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NPIC/R-836/64
September 1964

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PHOTOGRAPHIC INTERPRETATION REPORT

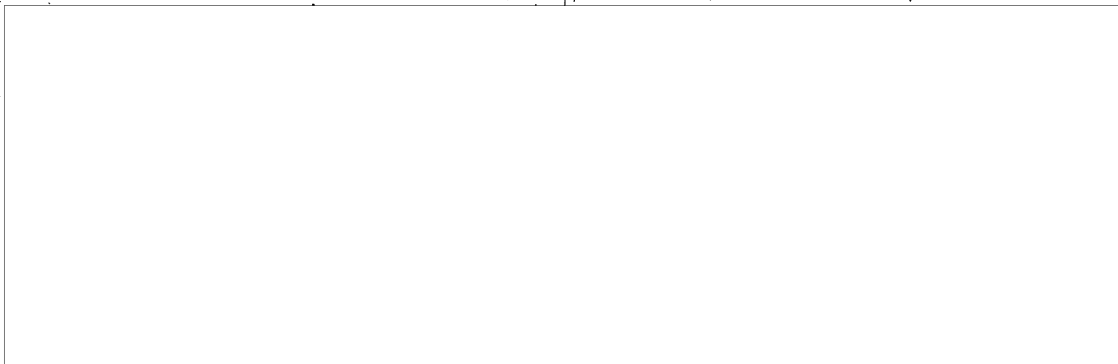
UNIDENTIFIED ACTIVITY AT SA-1 SAM SITES, MOSCOW, USSR



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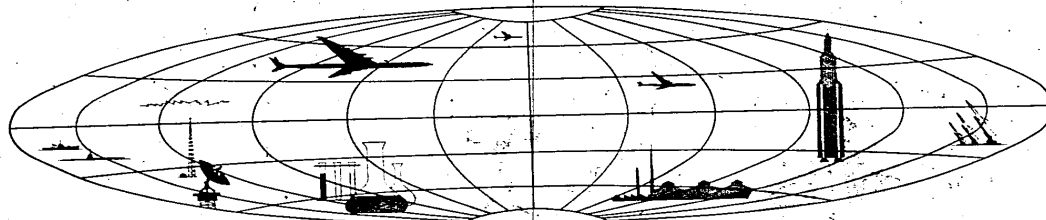


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PHOTOGRAPHIC INTERPRETATION REPORT

UNIDENTIFIED ACTIVITY AT SA-1 SAM SITES,
MOSCOW, USSR

NPIC/R-836/64

September 1964

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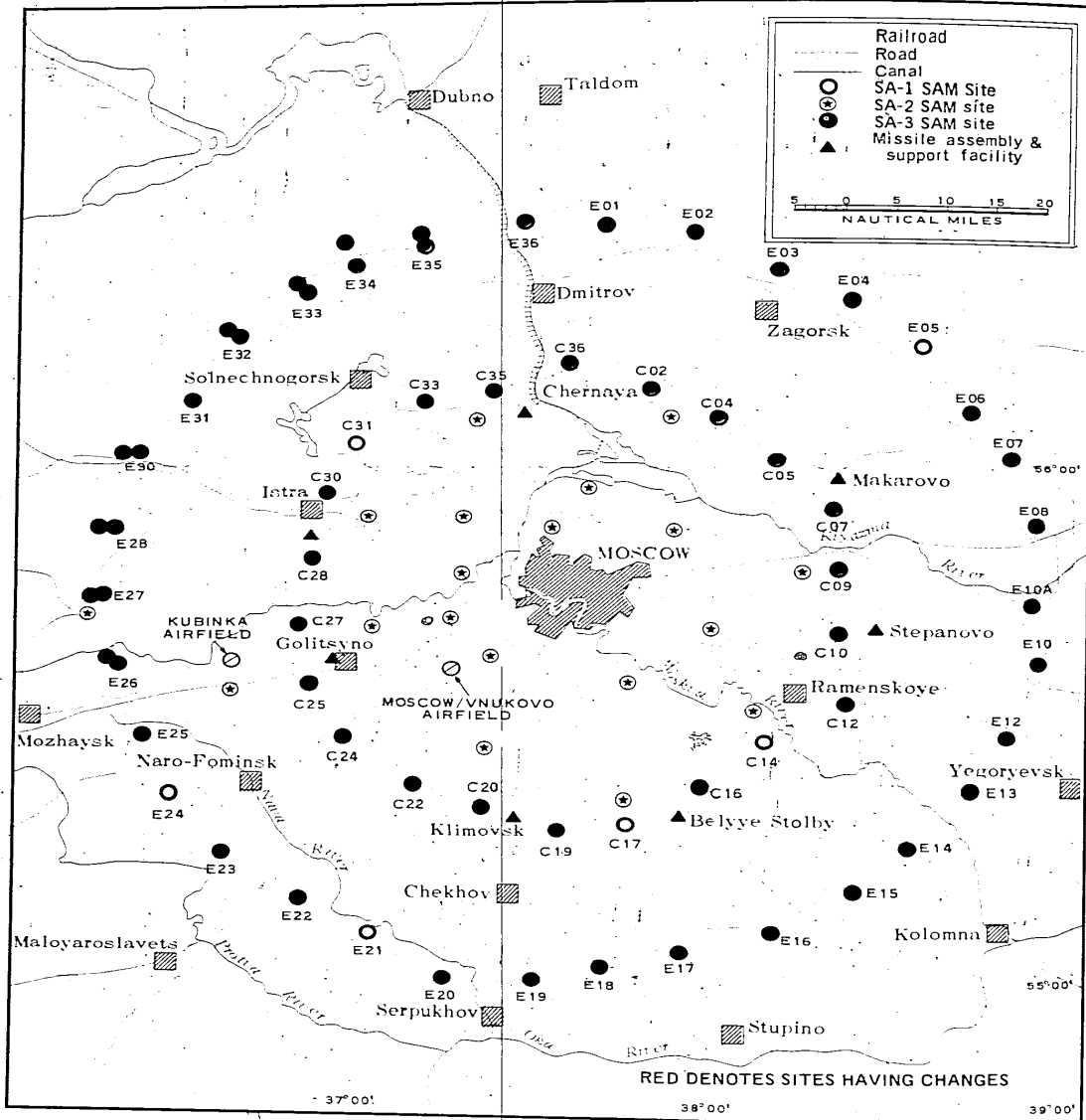


FIGURE 1, MOSCOW SA-1 SITES HAVING CONSTRUCTION ACTIVITY SINCE 1963.

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DISCUSSION

This report is in response to requirements for information concerning the nature, type, and location of unidentified activity observed at SA-1 SAM sites in the Moscow area since

1963. KEYHOLE photography from Missions [redacted] revealed unidentified construction at 50 of the 56 SA-1 SAM sites around Moscow (Figure 1) that was not present on 1963 photography. 1-4/

Most activity consists of earth scars within the launch areas, some scars occurring between the launch rib roads and some paralleling the roads. Revetments are apparent in a number of the scars, but no development pattern is apparent either in the preliminary scarring or the placement of revetments, and no identification of the purpose of the activities is possible at present because there are only slight, vague similarities noted at a few sites.

Figure 2 shows the launch, support, and guidance areas of a typical SA-1 site. In order to simplify referencing points in the launch area, a system of numbers and letters has been adopted. Using the guidance area as a reference point, the left side of the launch area is designated A, the right side B, and the roads as follows: the perimeter road; the centerline road; the rib roads, numbered from the ribroad nearest the guidance area. Launch positions on rib roads are numbered out from the centerline road. Thus, activity at 3A2 would indicate a position on the third rib road, left side of the launch area, at the second launch position out from the centerline road, as shown in red in Figure 2.

Annotated photographs follow from Mission [redacted] with brief descriptions of the changes that have occurred since 1963. All photographs are printed with the guidance area at, or immediately outside, the bottom of the figure. Table 1, at the end of the report, gives chronology of construction activities.

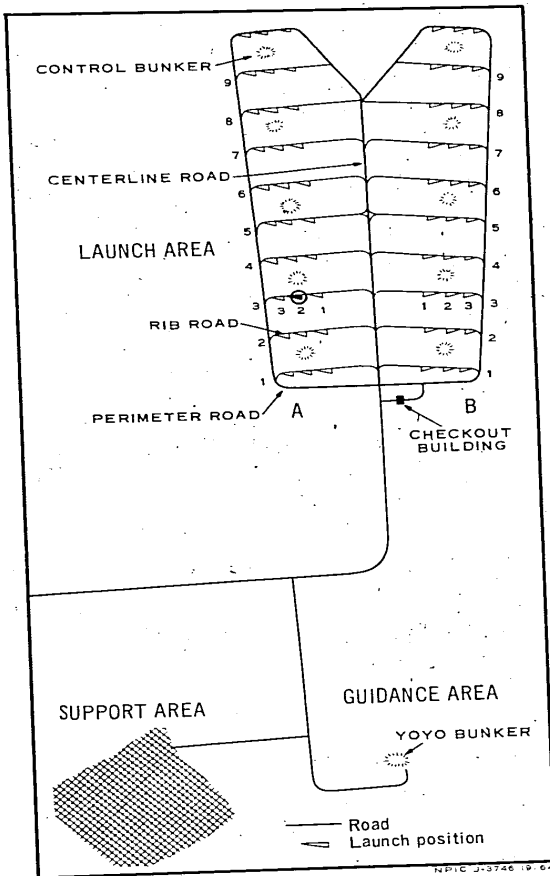


FIGURE 2. TYPICAL SA-1 SITE.

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SAM SITE C02-1

At the perimeter road, opposite rib road 6A (item 1), an unidentified structure that measures 95 by 65 feet is located in a clearing that covers approximately 27,000 square feet. A rectangular scarred area of approximately 14,000 square feet extends from the intersection of the perimeter road and rib road 3B (item 2). A linear scar 130 feet long by 45 feet wide extends from the intersection of the perimeter road and rib road 2B (item 3).

SAM SITE C04-1

An irregular clearing on the north side of the launch area (item 1) covers approximately 41,500 square feet. It contains a U-shaped probable revêtement with walls that appear to be approximately 120, 50, and 120 feet long and an estimated 20 feet wide at the base. Across the road are two parallel, possibly earthen walls. Scarring parallel to rib road 9B (item 2) and extending to the perimeter road covers approximately 12,000 square feet.

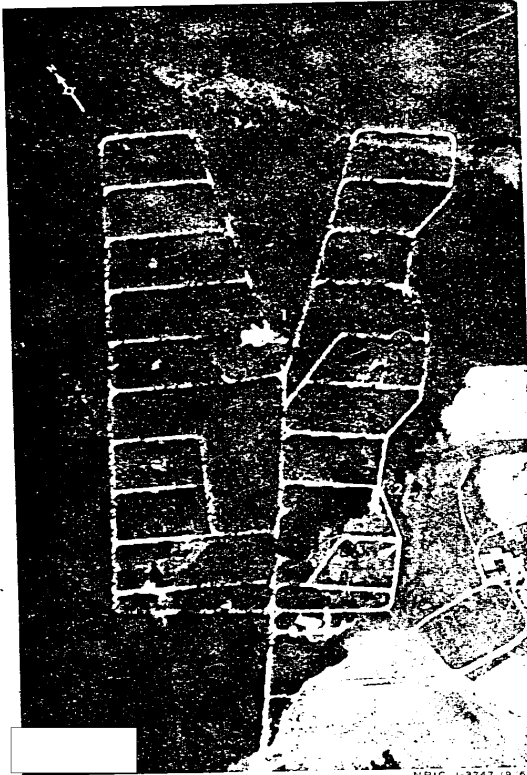


FIGURE 3. MOSCOW SAM SITE C02-1.

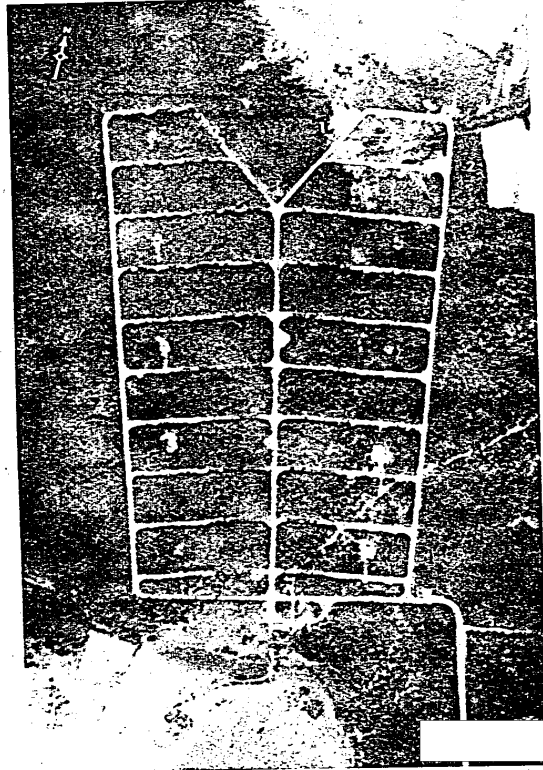


FIGURE 4. MOSCOW SAM SITE C04-1.

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TOP SECRET CHESS RUFF



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SAM SITE C05-1

A new road was observed on February 1964 photography extending from a point between rib roads 1A and 2A to the intersection of rib road 3A with the perimeter road (item 1).

