

## List of X-ray diffractive analysis

1. Sample No. : D-60
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 27.69N, 14.15 E
6. Location : Catinardının D., Sıçankale Y., Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : serpentized dunite
9. Occurrence : massive
10. Description of specimen :

This specimen is taken from the footwall side of the orebody in trench (TD-13) at Sıçankale.

It is pale green colored, fragile, and abundant in carbonate minerals.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
serpentine	moderate
magnesiochromite	very strong
aragonite	weak

12. Remarks : refer Appendix 7-132 (TD-13) , Appendix 5-9  
Plate 7-2 (TD-13)

1. Sample No. : D-61
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 27.27 N, 12.78 E
6. Location : Akdağın Sr., Sıçankale Y., Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : harzburgite
9. Occurrence : massive
10. Description of specimen :

This specimen is taken from the hangingwall-side of the orebody where pyroxenite dyke contacts to, in trench (TD-16) at Sıçankale.

It is pale green colored and fragile.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
serpentine	very strong

12. Remarks : refer Appendix 7-135 (TD-16)  
Plate 7-2 (TD-16)

### List of X-ray diffractive analysis

1. Sample No. : D-62
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 28.04 N, 16.55 E
6. Location : Batı Coşan, Bendindere, Sıçankale Y., Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : serpentized dunite
9. Occurrence : massive
10. Description of specimen :

This specimen is taken from host rock at the footwall side of the orebody in trench (TD-18) at Batı Coşan.

It is pale green colored, composed of serpentized dunite and network of carbonate minerals.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
serpentine	very strong
hydromagnesite	strong

12. Remarks : refer Appendix 7-137 (TD-18)  
Plate 7-1 (TD-18)

1. Sample No. : D-63
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Trabzon, H-44, c3, No.4
5. Coordinates : 30.20 N, 18.79 E
6. Location : Coşan, Isıkıngındere, Kop, Bayburt, Gümüşhane
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : serpentized dunite
9. Occurrence : massive
10. Description of specimen :

This specimen is taken from the hangingwall-side of the orebody in trench (TD-32) at Coşan.

It is green colored and more or loss serpentized.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
serpentine	very strong
artinite	very strong
brucite	very strong

12. Remarks : refer Appendix 7-151 (TD-32)  
Plate 7-1 (TD-32)

### List of X-ray diffractive analysis

1. Sample No. : X-12
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 25.02 N, 13.03 E
6. Location : Taşlıdere, Dingik, Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : harzburgite
9. Occurrence : massive
10. Description of specimen :

This specimen is of typical harzburgite.

It has greenish grey color, medium size grain size and much amount of orthopyroxene crystals and veinlets.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
forsterite	strong
enstatite	moderate
serpentine	weak

12. Remarks : refer Appendix 3-46

1. Sample No. : X-14
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 27.75 N, 17.02 E
6. Location : Batı Coşan, Bendindere, Sıçankale Y., Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : brucite-bearing serpentinite from dunite
9. Occurrence : massive
10. Description of specimen :

This specimen is the host rock of chromite deposit and taken from chromite banding zone, east of Batı Coşan.

It is dark gray colored and fine grained.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
serpentine	very strong
magnesiochromite	strong

12. Remarks : refer Appendix 3-47

### List of X-ray diffractive analysis

1. Sample No. : X-15
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 27.68 N, 17.07 E
6. Location : Batı Coşan, Küçükşivri Sr. , Sıçankale Y. , Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : clinopyroxenite
9. Occurrence : dyke in dunite
10. Description of specimen :

This specimen is pale yellowish green colored and granular with medium grain size.

It is affected by serpentinization.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
augite	strong
serpentine	moderate

12. Remarks : refer Appendix 3-48

1. Sample No. : X-18
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.2
5. Coordinates : 27.01 N, 12.15 E
6. Location : Kızıldağ Sr. , Sıçankale Y. , Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : serpentinite from harzburgite
9. Occurrence : massive
10. Description of specimen :

This specimen has dark grayish green color and very fine grains.

