

31AE file - USSR
btdel
4

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

~~SECRET~~ [Redacted]

COUNTRY USSR (Altay Kray)
SUBJECT Alleged Nuclear Weapons Tests near
Senipal'tinsk

REPORT NO. [Redacted]
DATE DISTR. 1 April 1957
NO. PAGES 7
REQUIREMENT NO. RD
REFERENCES E025x1 CIA

DATE OF INFO. [Redacted]
PLACE ACQUIRED [Redacted]

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

[Large Redacted Area]

1. Appearance of the Blast

we know of no such shot

a. On the morning of 8 December 1955 (new Soviet calendar), Source was working inside one of the large buildings of the soda plant. At approximately 0900 hours (local time), Source experienced a significant change in pressure on his ear drums. This pressure was not sharp and painful but was of sufficient intensity and duration to cause him to turn from his work to determine the cause of the pressure. For a few seconds he was unable to hear. As Source turned from his work, the ground began to tremble and pulsate, not violently, but as if an earthquake were beginning. At this point the chief of the works ran through the building calling to all workers to go outside. As Source ran out he observed that the buildings in the area were oscillating as if they had been set in motion by the ground movement. Source believed the movement of the buildings was caused by the ground movement rather than by an air wave. Outside the air was "crackling with pressure;" it sounded as if the "air was tearing up." Source did not know whether the crackling was due to the burst or to the passage of a single-engine jet aircraft over the area during this time. The vibration of the buildings appeared to have been effected by one large "push" followed by a series of smaller vibrations.

Declassified Authority: [Redacted]
By: Dorothy Johnson Date: [Redacted]
02-08-2017

ASSISTANT TO THE SECRETARY
S/AS

APR 16 1957

STATE	X	ARMY	X	NAVY	X	AIR	X	FBI		AEC	X	NSA	#	OSI	Ev	X
-------	---	------	---	------	---	-----	---	-----	--	-----	---	-----	---	-----	----	---

(Note: Washington distribution indicated by "X"; Field distribution by "#")

EGT-496

INFORMATION REPORT INFORMATION REPORT

~~SECRET~~

25x1 CIA

-2-

- b. Source and several coworkers first looked in the direction the ground wave appeared to be traveling (northeast). Someone shouted to the group to turn around and as Source turned he saw the upper third of a large red-orange fireball on the southwest horizon. The fireball appeared in color and intensity like a bright sun shining through a haze. Source was not blinded by this light and felt no change in temperature. Only the upper third of the fireball, described as a semicircle, was visible over the forest. Source stated that the fireball did not increase in size during his observation. He was unable to describe accurately the size of the fireball but recalled that the end points of the chord of the upper third of the ball lay on the horizon between two small lakes (see Sketch 1 of Attachment A). *2*
- c. Source did not see the fireball pulse. He guessed the elapsed time from the moment he felt the shock on his ears until he observed the fireball collapse and disappear to be approximately five minutes.
- d. No mushroom cloud appeared as a result of the explosion. The weather was clear and cold (-30°C.); the sun was obscured by a complete cover of clouds at very high altitude. Source stated that this region was "always" blanketed with a very high cloud cover. No change occurred in the weather as a result of the blast.