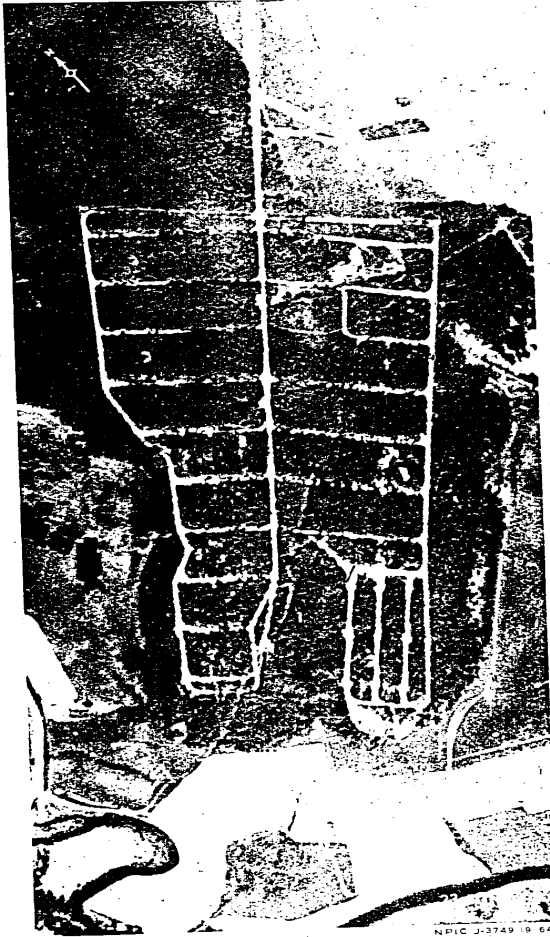


FIGURE 5. MOSCOW SAM SITE C05-1.

SAM SITE C07-1

On photography of Mission [redacted] a scarred area between rib roads 7A and 8A (item 1) and parallel to the perimeter road measured approximately 22,300 square feet. On Mission [redacted] photography, a U-shaped probable revetment was identified in the area. Between rib roads 8A and 9A (item 2) scarring covered approximately 34,800 square feet [redacted]



FIGURE 6. MOSCOW SAM SITE C07-1.

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25X1

25X1

25X1

25X1

25X1

25X1

25X1

TOP SECRET CHESS RUFF

25X1
25X1

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SAM SITE C09-1

Earth scarring on the east side of rib road 6B (item 1) covered 11,700 square feet when first seen, on Mission [redacted] and had increased in area four days later [redacted]. Activity in the area was continuing on Mission [redacted].

SAM SITE C10-1

Between rib roads 5A and 6A (item 1), two probably earthen walls are constructed parallel to one another and to the perimeter road. They are approximately 425 feet long and 70 feet apart.

25X1
25X1

25X1

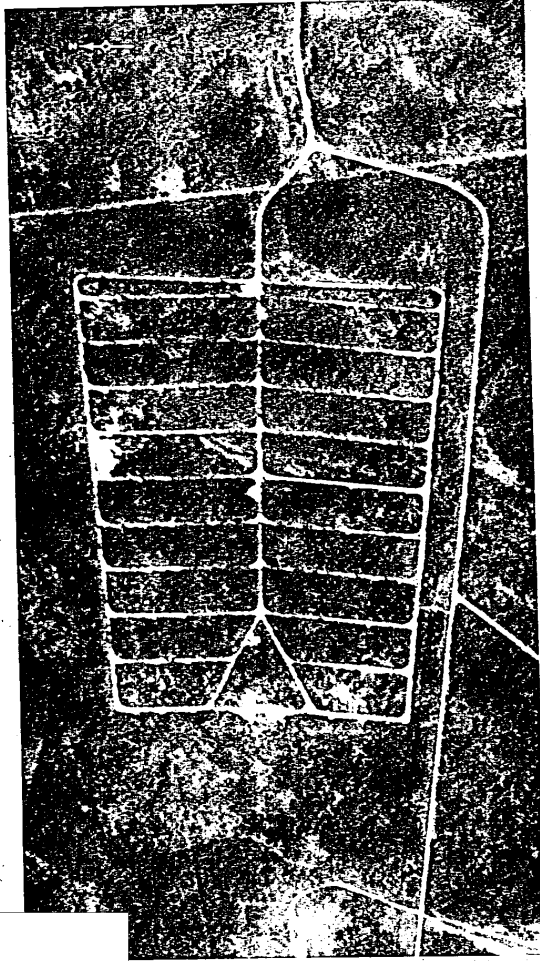
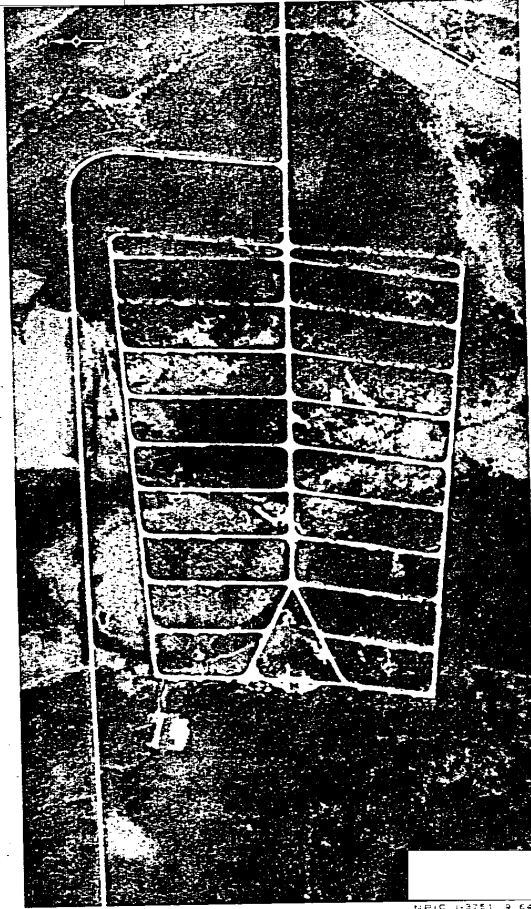


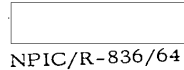
FIGURE 7. MOSCOW SAM SITE C09-1.

FIGURE 8. MOSCOW SAM SITE C10-1.

25X1

25X1

TOP SECRET CHESS RUFF



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SAM SITE C12-1

A scarred area between rib roads 2B and 3B (item 1) was approximately 137,000 square feet in area, Mission [redacted] and contained four walls or structures, one 285 feet long, one 225 feet, and two 250 feet long. All are estimated to be 25 feet wide. The scarred area had expanded by mid-July 1964 [redacted] almost to rib road 2B.

SAM SITE C14-1 (NO FIGURE)

SAM Site C14-1 has had no apparent change since September 1963. 4/

SAM SITE C16-1

A curved scar extends from rib road 9A toward rib road 8A (item 1). A second cleared area (item 2) is located along the perimeter road between rib roads 7B and 8B and covers approximately 21,000 square feet. Clearings have been cut in the woods along both sides of rib road 7B (item 3).

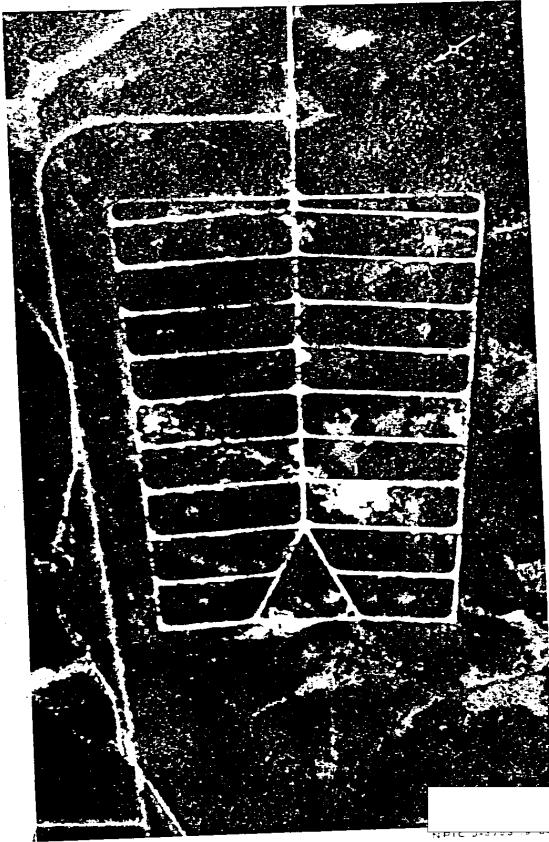


FIGURE 9. MOSCOW SAM SITE C12-1.

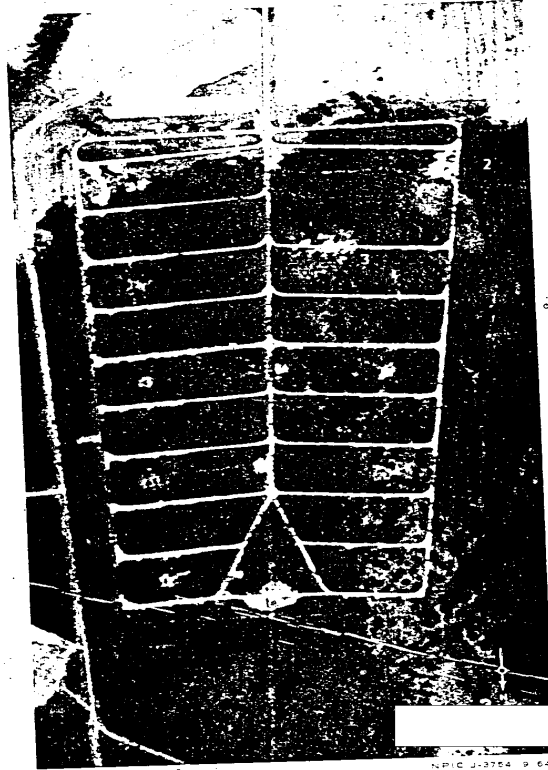


FIGURE 10. MOSCOW SAM SITE C16-1.



25X1
25X1

25X1

25X1

25X1
25X1

25X1

TOP SECRET CHESS RUFF



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SAM SITE C17-1 (NO FIGURE)

SAM Site C17-1 has had no apparent change since September 1963. 4/

SAM SITE C20-1

A shallow cut or excavation at 6A3 measures approximately 195 by 75 feet (item 1).

SAM SITE C19-1

A rectangular scarred area at the intersection of rib road 5A and the centerline road is 300 by 155 feet (item 1). Outside the perimeter road at the southeast corner (item 2), a cleared area measures 490 by 140 feet. On the scarring had extended eastward an additional 150 feet.

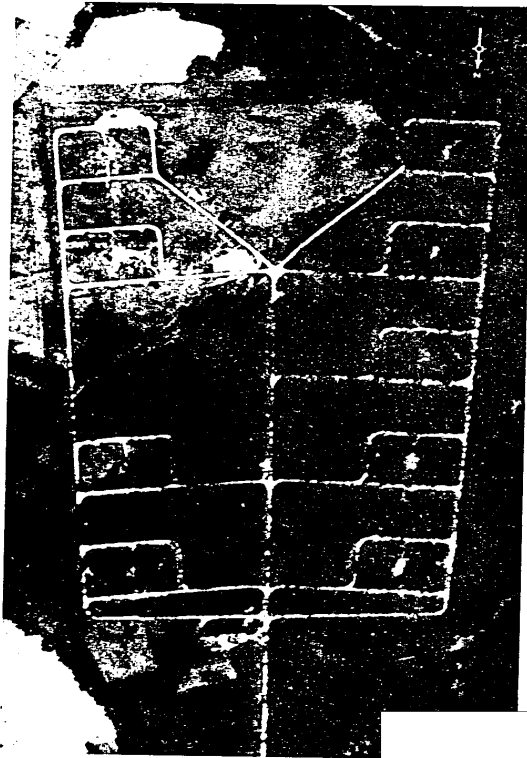


FIGURE 11. MOSCOW SAM SITE C19-1.

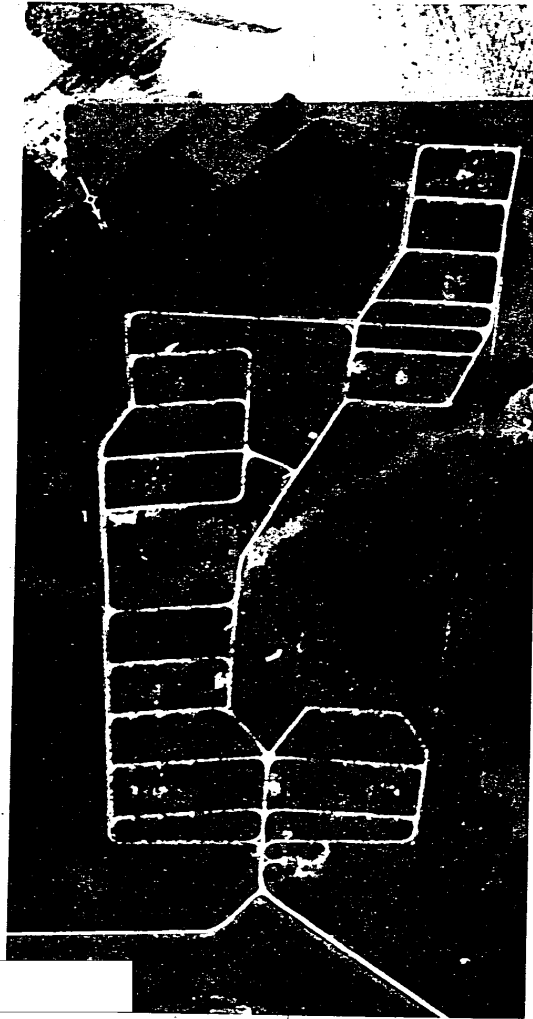


FIGURE 12. MOSCOW SAM SITE C20-1.



