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NPIC/R-117/63
July 1963

PHOTOGRAPHIC INTERPRETATION REPORT

TYPE III SOVIET ICBM LAUNCH SITES

ARMY NAVY AIR FORCE CIA

25X1

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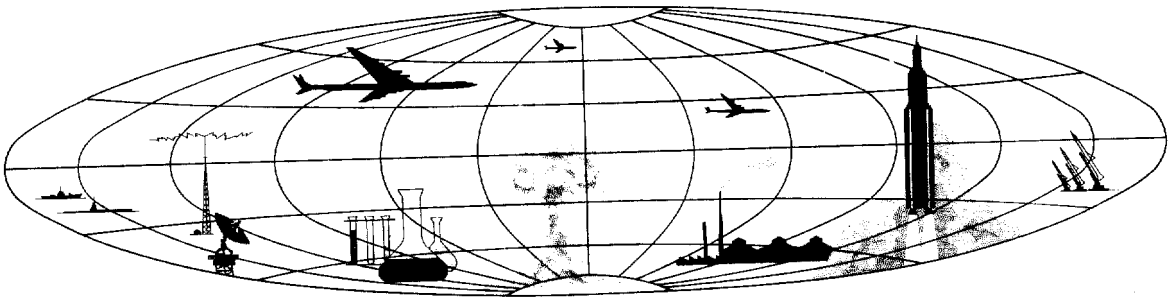
NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



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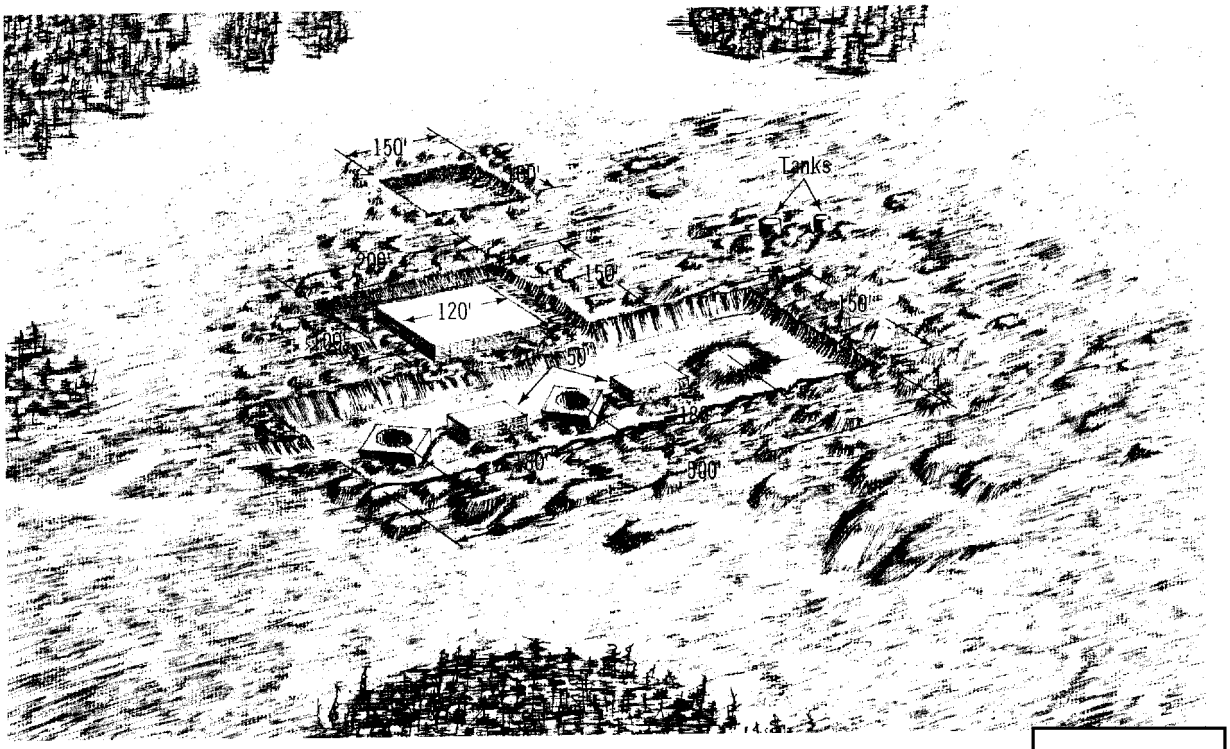