2. Effects and Damage

- a. All windows in the large buildings of the soda factory (see Sketch 3 of Attachment A) were destroyed, but Source was unable to fit the loss of the windows into the sequence of events and could not recall whether the windows blew in or out. *3* Composition shingles on the wooden buildings did not suffer damage, nor did the buildings themselves suffer any effects. These buildings were of frame construction with walls made of planking approximately 7/8 inch thick. The only damage observed by Source was the flaking off of dry clay which was used by the prisoners to cover their crude living quarters. Automobiles in the area were not damaged. No personnel were injured. No leaves were torn from the trees (Source pointed out that the trees are coniferous).
- b. The blast pressure wave traveled down the stacks of the calcining furnaces, through a tunnel connecting the stacks to these furnaces, and down the length of the furnaces, blowing open the steel doors (weight of door, 220 lbs; coefficient of friction of hinges, unknown) and spewing the contents out into the yard (see Sketches 4a and 4b of Attachment A).
- c. Ashes were also blown from the fireplaces of residences in Soda Zavod. *4* Source did not observe other damage to the town of Soda Zavod. On 17 December he traveled to Malinovo (see *Drum*, 1 km east of Soda Zavod, was *Drum* and *Drum* *Drum*). He did not observe any damage to this town but pointed out that in his excitement of going home he probably would not have noticed anything but the most severe damage.
- d. Several hours after the blast, Kazakhs came into Soda Zavod and reported damage and loss of life in several of the small towns along the Irtysh River northwest of Semipalatinsk. Source did not learn specifically how the people had been killed. The Kazakhs reported that the residents of the towns did not evacuate the area because damage was not sufficient to result in mass relocation of the populace, although some living quarters were destroyed. The damage consisted of the destruction of clay-covered log houses; clay had been ripped off and some of the logs had fallen. The damage caused by the December 8 explosion was the first Source had seen or heard of in this area.

3. Post Test Activities

- a. On the day following the December 8 test, Source heard a VOA program in Russian announcing that the USSR had exploded a hydrogen bomb. On the following day (December 10), the Soviet radio, which Source believed to be Radio Moscow, also announced that the USSR had detonated a hydrogen bomb. The radio reported that 17 grams of hydrogen had been used in the weapon. Several days after the test, Source heard on the radio (again believed to be Radio Moscow) that indemnification would be paid to the residents injured by a "Soviet nuclear weapons test" in the area. He did

~~SECRET~~

~~SECRET~~

-3-

not know if this was actually paid

- b. On the day following the test (9 December), three Soviet "officials" whom neither he nor his associates had seen previously, arrived in the area and questioned residents concerning the event of the explosion and the cause and consequences of the damages. Source could not describe their uniforms except that they were golden yellow in color and had three stars of unknown color on the shoulder boards. Source did not speak with these "officials."
- c. On 9 or 10 December, a general rumor circulated among the people in Soda Zavod that a second test had been cancelled, allegedly because of the damage caused by the test on 8 December. Source could not amplify this statement.

4. Air Activity in the Area

- a. Source observed a single-engined jet aircraft at the time of the nuclear test and assumed it was concerned with the test. This aircraft was first observed by Source flying low over the trees (which Source located between him and the fireball), coming from the southwest and flying toward the northeast. Source reconstructed the flight path of this aircraft from a jet trail he saw in the sky at the time of the burst. This trail was very high until the aircraft was over the trees; it then took a sharp downward bend ending with the jet flying low (see Sketch 5 of Attachment A). The appearance of the aircraft caused considerable excitement and speculation; the observers assumed that it had dropped an atomic bomb. No other aircraft was observed at the time of the test.
- b. The only other air activities Source had observed in the area were the daily flights of three twin-engined transport planes which flew in the direction of Semipalatinsk. The aircraft flew several minutes apart between 0900 and 1000 hours every day. Each evening three similar aircraft flew from the direction of Semipalatinsk, presumably toward Barnaul. Source cannot recall seeing any military aircraft, such as large jet bombers or other types, flying in the area.

5. Restricted Area

EO25x1 CIA

- a. Source first heard of atomic testing in the area near Soda Zavod in the fall of 1951 when one of his Russian friends in the town told him that the USSR had the atom bomb. (Source had also heard a radio announcement sometime in 1949 that the USSR had the atom bomb). Source's friend said that the USSR had detonated a bomb in 1951 and that houses at an unknown location (not Soda Zavod) had had some clay flaked off as a result of the burst. Source's friend told him that at that time the radio reported this incident as an earthquake but that "all the Russians living in the area knew it was the atom." His friend said that he had heard from his Kazakh friends that large weapons were being tested in the restricted area. Source could supply no further details of this conversation.
- b. Sometime prior to 1955, Source also had contact with Kazakhs who lived along the Irtysh River northeast of Semipalatinsk. These Kazakhs told him that west of this river was a large restricted area for the purpose of "testing weapons." The Kazakhs stated that they had heard explosions in this area over several years, some of which they believed to be normal artillery weapons. From conversations with residents of the small towns along the river, Source estimated the center of this restricted area to be not farther than 280 to 300 km southwest of Mikhaylovskiy (see Sketch 2 of Attachment A). Source claimed that all residents along the Irtysh River knew of the restricted area.
- c. From June to August 1955, Source visited the east bank of the Irtysh between Semipalatinsk and Podpuskoye to fish. He observed on the west side of the river small poles bearing red flags 30 to 40 cm in size;