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25X1

25X1

25X1

TOP SECRET CHESS RUFF



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25X1

SAM SITE C22-1

Scarring along both sides of the centerline road between rib roads 6 and 7 (item 1) covers approximately 60,000 square feet.

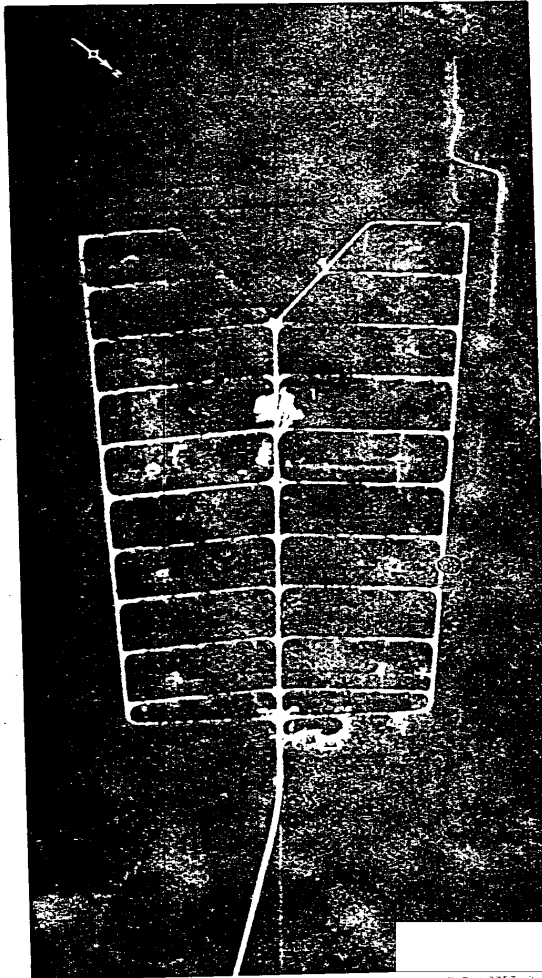


FIGURE 13. MOSCOW SAM SITE C22-1.

SAM SITE C24-1

A four-sided revetment in a 120,000-square-foot clearing between rib roads 2B and 3B (item 1) has openings on the east and west sides for roads connecting it with the rib roads. The revetment is approximately 220 feet long by 115 feet wide.

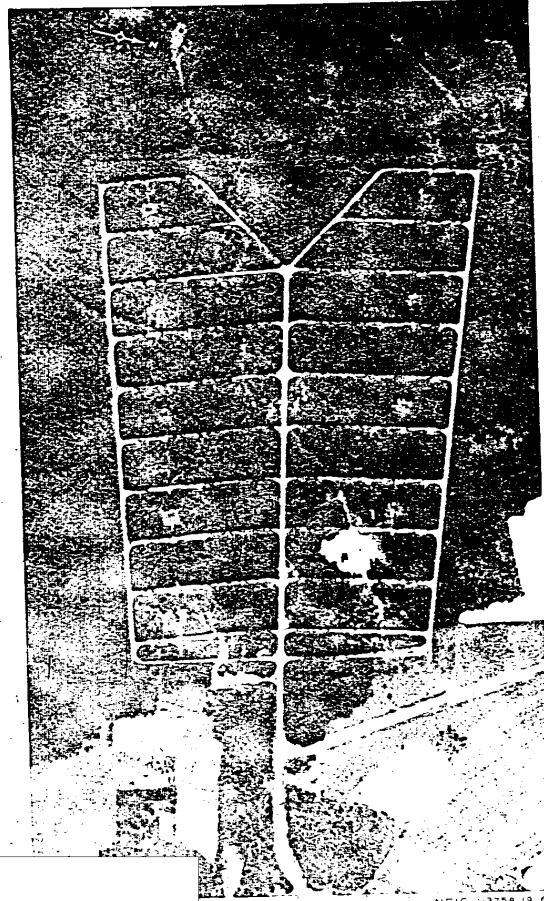


FIGURE 14. MOSCOW SAM SITE C24-1.

25X1

TOP SECRET CHESS RUFF



25X1

TOP SECRET CHESS RUFF



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SAM SITE C25-1

A large scarred area at the northeast corner of the launch area (item 1) covered approximately 100,000 square feet when photographed [redacted] and the scarring had increased eastward an additional 30,000 square feet by [redacted]

SAM SITE C27-1

A curved, scarred area near the perimeter road between rib roads 2A and 3A is approximately 370 feet long by 110 feet wide. On photography from Mission [redacted] the scar appears to have two parallel possible walls.

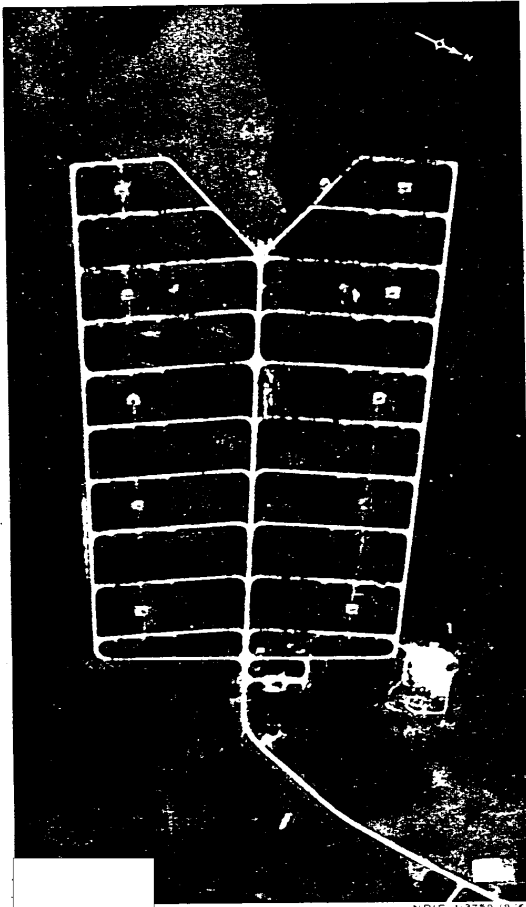


FIGURE 15. MOSCOW SAM SITE C25-1.

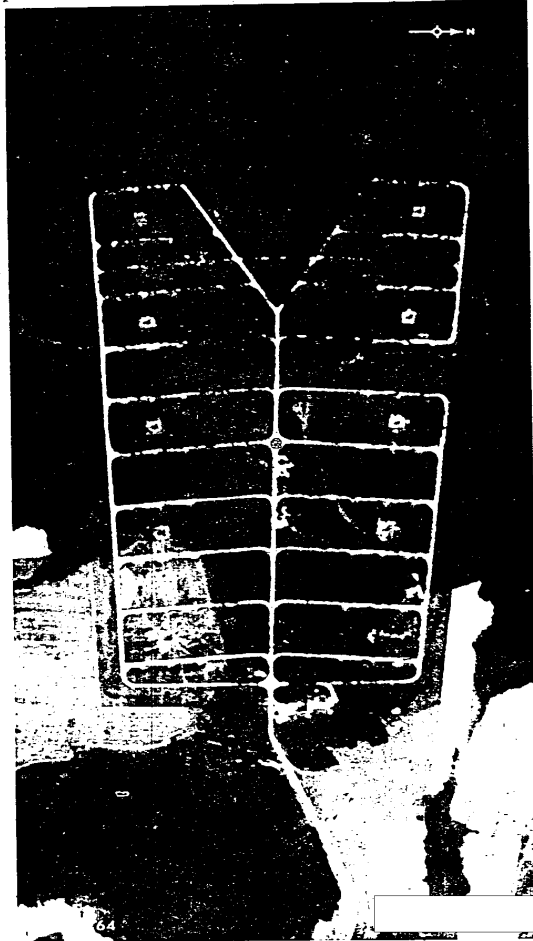


FIGURE 16. MOSCOW SAM SITE C27-1.

TOP SECRET CHESS RUFF



25X1

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25X1

25X1

TOP SECRET CHESS RUFF



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SAM SITE C28-1

Scarring inside the perimeter road between rib roads 8A and 9A (item 1) contains a revetment that is approximately 360 feet long, 120 feet wide, and has walls estimated to be 28 feet wide at the base. Across the perimeter road (item 2), a U-shaped revetment is in a scarred area of approximately 59,000 square feet. The revetment is 80 by 95 by 80 feet, with walls

SAM SITE C30-1

Parallel to both sides of rib road 3B (item 1) the earth is scarred for approximately 460 by 375 feet. A second area (item 2), along the perimeter road south of rib road 1B, is approximately 28,000 square feet in area.

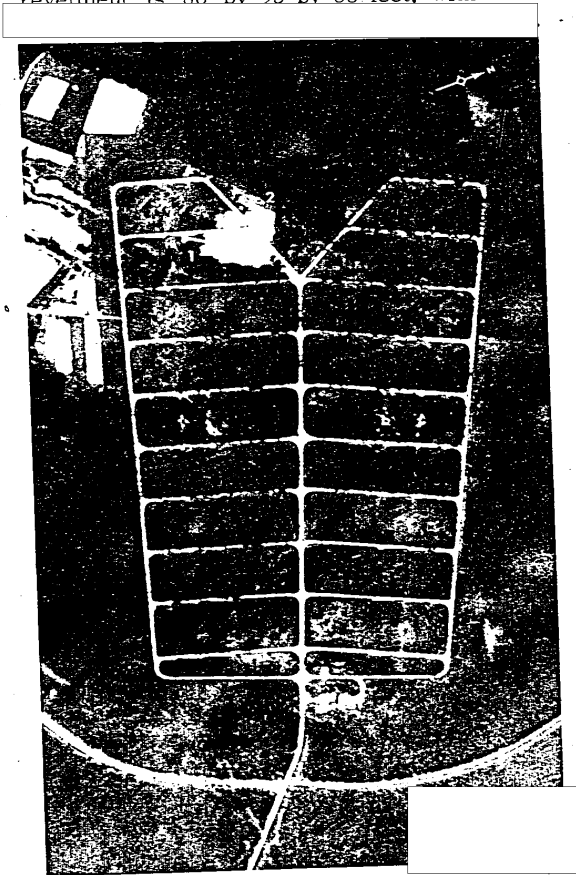


FIGURE 17. MOSCOW SAM SITE C28-1.

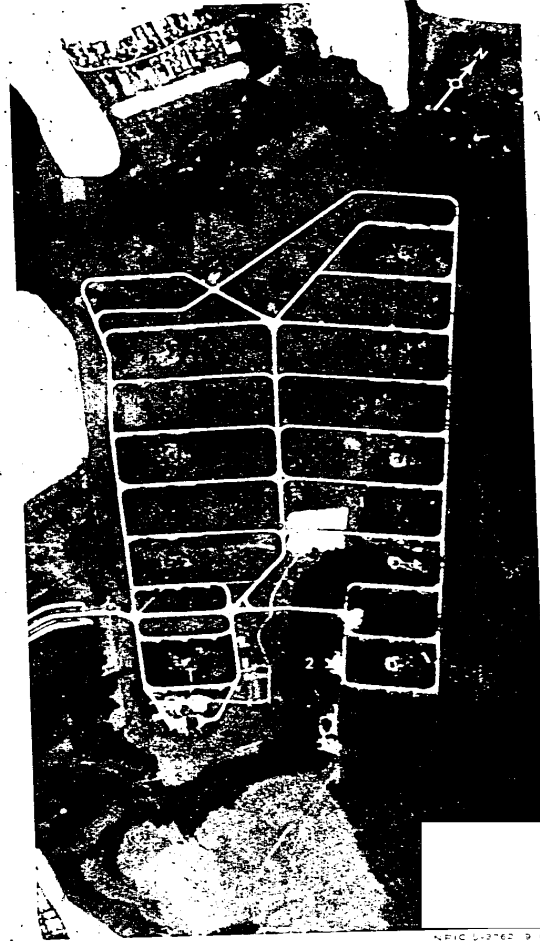


FIGURE 18. MOSCOW SAM SITE C30-1.



TOP SECRET CHESS RUFF

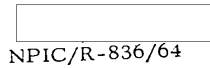
25X1
25X1

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25X1

25X1

TOP SECRET CHESS RUFF



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SAM SITE C31-1 (NO FIGURE)

SAM Site C31-1 has had no changes since September 1963. 3/

SAM SITE C33-1

A linear scar (item 1) along the perimeter road at the north-northwest corner of the launch area is approximately 145 feet long by 100 feet wide.