FIGURE 2. CONCEPT OF TYPE III ICBM SITE IN MIDSTAGE OF CONSTRUCTION. [redacted] 25X1

DETAILED DISCUSSION

As the midstage of construction of a Type III launch site commences, the characteristic rectangular excavation with its associated notch is present (Figure 2). This excavation varies in size from site to site depending on soil characteristics, but generally measures about 500 by 150 feet in the main section, with the notch being on a slightly higher level and measuring 200 by 150 feet. It appears that construction is probably started nearly concurrently on the control bunker in the notch of the excavation and on three silos in the main portion of the excavation. The control bunker generally measures 120 by 100 feet and is located 90 feet to the rear of the silos. The three silos are separated by a distance of 180 feet on center, in a straight line along the approximate center line of the main excavation. These three silos do not appear consistently the same on the photography, a matter to be discussed in later paragraphs. Later, two rectangular equipment and/or fuel bunkers appear, each between two of the silos. These bunkers each measure 70 by 50 feet. It has been determined that the two objects in the excavation forward of the control bunker which were identified as silos in earlier reports are in fact the two equipment bunkers.

Also present in a midstage of construction at Type III sites is a probable covered spray pond, generally located to the rear and slightly to the left of the control bunker and measuring approximately 150 by 100 feet. Two probable buried tanks are located to the left of the control bunker and silos in an area that will eventually be enclosed by the site service road.

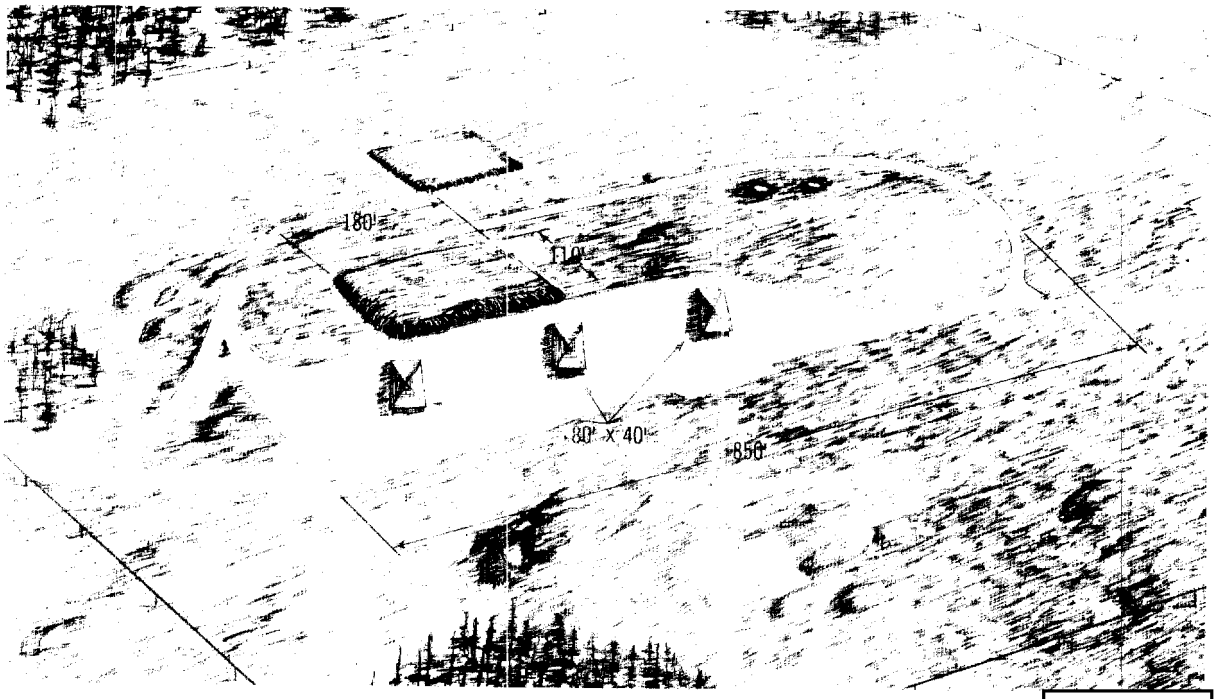


FIGURE 3. CONCEPT OF COMPLETED TYPE III ICBM SITE.