~~SECRET~~

~~SECRET~~ [REDACTED]

-4- [REDACTED]

these poles were placed at distances of 400 to 500 meters. Residents of the area told Source that these flags marked the restricted zone of the Soviet weapons testing ground and that all heavy weapons produced in the USSR were tested here. Source had also heard from Russian residents in Soda Zavod that weapons were assembled and tested in this area. He had no information concerning production of weapons within the restricted area itself or in the city of Semipalatinsk which does not lie within the restricted area. Source had no information concerning the inside of the restricted area. He did not see any fences, patrols, or towers near the area.

6. Other Test Activities

EO25x1 CIA

- a. Source claimed to have experienced the effects of two other Soviet nuclear tests: one in the winter (possibly December) of 1951 and one in early 1952. Source stated that the 1951 effect occurred at approximately 2000 hours; he described it as a rush of air accompanied by a slight ground movement. He saw no flash, and no damage occurred in the area. The effect in early 1952 was of the same intensity in ground movement but was accompanied by a less severe, hardly noticeable pressure wave. This second test occurred between 1800 and 1900 hours, but Source could not give a specific date.
- b. Source admitted that at the time he experienced the above effects he did not know their causes, but that after the test on 8 December 1955, which he considered to be unmistakably an atomic test, he thought back to previous experiences of a similar nature and concluded that the above effects were also the result of nuclear tests. He did not recall any discussion by the citizens in Soda Zavod of the 1951 and 1952 events, other than that from his friend (see paragraph 5).

7. Possible Weather Station

- a. Source could describe only generally what he believed to be a small weather station located in the town of Soda Zavod. This station was a small, one-story wooden house adjoining an area of approximately 15 x 15 meters, fenced with barbed wire. The fenced area enclosed two metal poles approximately 6 meters and 4 meters in height. These poles were anchored to the ground by guide wires and were connected by an overhead wire to the wooden building outside the area. Source believed these to be antennas but he had no evidence to support this. The enclosed area also contained a wooden pole 2 meters in height with a small unit resembling a portable radio transmitter attached to the base. Source once saw a man operating this unit by twisting knobs and reading dials. Source could not assign any function to this unit.
- b. Source also observed what appeared to be a surveying team working outside the fenced area: two men with red and white expandable tripod poles moving throughout the area, placing the poles vertically on the ground while a third man gave instructions to the pole carriers and made readings from the poles through "field glasses." Source once observed these poles with a T-shaped box on top; the men holding the poles were giving "readings" of unknown character to another man who noted the readings in a notebook. Source never observed any balloons being used.
- c. The station was manned by three civilians but was not continually occupied. Source passed it several times when it appeared deserted. He did not know if the station was operated during certain seasons or whether it was occupied in November and December 1955.
- d. Source had no evidence to assign a radioactive monitoring function to this station.

8. Regional Information

- a. Source never visited the city of Semipalatinsk because he did not have the proper documents (a "passport"); the only document he possessed was a

~~SECRET~~ [REDACTED]

SECRET

-5-

plant pass for the soda factory. He had heard that no special documentation was required in Semipalatinsk other than the normal documents carried by a free [redacted], and that no special security checks existed within the city except the normal spot checks made from time to time by the militia. Source never visited any of the towns surrounding Soda Zavod other than Mikhaylovskiy and Malinovo. Ozero [redacted]

- b. Source heard that a large, very restricted military installation was located directly southeast of Semipalatinsk. He had no information to associate this installation with the testing area.
- c. Source never observed any troop unit numbers nor did he ever see military personnel in large numbers. He could not recall the unit numbers of the small body of troops located in Soda Zavod.
- d. Source never observed any river traffic on the Irtysh on his few visits there. The river was 2 km wide and fast-flowing.