SAM SITE C35-1

Between rib roads 10A and 11A (item 1) an earthen wall appears to have been constructed by pushing earth up from opposite sides. Scarring covers an area of approximately 330 by 185 feet, and the probable wall is about 215 feet long and 20 feet wide at the base. Immediately south of this area, along rib road 10A (item 2), a second scarred area covers approximately 15,475 square feet.

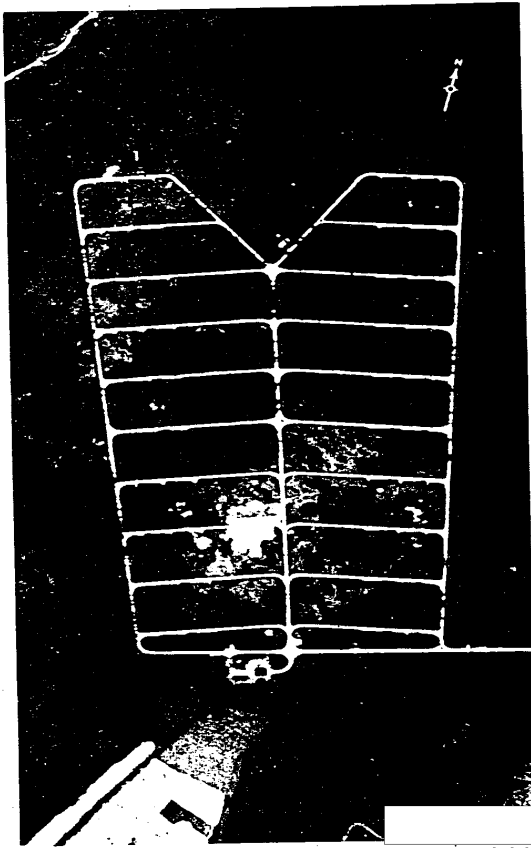


FIGURE 19. MOSCOW SAM SITE C33-1.

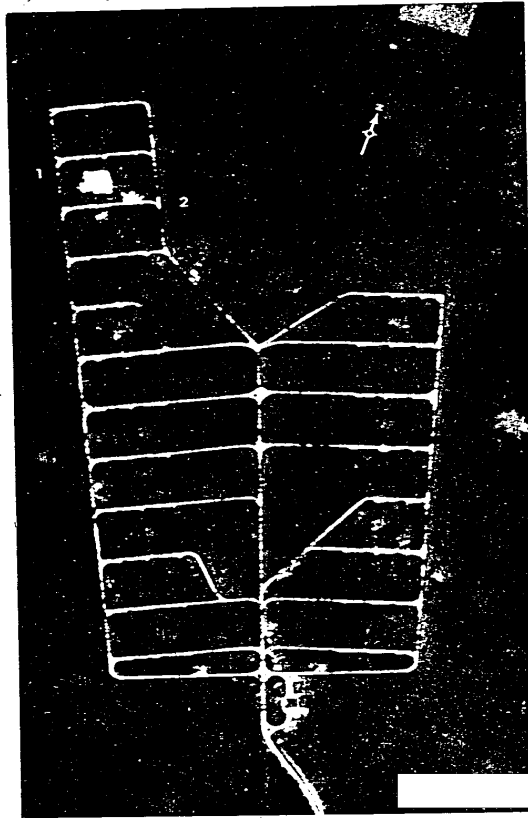


FIGURE 20. MOSCOW SAM SITE C35-1.



25X1
25X1

25X1
25X1

25X1

TOP SECRET CHESS RUFF

25X1

25X1

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SAM SITE C36-1

A scarred area of approximately 58,500 square feet between rib roads 8B and 9B (item 1) contains one probable rectangular revetment 145 feet long by 25 feet wide and a possible revetment 85 feet long by 20 feet wide. Adjacent to the perimeter road, between ribroads 2B and 3B (item 2), is a scarred area of approximately 59,500 square feet. A probable low earthen wall on the south side of this area measures approximately 165 feet long

SAM SITE E01-1

A curved wall extends between rib roads 7B and 8B (item 1). It is approximately 465 feet long and 20 feet wide at the base.

25X1

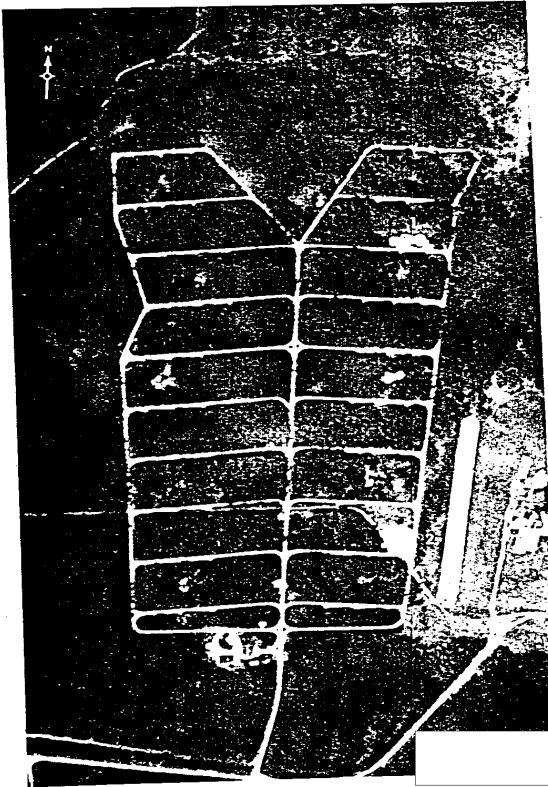


FIGURE 21. MOSCOW SAM SITE C36-1.

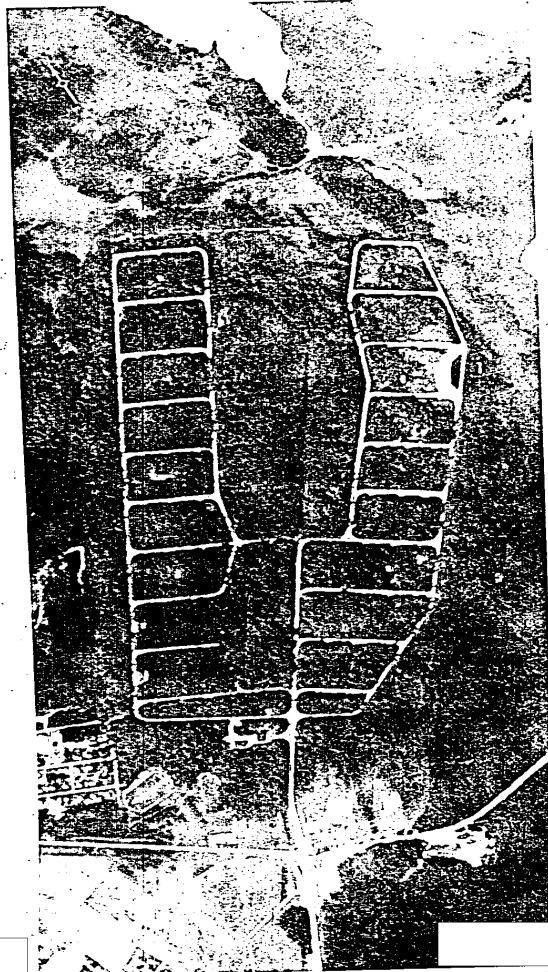


FIGURE 22. MOSCOW SAM SITE E01-1.

25X1
25X1

25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

SAM SITE E02-1

Photography [redacted] revealed a curved ground scar between rib roads 2A and 3A (item 1). [redacted] the area had developed into a square clearing of approximately 41,600 square feet. A second area had been cleared since September 1963, at the intersection of rib road 12A and the perimeter road (item 2).

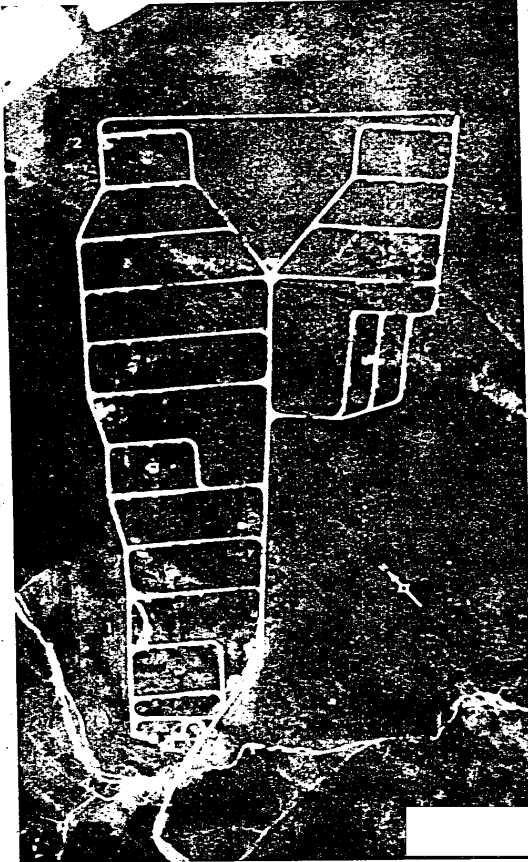


FIGURE 23. MOSCOW SAM SITE E02-1.

NPIC J-3767 (9 64)

SAM SITE E03-1

An area of scarring between rib roads 3B and 4B is approximately 490 feet long by 150 feet wide (item 1). On both sides of rib road 4A (item 2) there is a scarred area that measured approximately 36,600 square feet [redacted] and had expanded to 38,000 square feet [redacted]. At the intersection of rib road 6A and the centerline road (item 3) scarring covers approximately 12,445 square feet; and at the intersection of 6B and the perimeter road (item 4) a scar covers approximately 9,700 square feet.

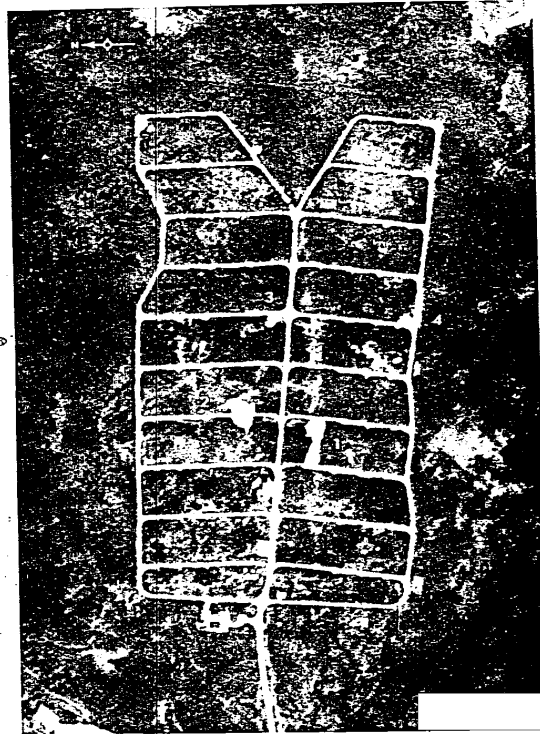


FIGURE 24. MOSCOW SAM SITE E03-1.

NPIC J-3768 (9 64)

TOP SECRET CHESS RUFF



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TOP SECRET CHESS RUFF

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25X1

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SAM SITE E04-1

This atypical site has two areas of ground scarring that are new since September 1963. The larger (item 1) is along both sides of a rib road in the northwest corner of the launch area and covers approximately 93,600 square feet. A smaller scar (item 2) is inside the perimeter road in the southeast corner of the launch area and covers approximately 21,800 square feet.

SAM SITE E05-1 (NO FIGURE)

SAM Site E05-1 has had no change in the launch area since September 1963. 1/

SAM SITE E06-1

A light-toned scarred area is situated between rib roads 1B and 2B along the centerline road (item 1) and covers approximately 52,200 square feet.

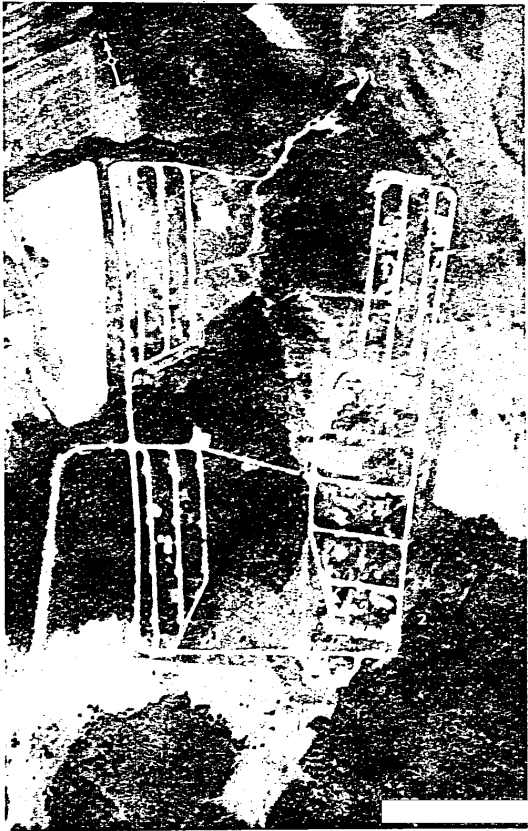


FIGURE 25. MOSCOW SAM SITE E04-1.