25X1

25X1B

25X1B

Equipment bunkers have been identified at Sites F and G at the Verkhnyaya Salda ICBM Complex and at Site D1, TTMTC.

A canted square perimeter, 55 feet on a side, has been observed around the right and center silos on three occasions at sites in a midstage of construction. This was noted at Site D2, TTMTC, on [redacted] Site F, Verkhnyaya Salda, on [redacted] and Site A, Olovyannaya ICBM Complex, on [redacted]

25X1D
25X1D
25X1D
25X1B
25X1B

In only one case has it been possible to measure the inside diameter of a silo with any degree of confidence. This was accomplished at the center silo of Site D2, TTMTC, on [redacted] with the resultant being an inside diameter of 30 feet.

25X1D
25X1D

The left silo has never been seen in a midstage of construction as having a distinct shape even on the best available photography. However, in three cases it can be described as being

slightly larger and more massive in appearance than the center and right silos. This was observed at Site D2, TTMTC, on [redacted] 25X1D
Olovyannaya, Site A, on [redacted] and at 25X1D
Verkhnyaya Salda, Site F, on [redacted] 25X1D
The left silo can in no case be described with confidence as being smaller than the other two.

At two of the sites in a midstage of construction (Site G, Verkhnyaya Salda on [redacted] 25X1D
and Site F, Verkhnyaya Salda, on [redacted] 25X1D
there has been evidence of possible connecting passageways between the control bunker and the three silos and two equipment bunkers. These possible passageways appear to run the length of the main excavation, with connecting segments to the actual facilities within the launch site.

When completed there are only a few components of a Type III site that are identifiable (Figure 3). The most apparent items are three objects each identical to the other in appearance and each measuring 80 by 40 feet. These three items are positioned at the exact location of the three silos seen in a midstage of construction and are canted to the long axis of the excavation location and coincide with the angle of the canted square perimeter observed around some of the center and right silos. It is noteworthy that the probable portal silo located to the left and rear of the control bunker at hardened IRBM/MRBM launch sites is identical in appearance when completed to the missile silos forward of the control bunker (see NPIC/R-76/63 for a full description of hardened IRBM/MRBM launch sites).

A characteristic racetrack-shaped road pattern is present, the long axis of which is approximately 850 feet in length. At Site D1, TTMTC, and at Site E, Yurya ICBM Complex, a short spur may turn in from this road and terminate at the left silo. No such spur can be identified leading to either of the other silos. On the other hand, this appearance may simply be the limits of the hardstand that surrounds all three silos.

The control bunker is mounded with the mounded area measuring up to 180 by 110 feet. In no case can an entrance into the control bunker be identified with any degree of confidence. The probable spray pond can be identified to the rear and to the left of the control bunker, and the racetrack-shaped road encircles the area where the two probable buried tanks are located. The equipment bunkers are not visible, having been completely covered when the excavation was backfilled. The only indication of their presence (at Site F, Verkhnyaya Salda, on [redacted] 25X1D
[redacted] 25X1D
occurred when the snow was melted at a point directly over their location, probably indicating that vents of some type were discharging heat at those points.

[redacted] 25X1B
25X1B

SITE DESCRIPTIONS

This section presents detailed descriptions of Type III launch sites that have had [redacted] 25X1
coverage of sufficiently good quality to be of value in the preparation of this report.

LAUNCH SITE D1, TTMTC
(Figure 4)

Coverage of this site on [redacted] 25X1D
provides the best example of a completed Type III

