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imagery analysis report

Unique Vehicles Associated With Soviet ICBM and IRBM Payload Handling (S)

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UNIQUE VEHICLES ASSOCIATED WITH SOVIET ICBM AND IRBM PAYLOAD HANDLING (S)

OVERVIEW

1. In late 1982, a unique set of vehicles of unknown function began to be observed with Soviet SS-17, -18, -19, and -20 missile systems. These two vehicles, which have been subsequently identified as a payload-associated multiple canister dolly (PAMCD) and a payload-associated van-bodied trailer (PAVBT), have now been confirmed at at least eight ICBM complexes, four SS-20 complexes, and at Glazov Missile Support Rear Depot (Figure 1). These vehicles are usually seen together and may give the Soviets the capability to carry multiple payloads to the field and maintain them while deployed. (S/WN)

2. This report contains one map, one table, and eight annotated photographs. (U)

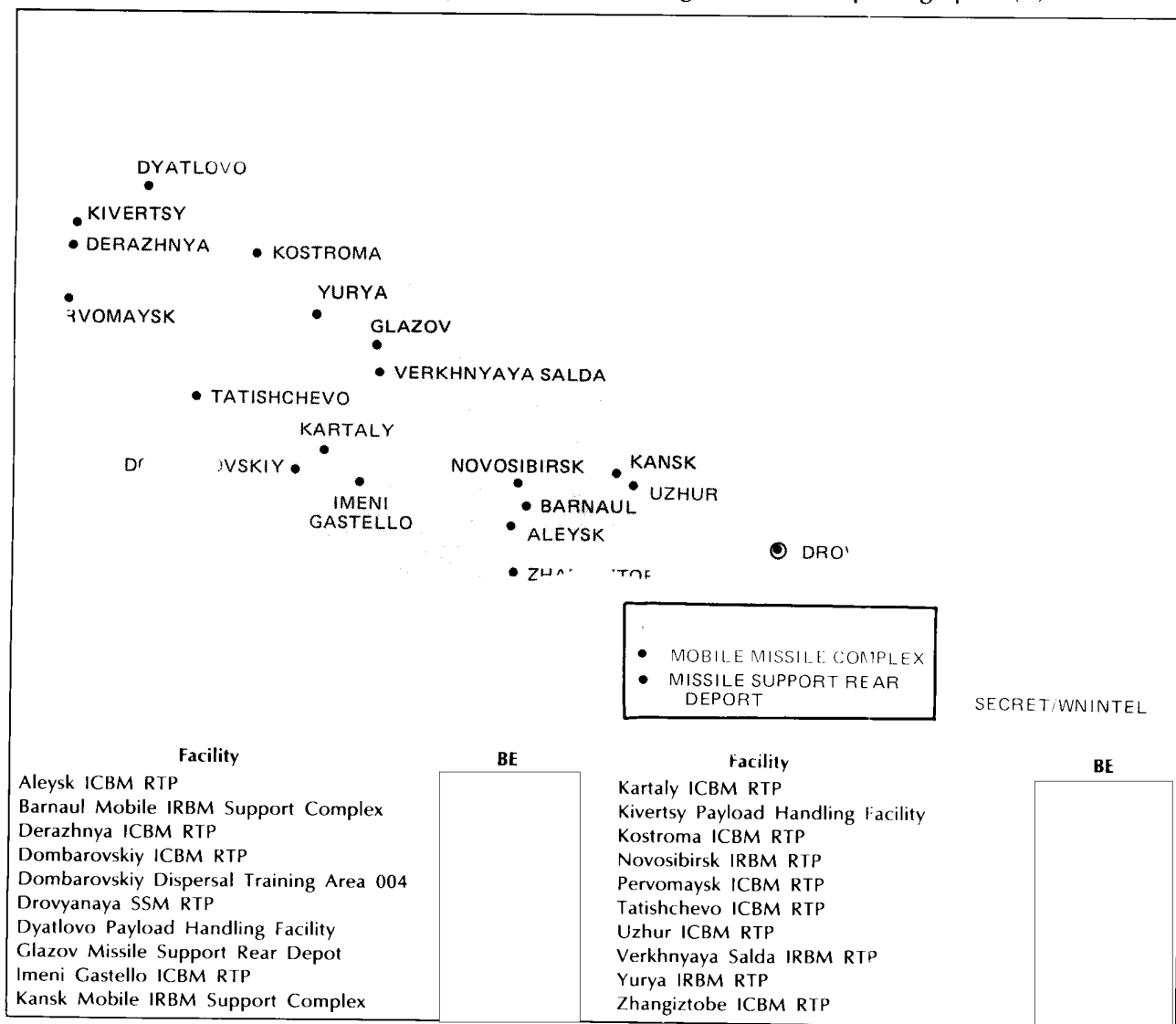


FIGURE 1. LOCATIONS OF FACILITIES WITH PAYLOAD-ASSOCIATED VEHICLES IN THE USSR

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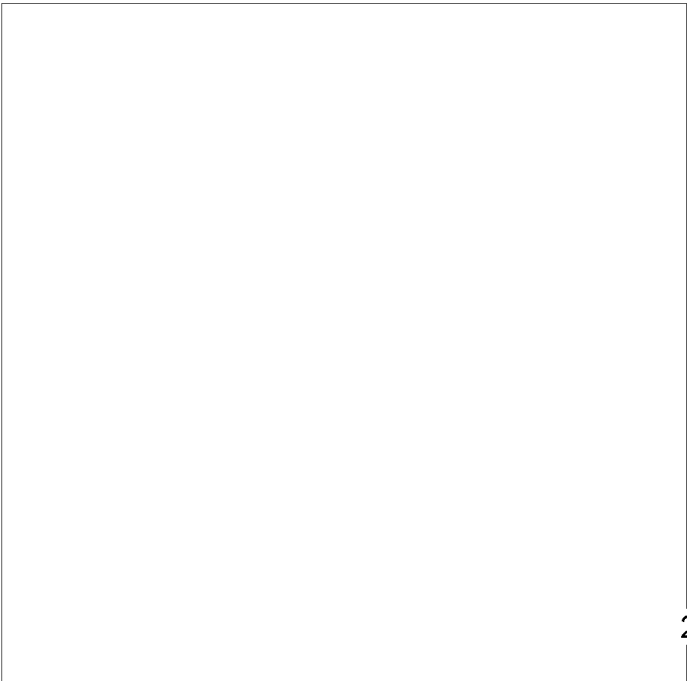
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DISCUSSION

Description of Vehicles

3. The multiple canister dolly (Figure 2) is a trailer, [redacted] long and [redacted] wide, that can carry up to eight concave cradles. The cradles are [redacted] long and [redacted] wide and are probably surrounded by a metal framework (Figure 3). Each cradle can carry a single warhead canister for a MIRVed fourth-generation missile. (S/WN)

4. The van-bodied trailer (Figures 2 and 3) is [redacted] and consists of two parts—a van body and a flat work platform. The van body is [redacted] and is covered with arch-roofed panels that may slide (Figure 4). The work platform is [redacted] by