1. [redacted]

2. [redacted] Comment. Source's reconstruction diagram of the appearance of the fireball in relation to the two lakes was made only after considerable effort and most probably constitutes only a vague guess.
3. [redacted] Comment. In view of the lack of other damage, this statement should be taken with reserve. Another source who lived in this area at the same time has denied knowledge of any broken windows.
4. [redacted] Comment. This phenomenon has been reported by a separate independent source who was in Soda Zavod at the time.

EO25x1 CIA

SECRET

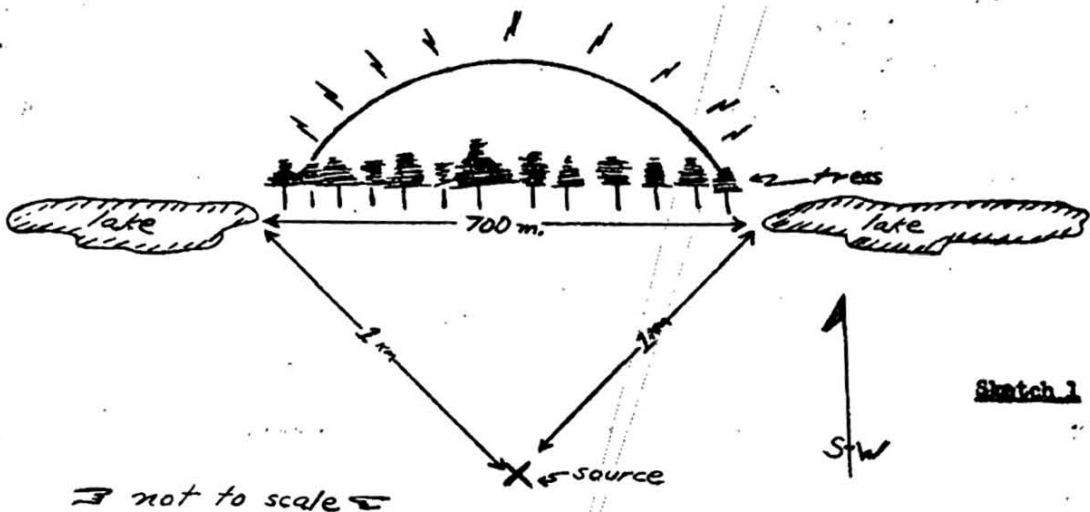
SECRET

6

Attachment A

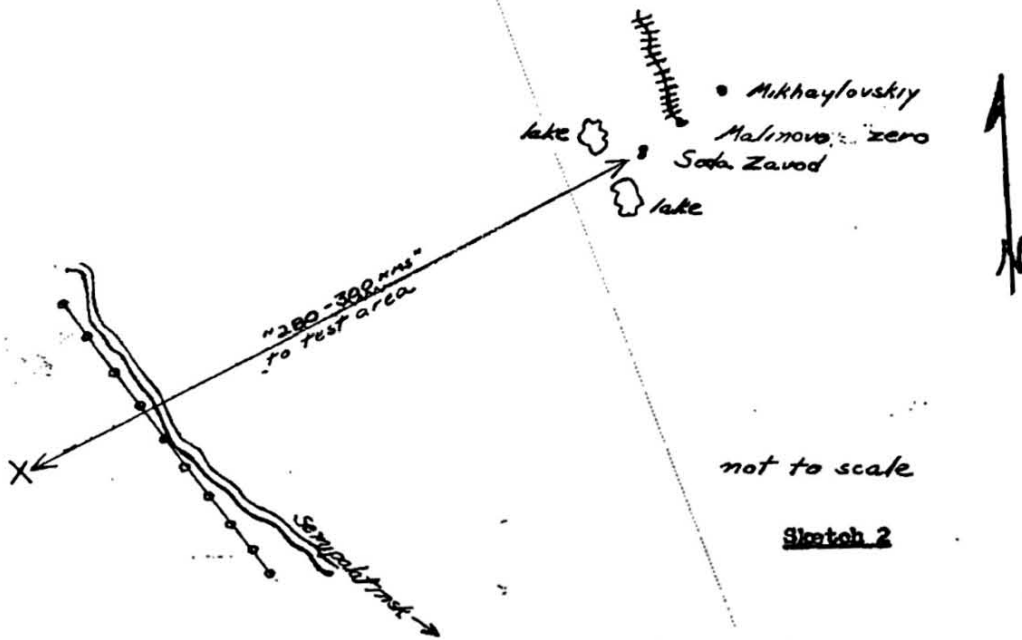
DECLASSIFIED

Authority AWD 949670



Location of Fireball in Relation to Lakes