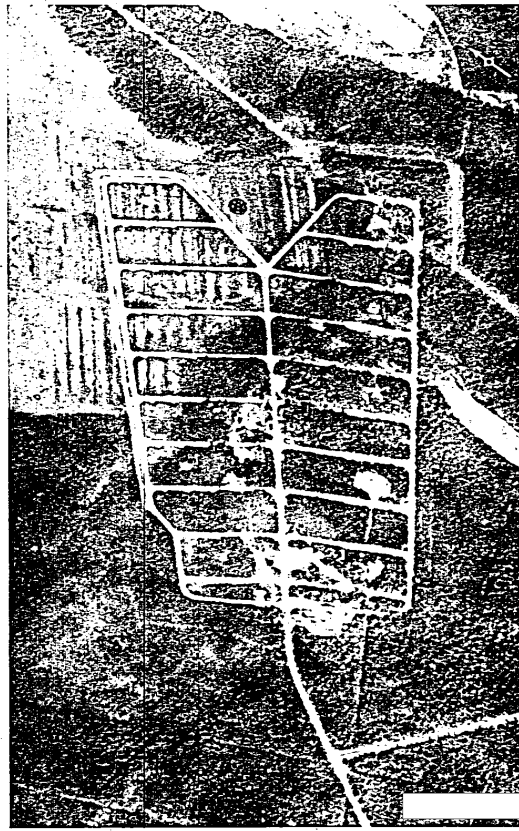


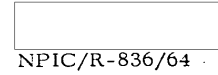
FIGURE 26. MOSCOW SAM SITE E06-1.

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TOP SECRET CHESS RUFF



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SAM SITE E07-1

Five areas of scarring are located by item numbers as follows: 1) an area of 8,750 square feet along the perimeter road in the northeast corner; 2) a second area, immediately south of item 1, is approximately 14,400 square feet; 3) an area between rib roads 7A and 8A adjacent to the perimeter road is approximately 23,250 square feet; 4) a clearing between 4A and 5A is approximately 27,000 square feet; and 5) a clearing at 2B is approximately 8,800 square feet.

SAM SITE E08-1

A clearing was first observed on the west side of rib road 5B (item 1) on photography of [redacted] and a U-shaped revetment was apparent in the clearing on photography [redacted]. The revetment measures approximately 110 by 190 by 115 feet, with walls estimated to be 15 feet wide at the base. A probable road has been constructed since September 1963, connecting rib roads 5A and 6A (item 2).



FIGURE 27. MOSCOW SAM SITE E07-1.



FIGURE 28. MOSCOW SAM SITE E08-1.



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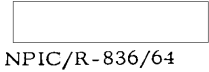
25X1
ZSAI

25X1

25X1
ZSAI

25X1

TOP SECRET CHESS RUFF



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SAM SITE E10A-1

New scarring was apparent between rib roads 5B and 6B (item 1) on photography of

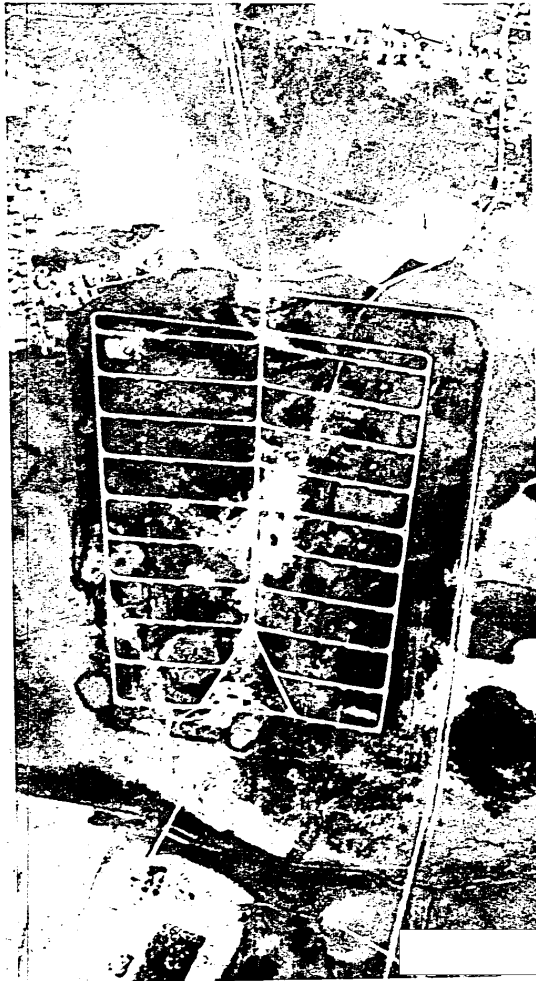


FIGURE 29. MOSCOW SAM SITE E10A-1.

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SAM SITE E10-1

An area of scarred earth that covers approximately 14,000 square feet lies just inside the northeast edge of the perimeter road (item 1).

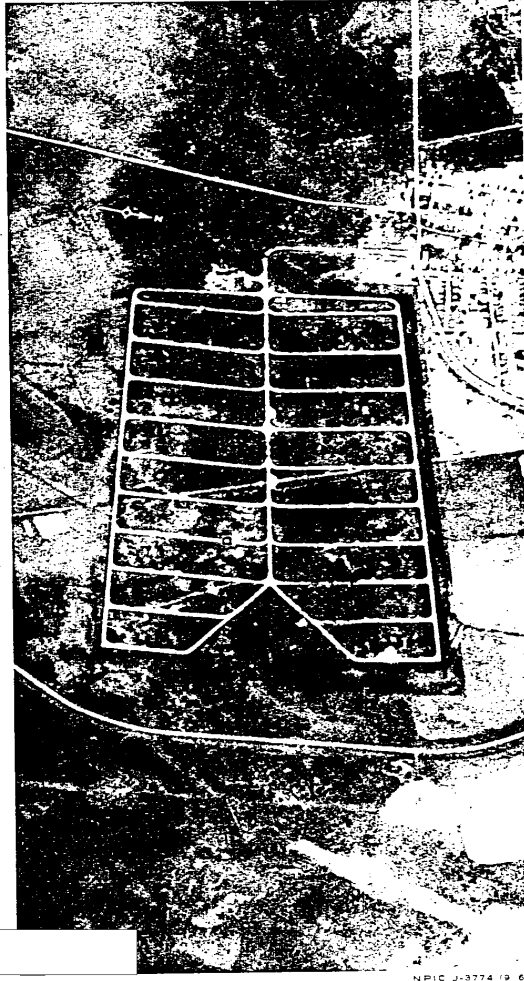
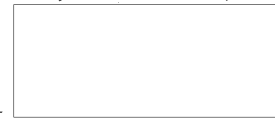


FIGURE 30. MOSCOW SAM SITE E10-1.

NPIC J-3774 19 64

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TOP SECRET CHESS RUFF



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SAM SITE E12-1

Between rib roads 3A and 4A (item 1), a scarred area that covered approximately 14,000 square feet [redacted] had expanded to approximately 17,800 square feet [redacted]

SAM SITE E13-1

A clearing lies between 9A2 and the perimeter road (item 1) and covers an area of approximately 22,100 square feet. On photography [redacted] a revetment that measures approximately 85 by 35 feet was discernible in the clearing. At the intersection of the centerline road and rib road 7A (item 2), another scarred area covers approximately 26,500 square feet. A third area of disturbed earth lies on both sides of the centerline road between rib roads 2 and 3 (item 3), and covers approximately 18,300 square feet.

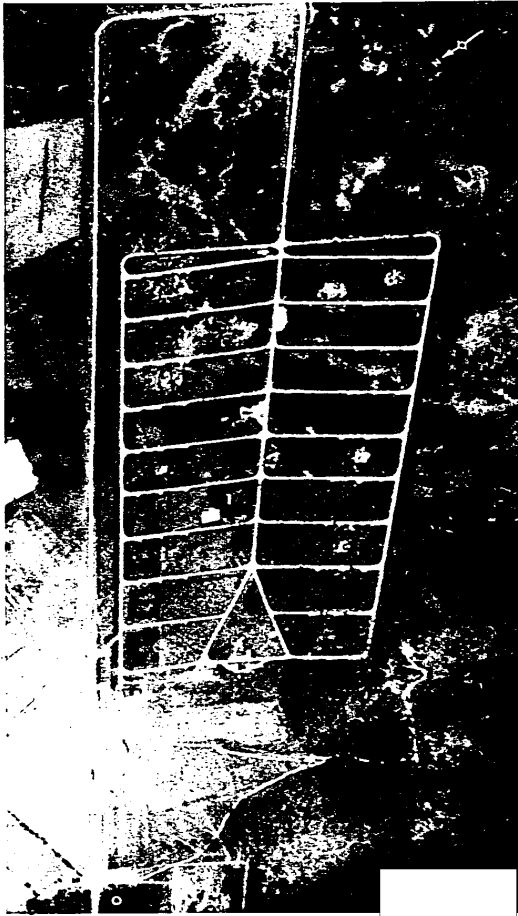


FIGURE 31. MOSCOW SAM SITE E12-1.

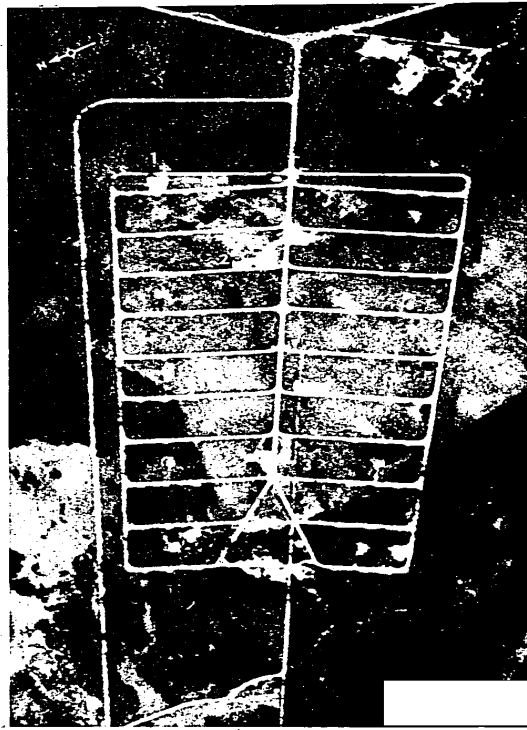


FIGURE 32. MOSCOW SAM SITE E13-1.



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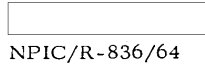
25X1

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TOP SECRET CHESS RUFF



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SAM SITE E14-1

In the northeast corner of the launch area, immediately outside the perimeter road (item 1), a scarred area of approximately 30,000 square feet appears to contain a rectangular revetment. To the west and also outside the perimeter road (item 2), a second area of approximately 26,000 square feet of earth appears scarred. Between rib roads 8B and 9B (item 3) earth scarring that covered approximately 50,000 square feet [redacted] photography had been extended across rib road 8B [redacted]

[redacted] The possible drive-through building (item 4) previously identified on March 1964 photography 5/ is still present on the perimeter road at launch position A2.

SAM SITE E15-1

There is a rectangular excavation approximately 185 feet long by 135 feet wide on the north side of rib road 9A (item 1), and adjacent to it is a second rectangular possible excavation (item 2) that measures 150 by 115 feet. A scarred area of 11,475 square feet lies between rib roads 5A and 6A (item 3), and opposite it, parallel to 5A (item 4) is another area that covers approximately 35,200 square feet. [redacted] items 3 and 4 had expanded to cover an area of approximately 73,000 square feet.

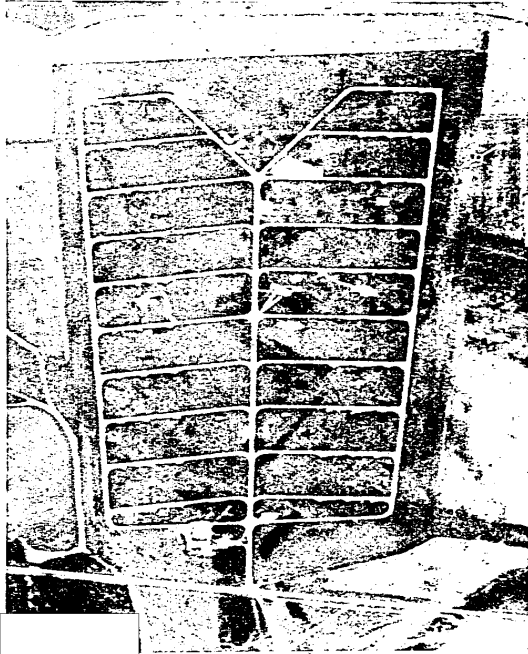


FIGURE 33. MOSCOW SAM SITE E14-1.



FIGURE 34. MOSCOW SAM SITE E15-1.



25X1

25X1

25X1

25X1

25X1

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25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

SAM SITE E16-1

Outside the perimeter road, opposite rib road 9A (item 1), scarring covers approximately 19,000 square feet. Previously reported structures 5/ at 4B1 (item 2) and 7B1 (item 3) had been removed by late June 1964.