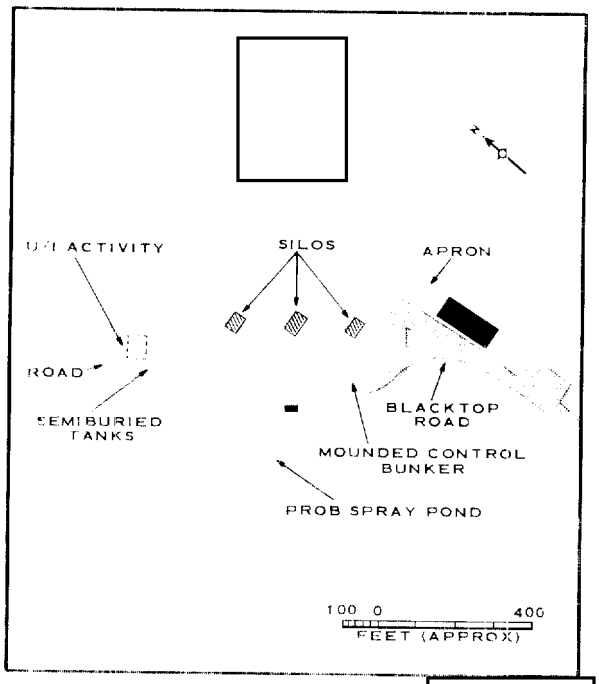


FIGURE 4. LAUNCH SITE D1, TTMTC.

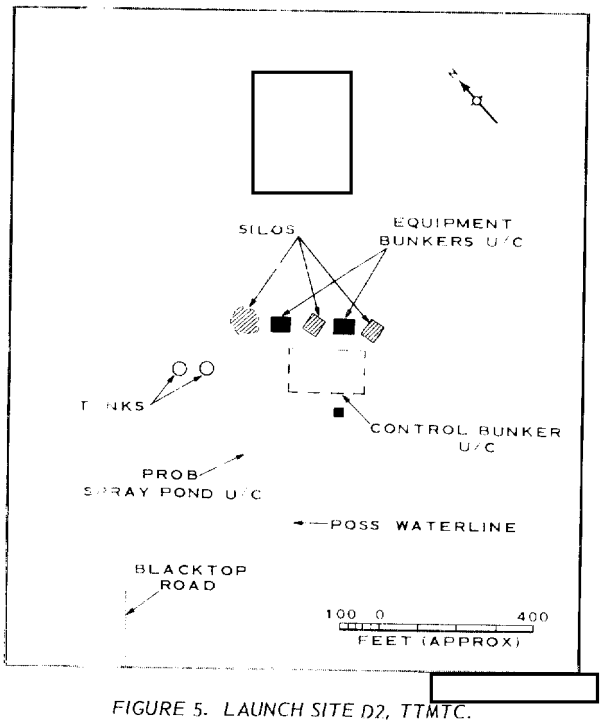


FIGURE 5. LAUNCH SITE D2, TTMTC.

launch site to date. The typical racetrack-shaped road pattern measures 900 by 350 feet and encloses most of the basic components of the site. The three silo covers or cover housings are the most apparent items present and their canted rectangular shape is clearly visible. The long axis of the covers are canted 45 degrees to the long axis of the original excavation. The covers appear to rise a few feet above the surrounding flat hardstand. The mounded control bunker is observed as is the covered probable spray pond to the left and rear of the control bunker. Two semiburied tanks are located to the left of the silos inside of the racetrack perimeter road.

LAUNCH SITE D2, TTMTC

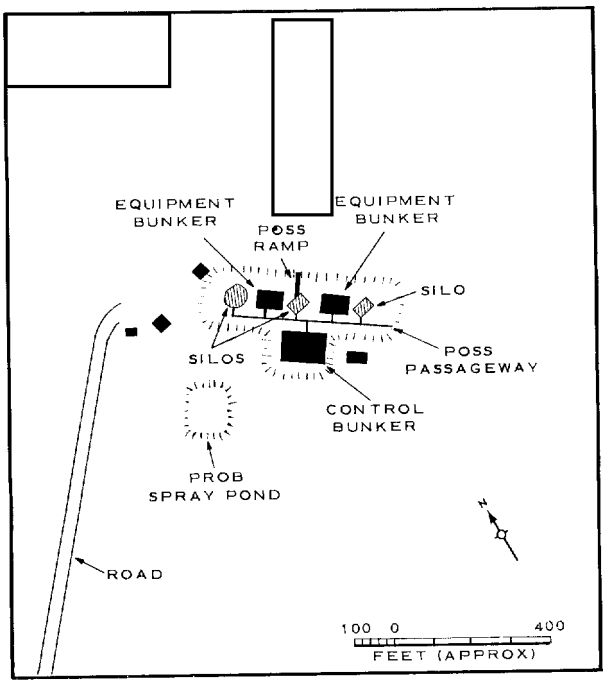
(Figure 5)