Fine networks of serpentine including asbestos are commonly observable.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
serpentine	very strong
brucite	moderate
magnesiochromite	moderate

12. Remarks : refer Appendix 3-49

### List of X-ray diffractive analysis

1. Sample No. : X-21
2. Project No. : 78/26<sup>t</sup>
3. Area : Kopdağ
4. Map No. : Erzurum, i-45, a1
5. Coordinates : 16.40 N, 33.60 E
6. Location : Karaçayırdere, Çırmıt köyü, Aşkale, Erzurum
7. Lithostratigraphic unit : ultrabasic rocks
8. Rock name : altered serpentinite
9. Occurrence : dyke-like appearance in harzburgite
10. Description of specimen :  

This specimen is affected strongly by carbonatization and silicification  
It is reddish brown colored, and very fine grained.  
Coarse, round fragments of serpentine and veinlets of carbonate mineral  
are observed.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
quartz	very strong
calcite	strong
dolomite	strong
magnesite	moderate

12. Remarks : refer Appendix 3-50

1. Sample No. : Z-14
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.1
5. Coordinates : 22.14 N, 07.20 E
6. Location : Çerçiilyaş T., Ağcahisar, Aşkale, Erzurum
7. Lithostratigraphic unit : terrace deposit
8. Rock name : dolomite
9. Occurrence : lenticular intercalated in conglomerate.
10. Description of specimen :

This specimen is creamy white colored, very fine grained, and drusy.  
Tabular crystals (0.2 - 1 cm size) are present.

11. Minerals identified :

name of the mineral	intensity of X-ray diffracted
dolomite	very strong

12. Remarks : refer Appendix 3-54

## APPENDIX 7

### List of trenches and galleries

name of the area : (2,000, 10,000, 25,000) shows the geological map  
where the trench is located.

specific gravity of	{	serpentinite	:	2.6
		dunite	:	3.0
		low-grade ore	:	3.0
		stock of ore	:	3.0
		high-grade ore	:	3.5
		magnesite	:	3.0

TZ-1 \* : operated in 1978

TA-1 : not operated in 1978

- : none

\* : uncertain

★ : not recorded

( ) : small in amount



# List of trenches and galleries

1. Number of trench :	TA-1 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzurum i-45, a1, No.1
5. Coordinates :	27.83 N, 30.20 E
6. Altitude :	1,920 - 1,950 m
7. Name of the area :	Hasbeykomu (magnesite) (25,000) (east Kop
8. Location and communication :	Henegesuyu, Hasbeykomu chrome zone) Aşkale, Erzurum, 10 minutes from Hasbey- komu on foot
9. Type etc. :	trench for exploration
10. Host rock :	serpentinized dunite
11. Orebody :	
Stratigraphic horizon in	
ultrabasic rocks ;	middle horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike N 15° E dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 30° E )
	extension to strike-side 140 m
	extension to dip-side 30 m
	width 120 m
Shape of the orebody ;	lenticular 9 trenches are observed
	in magnesite (with dolomite) orebody.
12. Chromite banding around the	not observed
orebody :	
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive
Ore minerals ;	magnesite
Gangue minerals ;	serpentine, dolomite
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the	
orebody estimated :	extension to strike-side * m
	extension to dip-side * m
	width * m
16. Volume of the trench estimated :	160 m <sup>3</sup>
17. The largest amount of the ore	
estimated which is taken	
from the trench :	500 ton
18. Amount of stock of the ore :	*
19. Relation to the other trenches	-
and galleries :	
20. Laboratorial tests :	thin section (A-91)
21. Remarks :	refer Plate 7-6