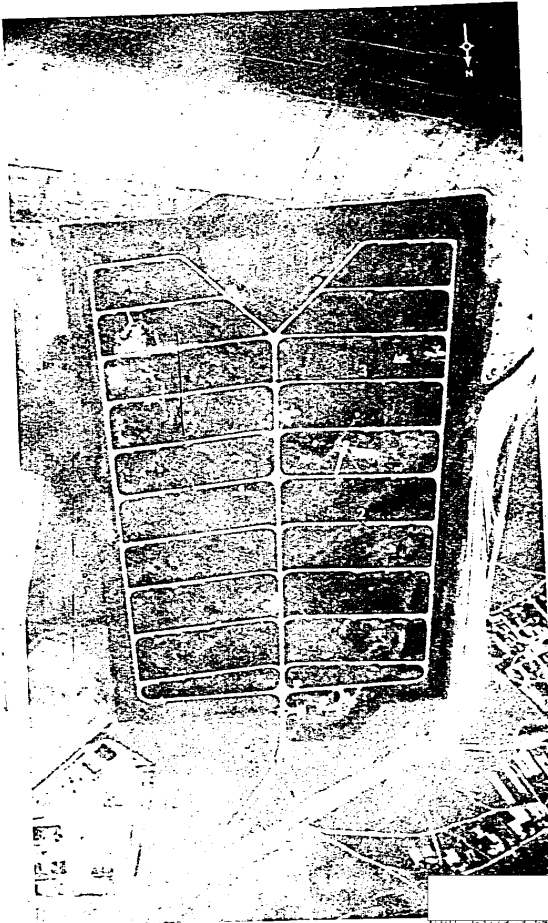


FIGURE 35. MOSCOW SAM SITE E16-1.

SAM SITE E17-1

Parallel to the perimeter road and outside the southeast corner of the launch area, scarring covers approximately 72,000 square feet (item 1). A large scarred area lying on both sides of rib road 6A (item 2) covered approximately 138,000 square feet and had expanded to approximately 156,450 square feet. Additional scarring along the centerline road between rib roads 4B and 5B covered approximately 15,600 square feet. photography (item 3).

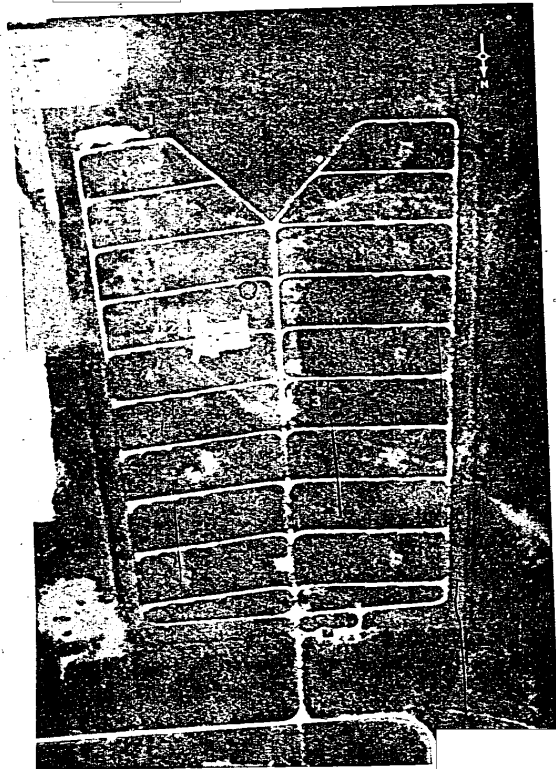


FIGURE 36. MOSCOW SAM SITE E17-1.



25X1

25X1

25X1

25X1

25X1

25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

SAM SITE E18-1

Along the centerline between rib roads 7B and 8B (item 1) earth scarring covers approximately 22,800 square feet. [redacted] a possible U-shaped revetment was apparent in the scarred area.

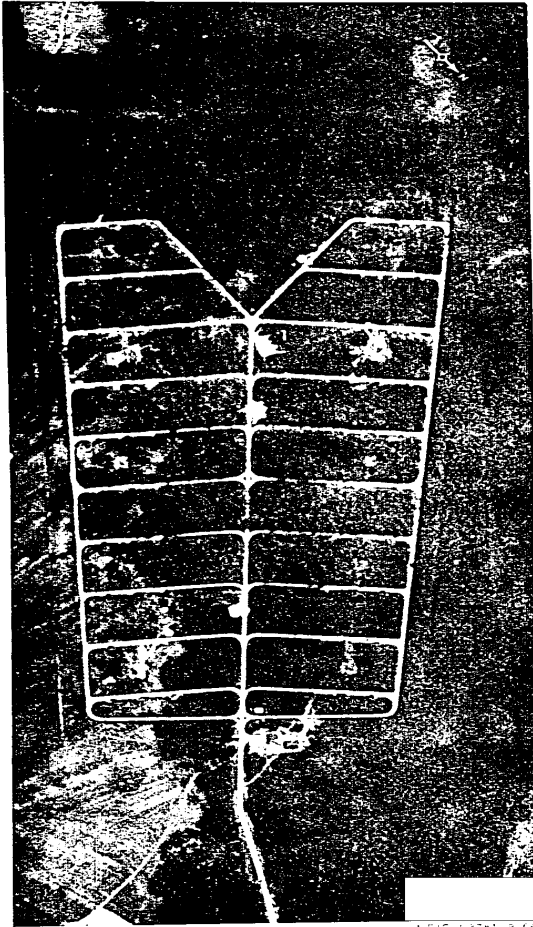


FIGURE 37. MOSCOW SAM SITE E18-1.

SAM SITE E19-1

A small scarred area outside the perimeter road near rib road 9A (item 1) is approximately 6,375 square feet in area. Another scar extends from the vicinity of the centerline road to a point opposite 6A1 (item 2) and measures approximately 665 by 90 feet. Within the scarred area, along the south edge of the rib road, there is a probable earthen wall that measures approximately 425 feet long and is estimated to [redacted]

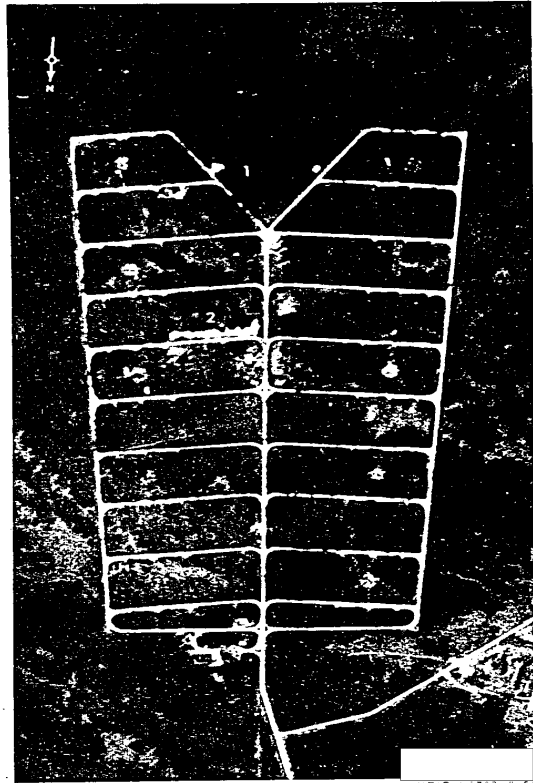


FIGURE 38. MOSCOW SAM SITE E19-1.

TOP SECRET CHESS RUFF



25X1

25X1

25X1

25X1

25X1

25X1

25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

SAM SITE E20-1

Adjacent to the centerline road between rib roads 4A and 5A (item 1) there is scarring approximately 6,750 square feet in area, and at the intersection of rib road 4B and the perimeter road there is another scar which covers 10,900 square feet (item 2). Extending along the perimeter road to rib road 1B there is a scar approximately 470 feet long by 105 feet wide (item 3).

SAM SITE E21-1 (NO FIGURE)

SAM Site E21-1 has had no apparent change

SAM SITE E22-1

A building 130 by 55 feet, located between rib roads 4B and 5B (item 1), may have been present in June 1963 but obscured by vegetation. Also between 4B and 5B (item 2) there is scarring covering approximately 58,000 square feet and containing a probable revetment under construction. Preliminary measurements indicate that one side of the probable revetment is 415 feet long and the other is 230 feet long.



FIGURE 39. MOSCOW SAM SITE E20-1.



FIGURE 40. MOSCOW SAM SITE E22-1.



25X1

25X1

25X1

25X1

25X1

TOP SECRET CHESS RUFF

NPIC/R-836/64

SAM SITE E23-1

Two scarred areas lie between rib road 9A and the perimeter road, one being approximately 20,500 square feet (item 1), and the other 70,000 square feet in area (item 2). Between 7A and 8A (item 3) there is a scar measuring approximately 250 by 145 feet. L-shaped scarring between 5A, 6A, and 7A (item 4) consists of a probable road constructed on a fill, forming the stem. A wall or fence approximately 480 feet long, parallel to 7A, forms the base. Some scarring is evident opposite 3A1 (item 5), and covers approximately 11,500 square feet.

SAM SITE E24-1 (NO FIGURE)

SAM Site E24-1 has had no apparent change in the launch area since September 1963. 2/

SAM SITE E25-1

Between rib roads 5B and 6B along the centerline road (item 1), a scar covering approximately 85,000 square feet contains a rectangular revetment under construction. The revetment measures 260 by 140 feet and has walls that are estimated to be 30 feet wide at the base. There is another small scar between rib road 9A and the perimeter road (item 2).

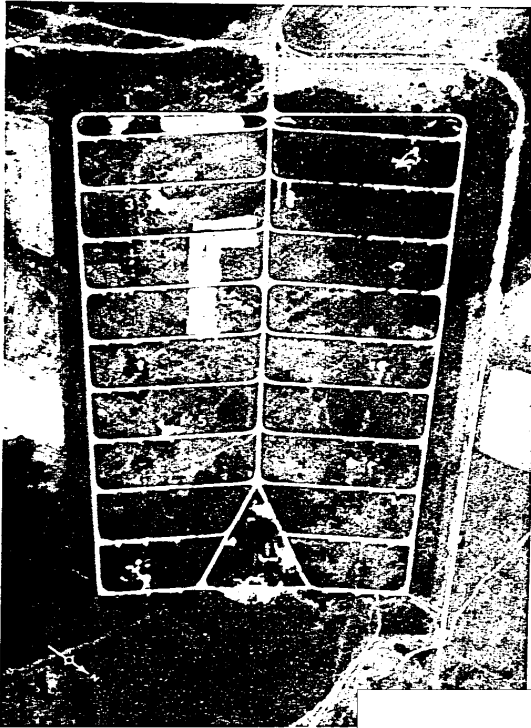


FIGURE 41. MOSCOW SAM SITE E23-1.

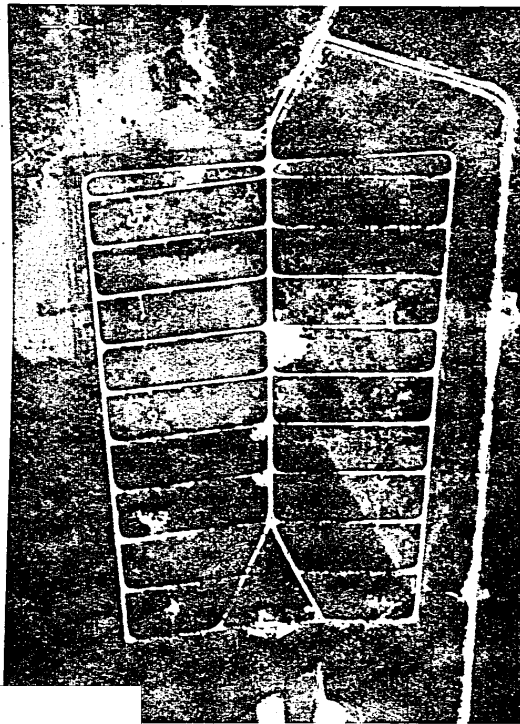


FIGURE 42. MOSCOW SAM SITE E25-1.

25X1

25X1

25X1

25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

25X1
25X1

SAM SITE E26-1

A scarred area parallel to a launch ribroad north of the centerline road (item 1) is approximately 26,600 square feet in area. It contains a rectangular revetment approximately 380 feet long by 70 feet wide, with walls that are approximately 25 feet wide at the base. Scarring along the perimeter road at the west end of the launch area (item 2) contains a probable rectangular revetment which is approximately 160 by 95 feet with walls estimated to be 28 feet wide at the base.

SAM SITE E27-1

Between rib roads 7A and 8A along the centerline road (item 1) the earth is scarred for approximately 23,750 square feet. At the junction of rib road 1B and the perimeter road (item 2) scarring covers approximately 14,500 square feet. Between rib road 12A and the perimeter road (item 3) earth scarring covers approximately 20,000 square feet through which there is a linear ditch or cut connecting the roads. The cut or ditch is approximately 170 feet long by 25 feet wide.