A photography of Site D1 at Tyura Tam on [redacted] was the best coverage to date of a completed Type III site, the coverage of Site D2, TTMTC on [redacted] provided the best photography to date of this type of site in a mid-stage of construction. Plainly visible in the typical notched excavation are the three silos, the two equipment bunkers, and the control bunker. The center and right silos definitely have a canted square perimeter measuring approximately 75 feet on a side. The inside diameter of the center silo measures 30 feet. Conversely, the left silo definitely does not have a canted square perimeter, and the relatively indistinct image of this silo does not lend itself to determining its exact shape. Due to the excellent photography available of this site, it is believed that this lack of definition is due to the fact that the left silo actually did not have a distinct shape at the time of this coverage. It can be stated, though, that the left silo appears somewhat larger than the other two at this site.

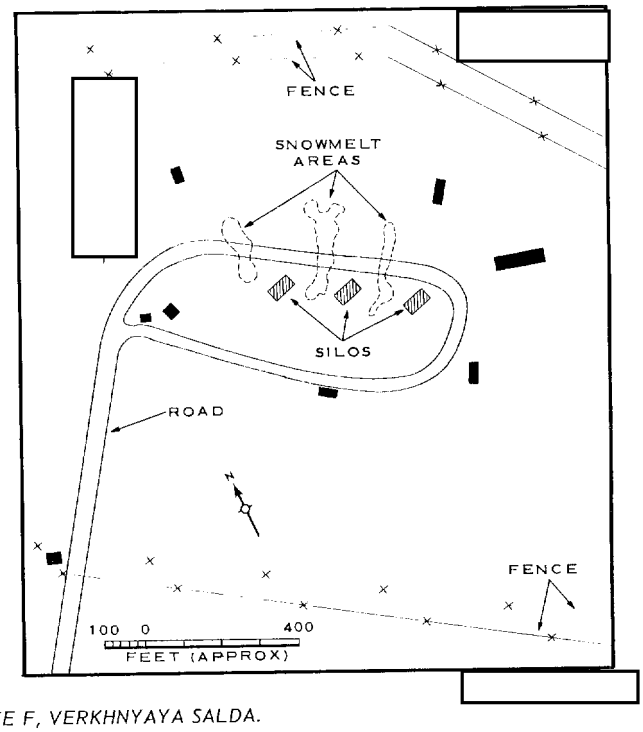
Also visible at the site is the excavation for the two semiburied tanks to the left of the silos.

NPIC/R-117/63

25X1D 25X1D



25X1D 25X1D



25X1

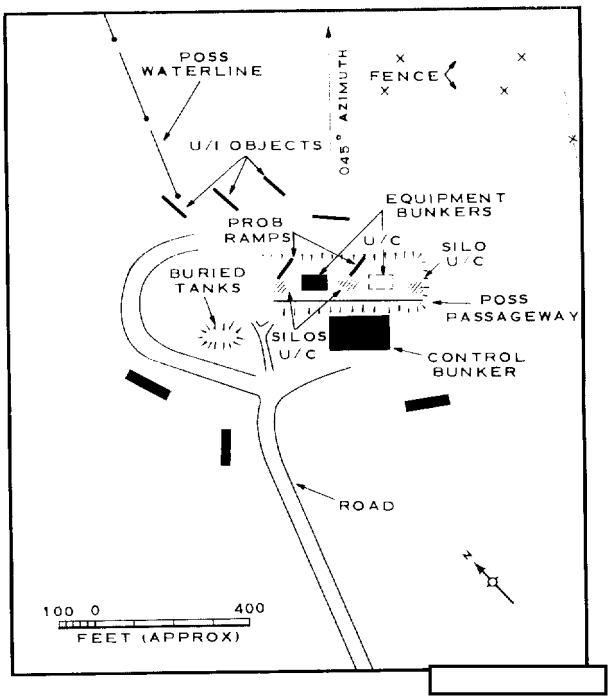
FIGURE 6. LAUNCH SITE F, VERKHNYAYA SALDA.