## List of trenches and galleries

1.	Number of trench :	TA-2
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	23.20 N, 03.03 E
6.	Altitude :	1,925 m
7.	Name of the mine :	Karagüney Tepe (2,000)
8.	Location and communication :	Karagüney Tepe, Kelvezikomu Çayırılı Erzincan, 20 minutes from Kelvezikomu on foot
9.	Type etc. :	pit for exploration
10.	Host rock :	strongly serpentized harzburgite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (lower part)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 65°w dip 34° N (Direction of the ore zone ; N 80° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width 0.15 m
	Shape of the orebody ;	layered
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, * (high-grade)
15.	The largest scale of the orebody estimated :	extension to strike-side 2.4 m extension to dip-side 0.7 m width 0.2 m
16.	Volume of the trench estimated :	2.5 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	1 ton
18.	Amount of stock of the ore :	0.7 ton (45 % Cr <sub>2</sub> O <sub>3</sub> is estimated)
19.	Relation to the other trenches and galleries :	TA-3,4
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-3	(not surveyed in detail)	
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, a2, No.2		
5.	Coordinates :	23.23 N,	03.03 E	
6.	Altitude :	1,925 m		
7.	Name of the mine :	Karagüney Tepe (2,000)	(northern chrome zone)	
8.	Location and communication :	Karagüney Tepe, Kelvezi komu Çayırılı		
		Erzincan, 20 minutes from Kelevezikomu		
		on foot		
9.	Type etc. :	pit for exploration, covered by soil		
		completely		
10.	Host rock :	*		
11.	Orebody :			
	Stratigraphic horizon in			
	ultrabasic rocks ;	upper horizon (lower part)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike	*	
		(Direction of the ore zone ;	N 80° E )	
	Scale of the orebody observed ;	extension to strike-side	*	m
		extension to dip-side	*	m
		width	*	m
	Shape of the orebody ;	*		
12.	Chromite banding around the			
	orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	*		
	Grade of the ore ;	macroscopic estimation,	*	
15.	The largest scale of the	extension to strike-side	*	m
	orebody estimated :	extension to dip-side	*	m
		width	*	m
16.	Volume of the trench estimated :		*	m <sup>3</sup>
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :		*	ton
18.	Amount of stock of the ore :	*		
19.	Relation to the other trenches			
	and galleries :	TA-2,4		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-6		

## List of trenches and galleries

1.	Number of trench :	TA-4	(not surveyed in detail)	
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, a2, No.2		
5.	Coordinates :	23.23 N,	03.03 E	
6.	Altitude :	1,925 m		
7.	Name of the mine :	Karagüney Tepe (2,000)		
8.	Location and communication :	Karagüney Tepe, Kelvezikomu Çayırılı, Erzincan, 20 minutes from Kelvezikomu on foot		
9.	Type etc. :	pit for exploration, covered by soil com- pletely		
10.	Host rock :	*		
11.	Orebody :			
	Stratigraphic horizon in			
	ultrabasic rocks ;	upper horizon (lower part)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike *		
		(Direction of the ore zone ; N 80° E )		
	Scale of the orebody observed ;	extension to strike-side	*	m
		extension to dip-side	*	m
		width	*	m
	Shape of the orebody ;	*		
12.	Chromite banding around the			
	orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	*		
	Grade of the ore ;	macroscopic estimation,	*	
15.	The largest scale of the			
	orebody estimated :	extension to strike-side	*	m
		extension to dip-side	*	m
		width	*	m
16.	Volume of the trench estimated :	*		
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench ;	*		
18.	Amount of stock of the ore :	*		
19.	Relation to the other trenches			
	and galleries :	TA-2,3		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-6		

## List of trenches and galleries

1. Number of trench :	TA-5
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	23.23 N, 04.22 E
6. Altitude :	1,960 m
7. Name of the mine :	Baltadeğmez (2,000) (northern chrome zone)
8. Location and communication :	Baltadeğmez Sr., Cancıkköyü, Aşkale, Erzurum, 45 minutes from Sığirci Y., by car
9. Type etc. :	trench for exploitation
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	2 - 3
Direction of the orebody ;	strike N 18° W dip 10° W (Direction of the ore zone ; N 74° E )
Scale of the orebody observed ;	extension to strike-side 0.3 m extension to dip-side 0.5 m width >0.15 m
Shape of the orebody ;	lenticular, network orebody disseminates into the host rock
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive, disseminated, powdery
Ore minerals ;	chromite
Gangue minerals	serpentine, magnesite, stichtite
Grade of the ore ;	macroscopic estimation, 30 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 6 m extension to dip-side 3.5 m width 1 m
16. Volume of the trench estimated :	80 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	75 ton
18. Amount of stock of the ore :	1 ton (high-grade ore, 45% Cr <sub>2</sub> O <sub>3</sub> estimated)
19. Relation to the other trenches and galleries :	TA-6,7,8,9
20. Laboratorial tests :	X-ray diffractive analysis (A-121)
21. Remarks :	refer Plate 7-6