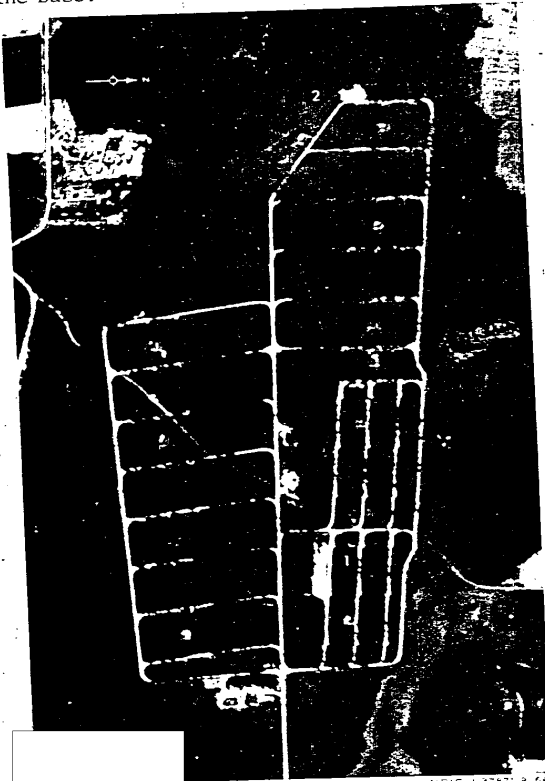


FIGURE 43. MOSCOW SAM SITE E26-1.

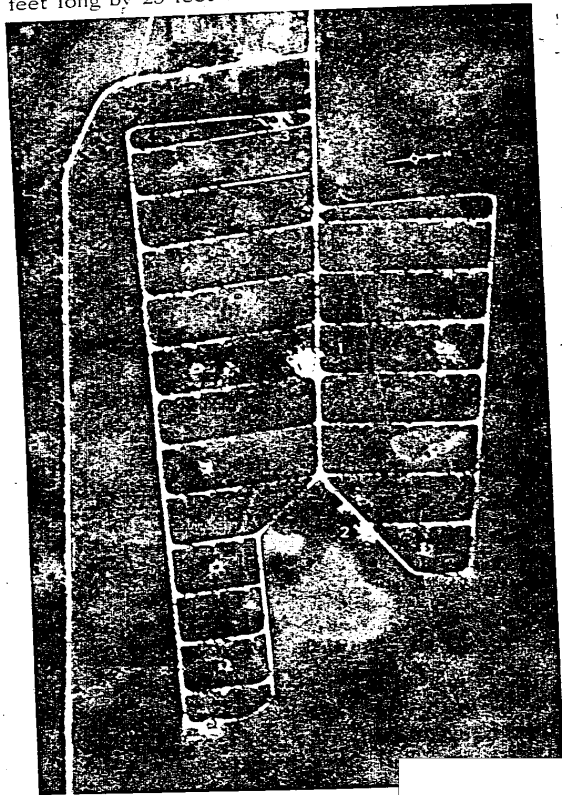
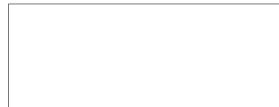


FIGURE 44. MOSCOW SAM SITE E27-1.

25X1

TOP SECRET CHESS RUFF



25X1

TOP SECRET CHESS RUFF

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SAM SITE E28-1

A clearing between rib roads 4A and 5A (item 1) is approximately 77,000 square feet in area and contains a revetment that measures 280 by 85 feet and has walls estimated to be

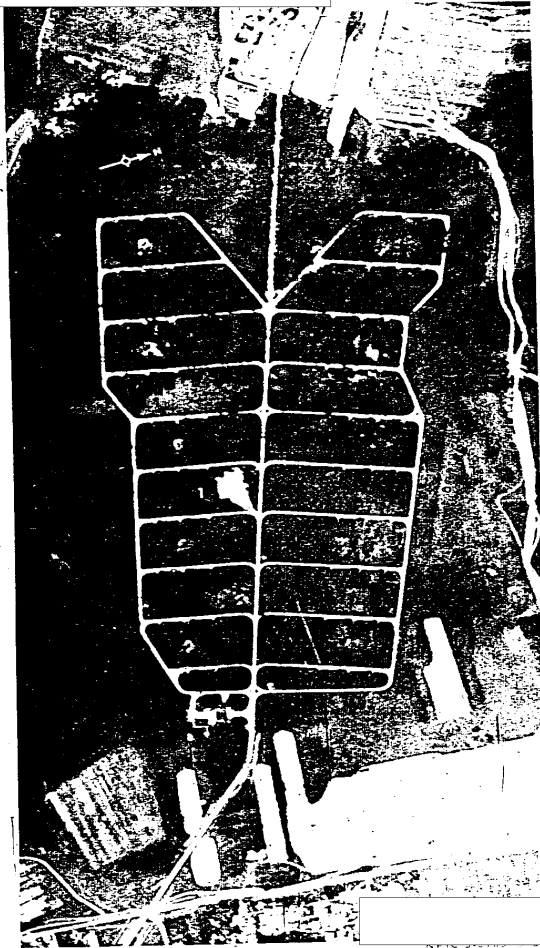


FIGURE 45. MOSCOW SAM SITE E28-1.

SAM SITE E30-1

Scarring parallels rib road 9A on both sides (item 1) and is approximately 300 feet long by 265 feet wide. Inside the perimeter road, at the intersection with rib road 8B (item 2), there is an area of disturbed earth which covers approximately 11,900 square feet. Along rib road 8A there are two areas of disturbed earth, one on the west side (item 3) approximately 10,400 square feet in area, and one on the east side (item 4) approximately 7,500 square feet. A ground scar on the east side of rib road 8B (item 5) has probable earthen walls pushed up on the ends, at right angles to the rib road. The area covers approximately 15,400 square feet. Paralleling rib road 6B (item 6) scarring covers an area of approximately 75,000 square feet. Adjacent to the control bunker between rib roads 5A and 6A (item 7) the earth is disturbed for approximately 9,600 square feet.

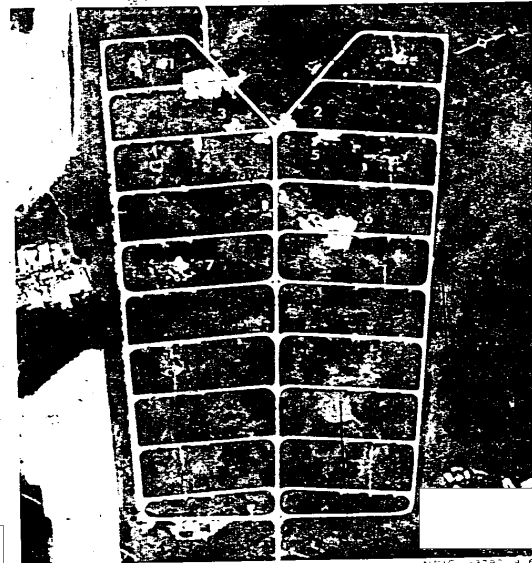


FIGURE 46. MOSCOW SAM SITE E30-1.

25X1

25X1

25X1

25X1

25X1

25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

25X1

SAM SITE E31-1

An area of scarring between rib roads 1A and 2A (item 1) covers approximately 67,200 square feet.

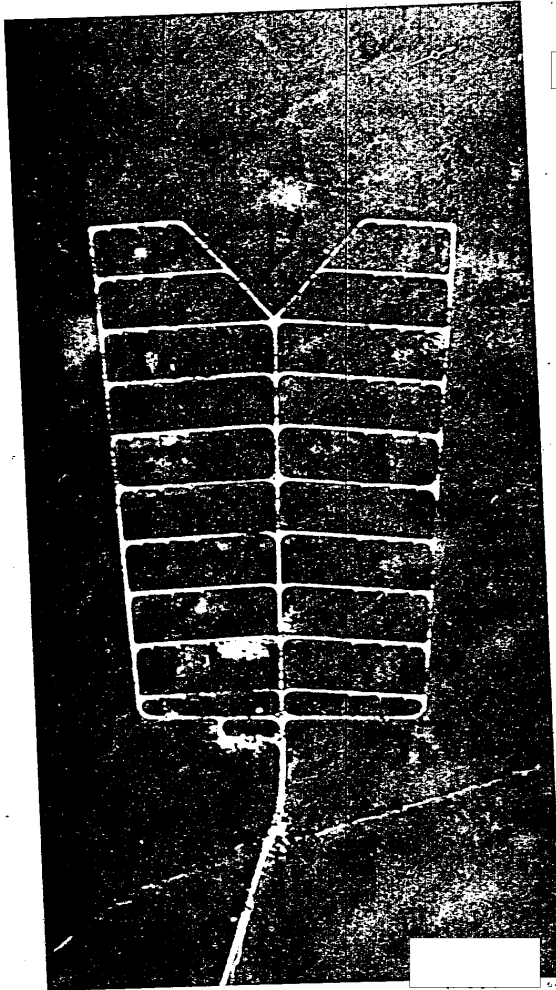


FIGURE 47. MOSCOW SAM SITE E31-1.

SAM SITE E32-1

A curved scar between rib roads 3A and 4A along the perimeter road (item 1) is approximately 71,400 square feet in area. Within it there is a rectangular revetment approximately 265 by 90 feet with narrow entrances at both ends. The walls are estimated to

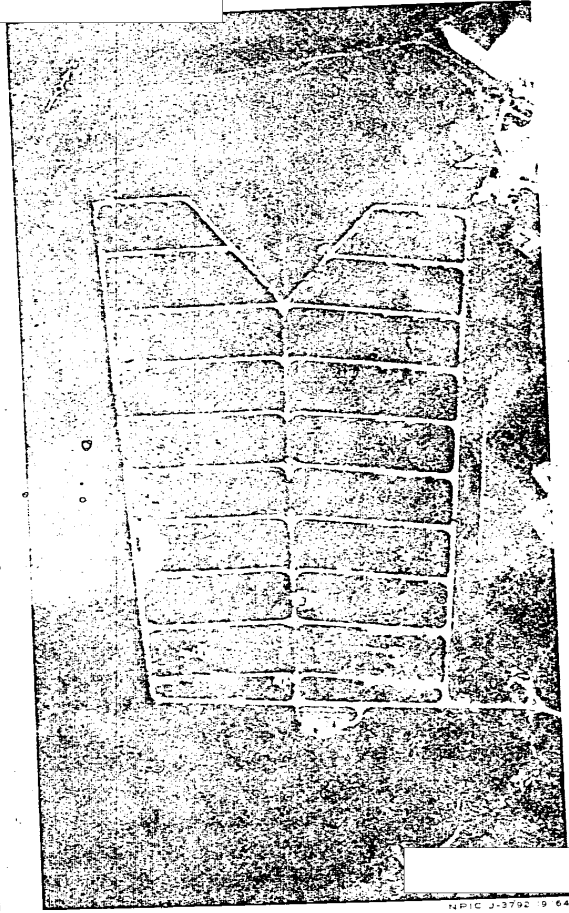


FIGURE 48. MOSCOW SAM SITE E32-1.

25X1

25X1

25X1
25X1

TOP SECRET CHESS RUFF



25X1

TOP SECRET CHESS RUFF



NPIC/R-836/64

SAM SITE E33-1

A scarred area north of rib road 9A contains two low earthen walls (item 1). Scarring covers approximately 30,000 square feet. A U-shaped revetment has been constructed between rib roads 5B and 6B (item 2), in a cleared area of approximately 57,500 square feet. The revetment measures 160 by 125 by 160 feet.

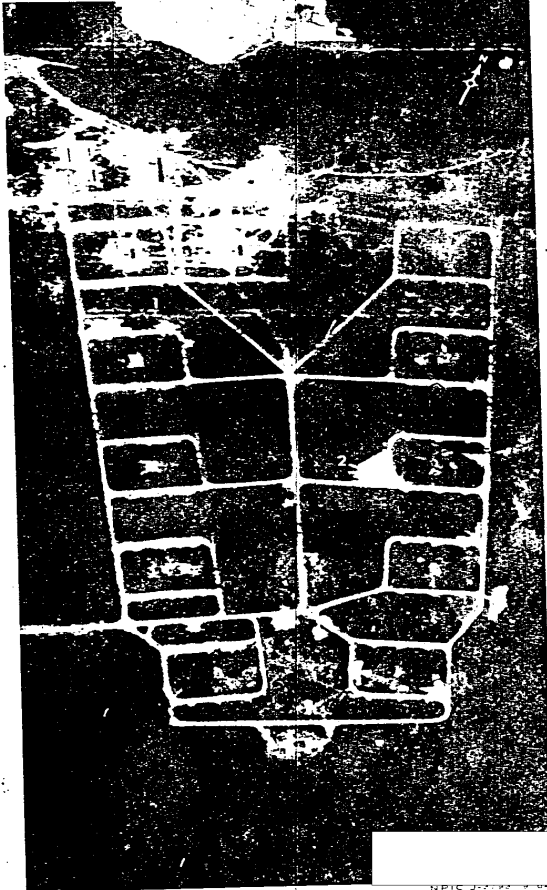


FIGURE 49. MOSCOW SAM SITE E33-1.

SAM SITE E34-1

At the center of the launch area (item 1) scarring parallels both sides of the perimeter road for approximately 1,065 by 225 feet.



FIGURE 50. MOSCOW SAM SITE E34-1.



25X1
25X1

25X1
25X1

25X1

TOP SECRET CHESS RUFF



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25X1
25X1

SAM SITE E35-1

Scarring along the perimeter road at the northeast end of the launch area (item 1) covers approximately 45,000 square feet. Within it, a generally L-shaped earthen wall measures 280 by 170 feet. A possible environmental shelter is at position 2A1 (item 2).