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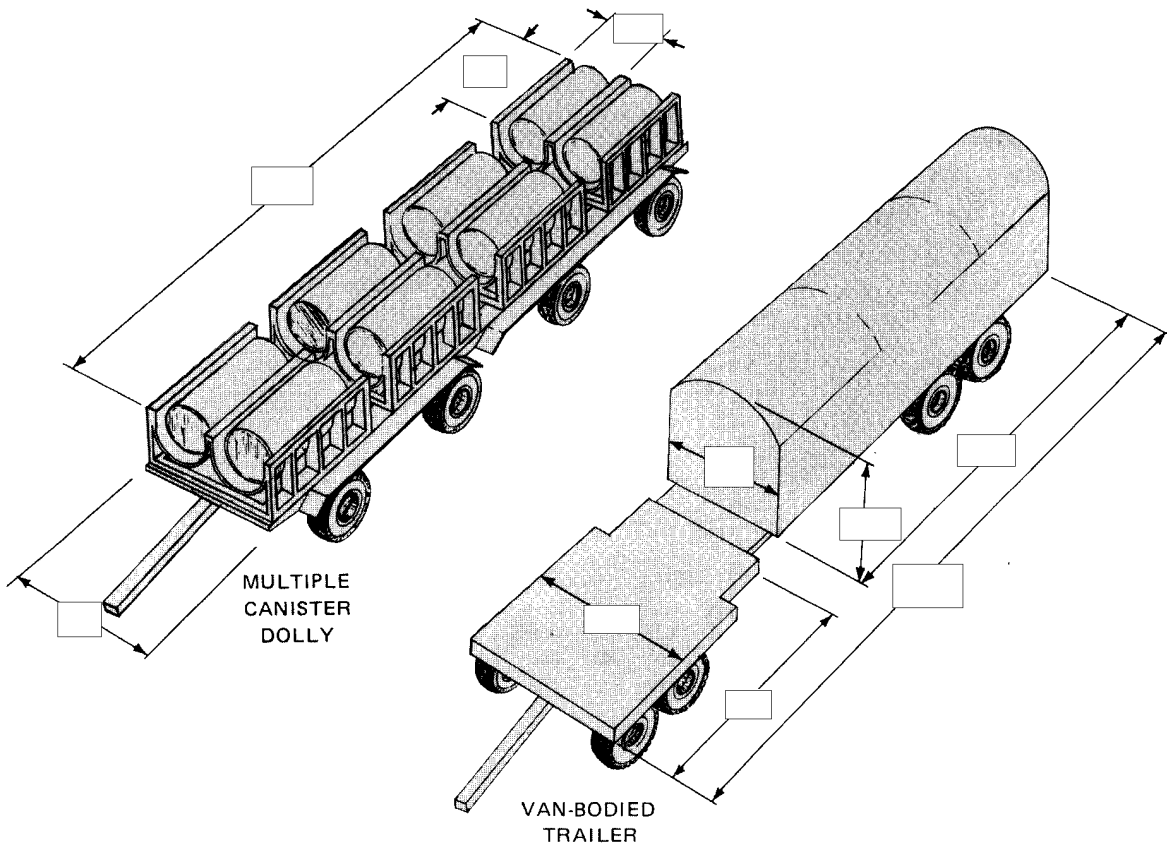
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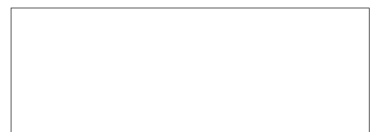
DIMENSIONS IN METERS

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FIGURE 2. PAYLOAD-ASSOCIATED VEHICLES AT KOSTROMA ICBM RTP (top) AND A CONCEPTUAL DRAWING OF THEM (bottom)



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 and has no observable surface features; it is sometimes covered with an arch-roofed panel (Figure 5). A small crane is probably housed in the

van body (Figure 6) and is probably used for lifting warhead canisters from the dolly onto the work platform. Panels may then be placed over the work

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platform or slid forward from the van body to provide a protected environment. This van-bodied trailer has been observed with a tow bar at either end. (S/WN)

a field-training exercise, the van-bodied trailer was observed during an ICBM dispersal training exercise at Dombarovskiy on  (Figure 7). (S/WN)

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5. The multiple canister dolly allows the Soviets to transport up to eight individual warheads at a time. The van-bodied trailer, with its crane and moving panels, provides a mobile, sheltered platform for working on missile payloads. Although these vehicles have not been observed together in

6. Probable uses of the two vehicles have been deduced from monitoring the areas in which they have been observed when in garrison as well as from their functional appearance. Although a review of imagery reveals that these vehicles have been at some SSM complexes since at least 1982