The probable spray pond is under construction to the left and rear of the control bunker.

LAUNCH SITE F, VERKHNYAYA SALDA

(Figure 6)

25X1D Coverage of this launch site on [redacted] provides one of the best examples of a Type III site in a midstage of construction. On this photography all three silos, the control bunker, and the two equipment bunkers are visible. The center and right silos each have a suggestion of the typical canted square perimeter confirmed at Site D2, TTMTC. The left silo definitely appears somewhat larger and more rounded. A possible ramp extends from the forward edge of the main excavation to the center silo. Possible passageways approximately 15-20 feet in width extend for a distance of 300 feet along the length of the main excavation between the silos and the control bunker. Short segments running perpendicular to the possible long passageway may interconnect



25X1

FIGURE 7. LAUNCH SITE G, VERKHNYAYA SALDA.

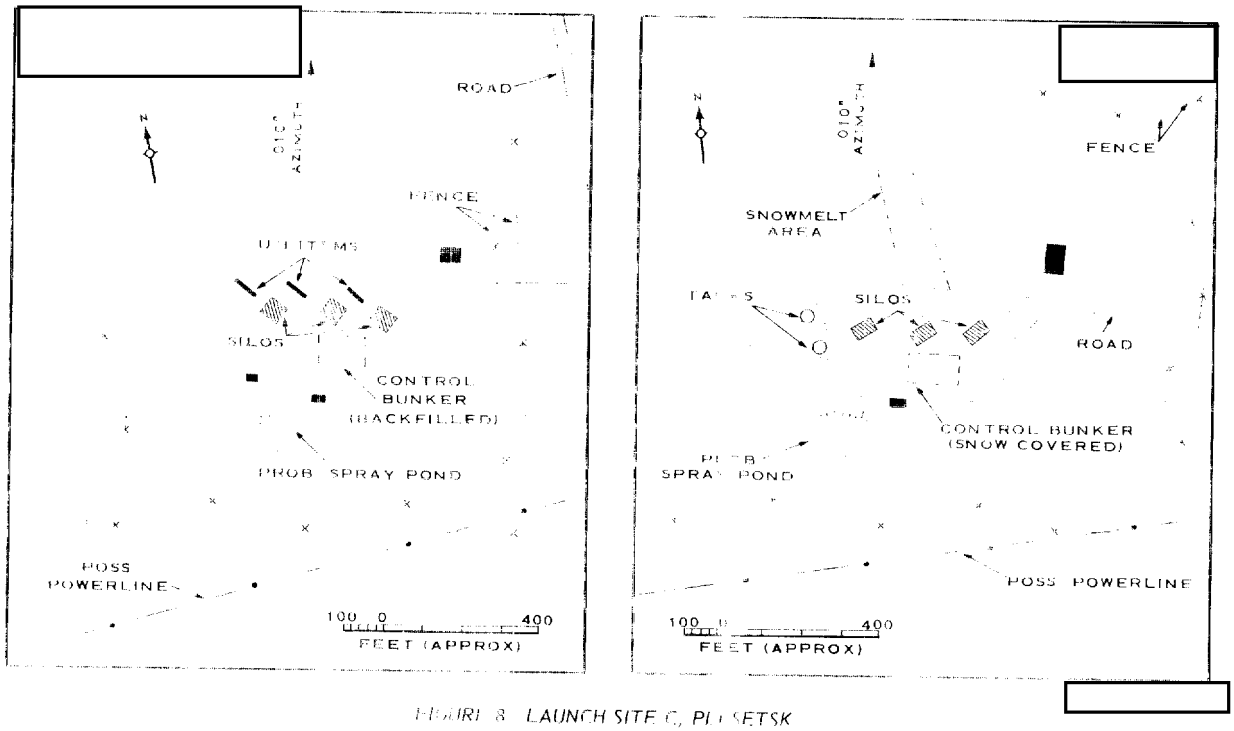


FIGURE 8. LAUNCH SITE C, PLESETSK

the silos, equipment bunkers, and control bunker.