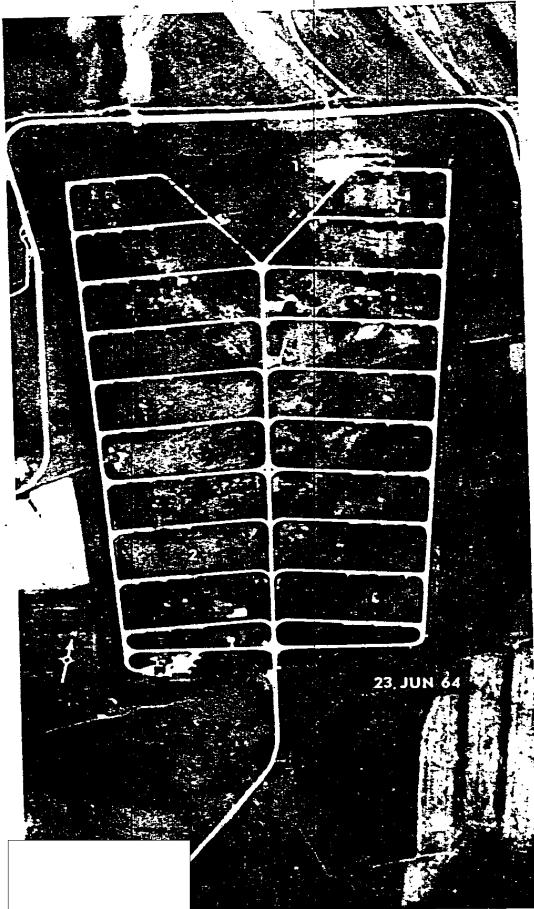


FIGURE 51. MOSCOW SAM SITE E35-1.

SAM SITE E36-1

A rectangular scar approximately 58,845 square feet in area lies between the perimeter road and rib road 1A (item 1). It contains a probable revetment under construction, with walls on the east and west ends that are approximately 100 by 190 feet long, respectively. Along both sides of rib road 5A (item 2) earth scarring covers approximately 62,800 square feet. Adjacent to the perimeter road on the west side there are two U-shaped probable revetments (item 3), one of which is 120 by 20 by 120 feet, and the other is 80 by 20 by 80 feet.

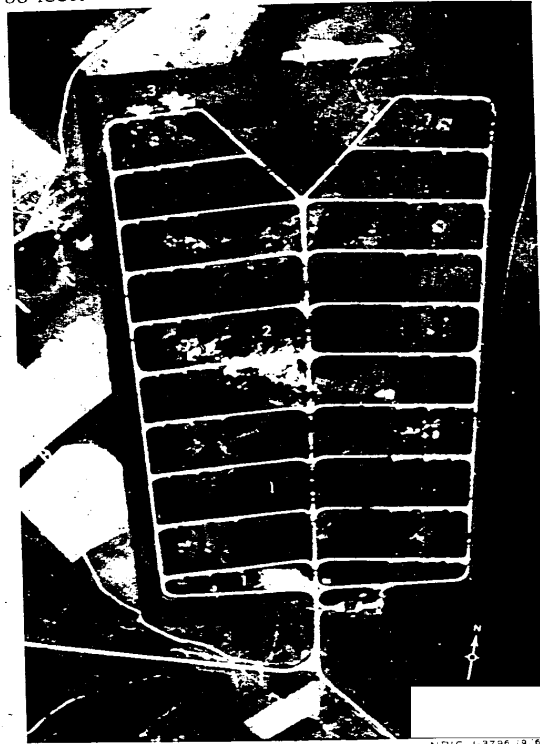


FIGURE 52. MOSCOW SAM SITE E36-1.

25X1
25X1

TOP SECRET CHESS RUFF



25X1

TOP SECRET CHESS RUFF

NPIC/R-836/64

Table 1. Chronology of Changes, Moscow Photographic Coverages*

Site Number										
C02-1	NP	1 FO: 2, 3 ND, s	NC	NC	NC	2, 3 NP	2, 3 FO	NAC	NAC	
C04-1	NP	1 ND, s; 2 NO	NC	NC	NC	1 CC: 2 FO	1 FO: 2 NAC	NAC, SC, CS	CC	
C05-1	NP	FO	NC	NC	NC	NAC	NAC	NAC	CC	
C07-1	NP	CC	NC	NC	NC	1, 2 FO	NAC	1 active	CC	
C09-1	NP	ND, s	NC	NC	NC	CC	FO	1 expands	1 active	
C10-1	NP	ND, s	NC	NC	NC	NO	FO	NAC	NAC, SC	
C12-1	NP	ND, s	NC	NC	NC	FO	NAC	NAC, SC, CS	1 expands	
C16-1	NP	ND, s	NC	NC	NC	FO	NAC	NAC	NAC	
C19-1	NO	ND, s	NC	NC	NC	FO	NAC	CC	1 expands	
C20-1	NO	ND, s	NC	NC	NC	NP	FO	NAC, SC	NAC, SC	
C22-1	NP	NO	ND, s	NC	NC	NP	FO	NAC	CC	
C24-1	NP	pos s P	ND, s	NC	NC	FO	NAC	NAC, SC	NAC	
C25-1	NC	NP	NP	NC	NC	FO	1 expands	ND, SC	1 expands	
C27-1	NC	ND, s	ND, s	NC	NC	NP	FO	NAC, SC	1 expands	
C28-1	NO	2 FO	ND, s	NC	1 NP: 2 NAC	1 FO	NAC	NAC, CS	NAC	
C30-1	NO	1 ND, s; 2 FO	ND, s	NC	NC	1 FO	NAC	NAC, CS	CC	
C32-1	NP	ND, SC	NC	NC	NC	NP	FO	NAC	CC	
C35-1	NP	NP	NC	NC	NC	1 NP: 2 FO	1 FO	NAC, CS, SC	CC	
C36-1	NP	1 FO: 2 ND, s	NC	NC	NC	2 FO	NAC	CC	CC	
E01-1	NO	FO	NC	NC	NC	NAC	NAC	NAC	NAC	
E02-1	NP	ND, s	NC	NC	NC	NO	1, 2 FO	CC	1 active	
E03-1	NO	NO	NC	NC	NC	FO	NAC	NAC	2 expands	
E04-1	NO	ND, s	NC	NC	NC	NC	FO	NAC	NAC	
E06-1	NO	ND, s	NC	NC	NC	NC	FO	NAC	CC	
E07-1	NO	ND, s	NC	NC	NC	NC	FO	CC	CC	
E08-1	NO	ND, s	NC	NC	NC	NC	FO	1 active	CC	
E10A-1	NO	ND, s	NC	NC	NC	NC	FO	CC	CC	
E10-1	NO	ND, s	NC	NC	NC	NC	FO	NAC	NAC, SC, CS	
E12-1	NO	ND, s	NC	NC	NC	NC	FO	NAC	1 expands	
E13-1	NO	ND, s	NC	NC	NC	NC	FO	1 active	NAC	
E14-1	NO	ND, s	NC	ND, SC	NC	FO	NAC	3 expands	3 expands	
E15-1	NO	ND, s	NC	1 FO	1, 2 ND: 3, 4 NP	2, 3 FO: 4 NP	4 FO	NAC	3 expands	
E16-1	NP	ND, s	NC	ND, SC	NC	1 FO	NAC	NAC, SC	NAC	
E17-1	NP	1, 2 ND, s; 3 pos s	NC	NC	NC	FO	NAC	NAC, SC	2 expands	
E18-1	NP	NP	ND, s	NC	NC	CC	FO	NAC, SC, CS	1 expands	
E19-1	NP	NP	1 NP: 2 ND, s	NC	NC	1 FO: 2 NP	2 FO	NAC	CC	
E20-1	NP	1, 2 ND, s	ND, s	NC	NC	1, 3 FO: 2 CS	2 FO	NAC	NAC	
E22-1	NO	FO	ND, s	NC	NC	CC	NAC	NAC	NAC	
E23-1	NO	ND, s	ND, s	NC	NC	FO	NAC	CC	NAC	
E25-1	NP	ND, s	ND, s	NC	NC	NC	1 FO: 2 NP	2 FO	NAC	
E26-1	NP	1 NP: 2 FO	1 NP: 2 NAC	NC	NC	1 NP: 2 NAC	1 FO	NC	NC	
E27-1	NP	ND, s	1, 2 FO: 3 ND, s	NC	NC	1, 2 NAC: 3 NP	2 FO	NC	NAC, SC, CS	
E28-1	NP	ND, s	ND, s	NC	NC	FO	NAC	NC	NAC, H	
E30-1	NP	ND, s	ND, s	NC	NC	1-5 FO: 6 NP	6, 7 FO	NC	6 expands	
E31-1	NP	NP	ND, s	NC	NC	FO	NAC	NC	CC	
E32-1	NP	ND, s	ND, s	NC	NC	FO	active?	NAC, SC	NAC	
E33-1	NP	FO	NC	NC	NC	reset complete	NAC	NAC, SC	NAC, HC	
E34-1	NP	NP	NC	NC	NC	FO	NAC	NAC	NAC	
E35-1	NP	1 ND, s; 2 FO	NC	NC	NC	1 FO	NAC	NAC	NAC	
E36-1	NP	1 ND, s; 2, 3 FO	NC	NC	NC	1, 4 FO	NAC	NAC	NAC	

*Numbers correspond to item numbers used in the preceding text and graphics. Abbreviations follow:

- NC--Not covered
- NP--Not present
- CC--Cloud covered
- HC--Heavy cloud cover
- ND--Not discernible
- FO--First observed
- CS--Cloud shadow
- S--Snow
- NO--Not observed
- NAC--No apparent change
- H--Haze
- SC--scattered cloud cover

TOP SECRET CHESS RUFF

TOP SECRET CHESS RUFF

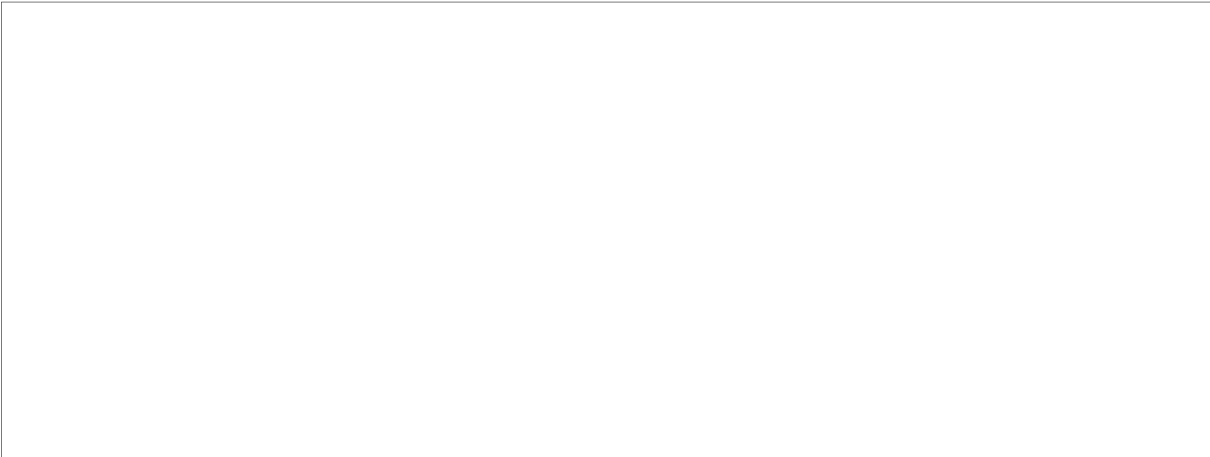


NPIC/R-836/64

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REFERENCES



25X1

MAPS OR CHARTS

- DIA. US Air Target Chart, Series 200, Sheet 0154-22HL, 2d ed, Mar 63, scale 1:200,000 (SECRET)
- DIA. US Air Target Chart, Series 200, Sheet 0154-23HL, 2d ed, Apr 63, scale 1:200,000 (SECRET)
- DIA. US Air Target Chart, Series 200, Sheet 0167-4HL, 2d ed, Mar 63, scale 1:200,000 (SECRET)
- DIA. US Air Target Chart, Series 200, Sheet 0167-10HL, 2d ed, Feb 63, scale 1:200,000 (SECRET)

DOCUMENTS

- 1. NPIC. R-64/64, SA-1 SAM Sites, Moscow, USSR, Northeast Quadrant, Jan 64 (TOP SECRET RUFF)
- 2. NPIC. R-71/64, SA-1 SAM Sites, Moscow, USSR, Southwest Quadrant, Feb 64 (TOP SECRET RUFF)
- 3. NPIC. R-81/64, SA-1 SAM Sites, Moscow, USSR, Northwest Quadrant, Feb 64 (TOP SECRET RUFF)
- 4. NPIC. R-90/64, SA-1 SAM Sites, Moscow, USSR, Southeast Quadrant, Feb 64 (TOP SECRET RUFF)
- 5. NPIC. R-278/64, Newly Identified Activity at SAM Sites E14-1, E15-1, and E16-1, Moscow, USSR, May 64 (TOP SECRET CHESS RUFF)

REQUIREMENTS

- CIA. C-RR4-81,508
- CIA. C-RR4-81,660

NPIC PROJECT

N-696/64

TOP SECRET CHESS RUFF



25X1