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they have been observed in only a limited number of areas within the SSM support complexes. When they are not in use, the two vehicles are normally in the ground support equipment maintenance/storage areas of the rail-to-road transfer points (RTPs). When they are in use at ICBM complexes, they have been seen most often at SS-18 rail offloading areas with payload-associated Mod-4 retrofit components (Figure 3). At SS-20 (IRBM) facilities, the vehicles have been in either the rail offloading areas or the nuclear payload handling facilities (NPHFs). At Kansk and Barnaul Mobile IRBM Support Complexes, the vehicles are usually in the NPHF. At Verkhnyaya Salda, the vehicles have been observed in the rail offloading area of the RTP and in the NPHF. At Novosibirsk, they are usually near the rail offloading area of the RTP. These observed patterns of use indicate the vehicles are used for payload-handling operations. (S/WN)

7. At the Kansk NPHF, Verkhnyaya Salda RTP, and the Novosibirsk RTP, the canister dolly and van-bodied trailer have been observed with probable single reentry vehicle (RV) dollies and probable postboost vehicle (PBV) dollies (Figure 8). Identification of the probable RV dollies and probable PBV dollies with these two vehicles is a further indication of their payload-associated function. (S/WN)

8. The two payload-associated vehicles were first identified in the NPHF at the Kansk SSM support complex in December 1984. A review of recent imagery has since confirmed the presence of both these vehicles at 12 SSM complexes and one missile support rear depot. Possible or probable multiple canister dollies and van-bodied trailers have also been observed at several other SSM complexes (Table 1). (S/WN)

**Table 1.
Missile Complexes Where Payload-Associated Vehicles
Have Been Observed**

ICBM Complex	System	PAMCD	PAVBT	First Seen
Aleysk	SS-18	1 prob	1 conf	Nov 83
Derazhnva	SS-19	—	1 prob	Jul 84
Drovyanaya	SS-11/-20	—	1 poss	Aug 84
Imeni Gostello	SS-18	1 conf	1 conf	Jun 84
Kostroma	SS-17/-11	1 conf	1 conf	Jan 84
Pervomaysk	SS-19	1 conf	1 conf	Apr 84
Tatishchevo	SS-19	1 conf	1 conf	May 84
Zhangiztobe	SS-18	1 conf	1 conf	May 84
IRBM Complex				
Barnaul	SS-20	1 conf	1 conf	Apr 83
Kansk	SS-20	2 conf	2 conf	Apr 83
Novosibirsk	SS-20	1 conf	1 conf	Aug 82
Verkhnyaya Salda* **	SS-20	1 conf	1 conf	Apr 84
Missile Support Rear Depot				
Glazov		5 conf	5-7 conf	May 83

*Complex undergoing conversion to SS-X-25.

trailers present since Oct 82.

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9. The two vehicles have been seen at Kansk and Barnaul more frequently than at any of the other SSM complexes. This is probably because these two facilities were built from scratch and as yet have limited vehicle storage capacity. The vehicles are seen less frequently at the more established complexes, where more vehicle storage space is available. An example of this is at Drovyanaya, where storage structures for the SS-7, SS-11, and SS-20 missile systems have been built, and only one possible van-bodied trailer has been observed. The multiple canister dolly and the van-bodied trailer may be at this and other SSM complexes but have not been observed or confirmed because they have been in storage or camouflaged. In addition, frequency of coverage, cloud


cover, and terrain masking in some areas, particularly at SS-20 complexes in the western USSR, further complicate observation or confirmation of these payload-associated vehicles. (S/WN)

Imagery Analyst's Comments


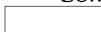

10. These two specialized vehicles provide a capability for payload-associated activities in areas removed from fixed facilities at SSM complexes and provide an inherent capacity to support any reconstitution of missile forces planned by the Soviets. These capabilities are particularly important for mobile IRBMs and will become increasingly important as mobile ICBMs are deployed. (S/WN)

REFERENCES

IMAGERY

All applicable satellite imagery acquired from January 1980 to  was used in the preparation of this report. (S/WN)

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Comments and queries regarding this report are welcome. They may be directed to 
 Soviet Missile and Space Division, Imagery Exploitation Group, NPIC; 
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