LAUNCH SITE G, VERKHNYAYA SALDA

(Figure 7)

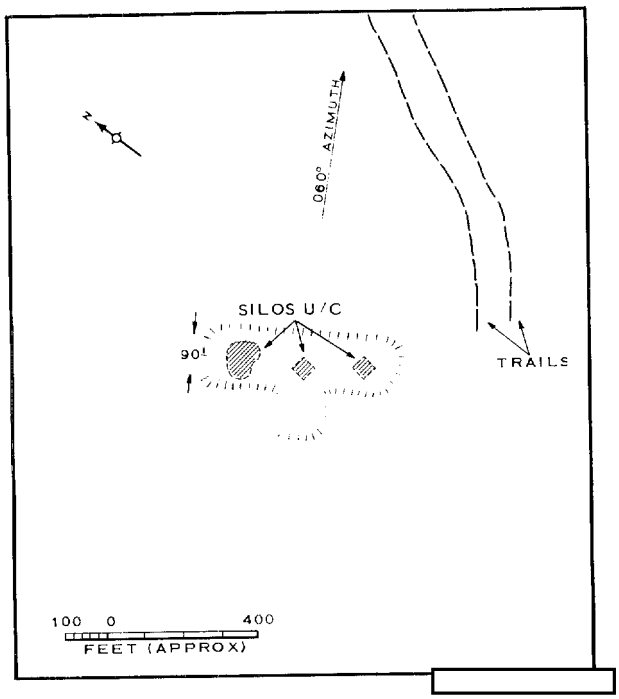
This site has been observed on excellent photography in a midstage of construction [redacted] The control bunker and the left equipment bunker are visible as are the three silos. The silos, however, are poorly defined. There are indications that the right equipment bunker is in an early stage of construction. A possible passageway extends almost the entire length of the excavation between the silos and the control bunker. Two objects, probably ramps to assist in construction, extend from the forward edge of the excavation to the center and left silos. These are placed, with respect to the main excavation, at the same angle that the silo covers will have when the site is completed. Forward and outside of the main excavation, three parallel unidentified linear objects were noted. An imaginary extension of these objects leads directly to each of the silos. As previously stated, no shape can be assigned to any of the silos at this site.

LAUNCH SITE C, PLESETSK

(Figure 8)

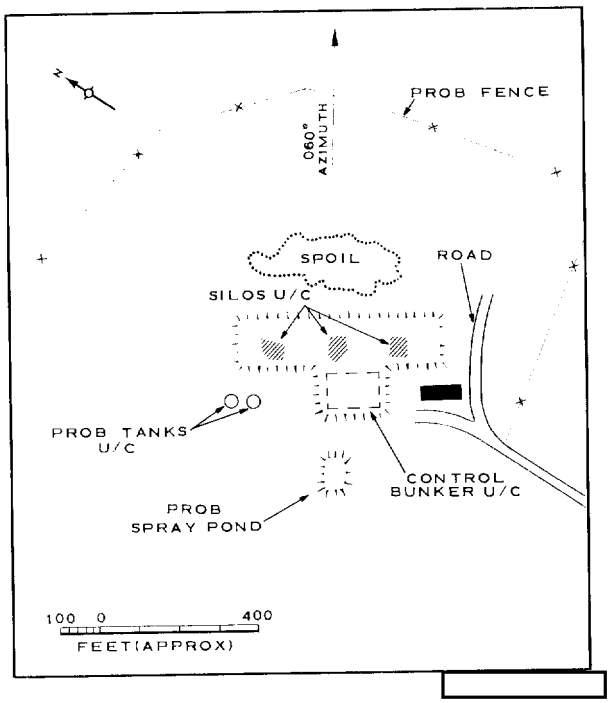
Although there were repeated [redacted] coverages of this site while it was in a midstage of construction, none of them were of sufficient quality to determine shapes of the objects in the excavation. Identification of the silos and control bunker was possible on some missions, but only by comparing the earlier coverage with excellent quality photography provided by [redacted] By this time the site had been completed.

On the excellent coverage provided by [redacted] three rectangular silo covers are plainly visible. The location of the buried control bunker is apparent as is the typical Type III road pattern, but details of these features are partially



25X1 [redacted]

FIGURE 9. LAUNCH SITE A, OLOVYANNAYA.