EO25x1 CIA



Area of Soda Zavod and Nuclear Test Ground

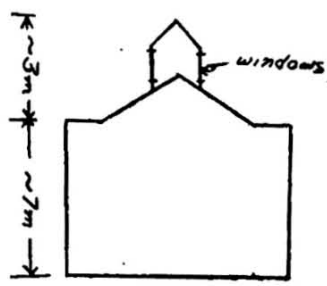
SECRET

DECLASSIFIED
Authority AWD 949670

SECRET

-7-

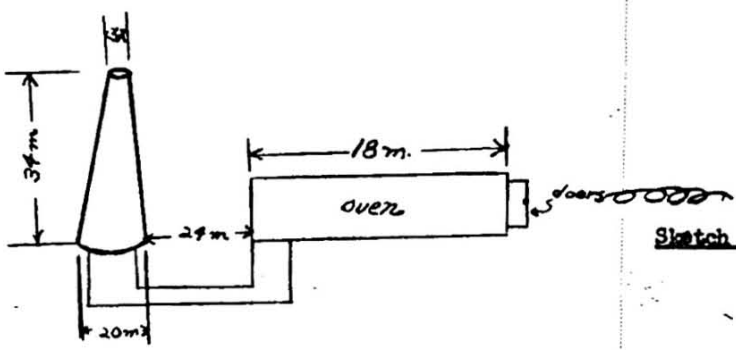
Attachment A



EO25x1 CIA

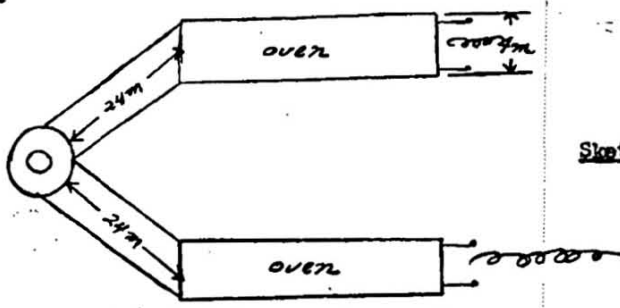
Sketch 3

Position of Damaged Windows in Soda Factory



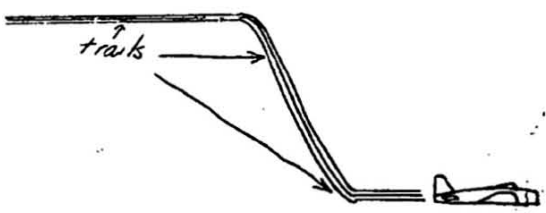
Sketch 4a

direction
of wind



Sketch 4b

Effect of Pressure Wave on Furnaces



direction
of burst (S-W)

Sketch 5

not to scale



soda
factory

Flight Direction of Aircraft Reconstructed from Jet Trails

SECRET



National Security Archive,
Suite 701, Gelman Library, The George Washington University,
2130 H Street, NW, Washington, D.C., 20037,
Phone: 202/994-7000, Fax: 202/994-7005, nsarchiv@gwu.edu