[redacted] 25X1

FIGURE 10. LAUNCH SITE B, SHADRINSK.

obscured by snow cover. There is activity at the point within the road pattern analagous to the location of the two buried tanks at Launch Complex D, TTMTC, and the probable spray pond is evident to the left and rear of the control bunker.

25X1D On [redacted] a number of unidentified dots are apparent forward of the center silo, down the hill toward the site fence line. These may possibly be caused either by snowmelt due to an undetermined cause or by the dumping of material in small piles on top of the snow.

25X1D On [redacted] backfilling of this site appeared to be completed. On this coverage three parallel objects were observed forward of the silos similar to the ones that were noted at Launch Site G, Verkhnyaya Salda, on [redacted] 25X1D however, they are located closer to the silos.

LAUNCH SITE A, OLOVYANNAYA
(Figure 9)

This site was observed in a midstage of construction on [redacted] 25X1D The three silos are visible, with the right and center ones appearing vaguely canted and square. The left silo appears slightly larger and somewhat elliptical, with the major axis approximately 90 feet in length across the short axis of the main excavation. Neither the control bunker nor the equipment bunkers are present as yet.

LAUNCH SITE B, SHADRINSK
(Figure 10)

As seen in a midstage of construction on fair-quality photography from [redacted] 25X1D this site had the characteristic notched excavation of a Type III launch site. The three silos under construction were barely visible in the main portion of the excavation; however, no shape could be assigned to any of them. The base of the control bunker had been placed in the notch but neither of the equipment bunkers was as yet present. The probable spray pond can be discerned to the rear and left of the control bunker.

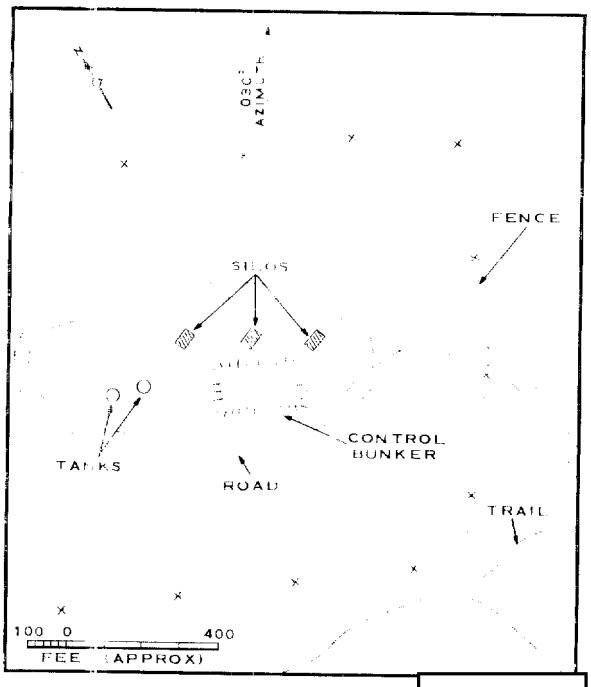
LAUNCH SITE E, YEDROVO

(Figure 11)

25X1D

The rectangular shape of the three silo covers can be barely observed on photography of this completed site from [redacted] The typical road pattern of a completed site is present but snow cover prevents detailed interpretation of the site.

The snow is melted over the location of the equipment bunkers, indicating a discharge of heat at this point. The snow is also melted at a point to the left of the left silo beyond the boundary of the original excavation. The location of this melted snow coincides exactly with a small structure that was observed outside of the excavation when the site was in a midstage of construction. The characteristic road pattern cannot be definitely traced because of the snow cover; however, a faint suggestion of it does show through the snow.



[redacted] 25X1

FIGURE 11. LAUNCH SITE E, YEDROVO.

REFERENCES

PHOTOGRAPHY

25X1D

[redacted]

RELATED DOCUMENTS

NPIC. R-30/63, Silo ICBM Launch Areas in the USSR, Mar 63 (TOP SECRET [redacted]) 25X1

NPIC. R-48/63, Launch Complex D, Tyura Tam Missile Test Center, USSR, Apr 63 (TOP SECRET [redacted]) 25X1

NPIC. R-76/63, Analysis of Hardened MRBM/IRBM and IRBM Launch Sites in the USSR, Apr 63 (TOP SECRET [redacted]) 25X1

REQUIREMENTS

DIA. XX 63-68

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