## List of trenches and galleries

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|--|--|
| 1. Number of trench :  | TA-6   |
| 2. Project No. :   | 78/26  |
| 3. Area :  | Kopdağ   |
| 4. Map No. :   | Erzincan, i-44, a2, No.2   |
| 5. Coordinates :   | 23.20 N, 04.16 E   |
| 6. Altitude :  | 1,965 m  |
| 7. Name of the mine :  | Baltadeğmez (2,000) (northern chrome zone)   |
| 8. Location and communication :  | Baltadeğmez Sr., Cancıkkomu, Aşkale,<br>Erzurum, 45 minutes from Sıçankale Y.,<br>by car |
| 9. Type etc. :   | trench for exploitation  |
| 10. Host rock :  | strongly serpentized dunite and serpen-<br>tinite (powdery)                              |
| 11. Orebody :  |  |
| Stratigraphic horizon in<br>ultrabasic rocks ;                                     | upper horizon (footwall-side orebody)  |
| Amount of the orebody ;  | 1  |
| Direction of the orebody ;   | strike N 76° E dip 44° N<br>(Direction of the ore zone ; N 74° E )                       |
| Scale of the orebody observed ;  | extension to strike-side 1.2 m<br>extension to dip-side 0.5 m<br>width 0.35 m            |
| Shape of the orebody ;   | layered  |
| 12. Chromite banding around the<br>orebody :                                       | not observed   |
| 13. Fault around the orebody :   | strike N 70° E dip 72° N   |
| 14. Ore :  |  |
| Type of the ore ;  | massive, powdery   |
| Ore minerals ;   | chromite   |
| Gangue minerals ;  | serpentine, magnesite  |
| Grade of the ore ;   | macroscopic estimation, 30 - 40 % Cr <sub>2</sub> O <sub>3</sub>                         |
| 15. The largest scale of the<br>orebody estimated :                                | extension to strike-side. 20 m<br>extension to dip-side 3 m<br>width 1.5 m               |
| 16. Volume of the trench estimated :   | 330 m <sup>3</sup>   |
| 17. The largest amount of the ore<br>estimated which is taken<br>from the trench : | 315 ton  |
| 18. Amount of stock of the ore :   | very small   |
| 19. Relation to the other trenches<br>and galleries :                              | TA-5,7,8,9   |
| 20. Laboratorial tests :   | X-ray diffractive analysis (Acr-97)  |
| 21. Remarks :  | refer Plate 7-6  |

## List of trenches and galleries

1.	Number of trench :	TA-7
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	23.19 N, 04.14 E
6.	Altitude :	1,955 m
7.	Name of the mine :	Baltadeğmez (2,000) (northern chrome zone)
8.	Location and communication :	Baltadeğmez Sr. , Cancıkkomu, Aşkale, Erzurum, 45 minutes from Sıçankale Y., by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	* 1
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; E )
	Scale of the orebody observed ;	extension to strike-side 0.2 m
		extension to dip-side 0.4 m
		width 0.09 m
	Shape of the orebody ;	lenticular
		Orebody disseminates into the host rock
12.	Chromite banding around the	
	orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated, powdery
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 15 - 20 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the	
	orebody estimated :	extension to strike-side 7 m
		extension to dip-side 1.2 m
		width 1 m
16.	Volume of the trench estimated :	55 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	30 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches	
	and galleries :	TA-5,6,8,9
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

# List of trenches and galleries

1.	Number of trench :	TA-8
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	23.20 N, 04.12 E
6.	Altitude :	1,955 m
7.	Name of the mine :	Baltadeğmez (2,000) (northern chrome zone)
8.	Location and communication :	Baltadeğmez Sr. , Cancıkkomu, Aşkale, Erzurum, 45 minutes from Sığankale Y., by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; E )
	Scale of the orebody observed ;	extension to strike-side 0.1 m
		extension to dip-side 0.5 m
		width 0.09 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike E dip 28° N
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated, banded, powdery
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 15 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated ;	extension to strike-side 7 m
		extension to dip-side 1.8 m
		width 1 m
16.	Volume of the trench estimated :	30 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	45 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-5,6,7,9
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-9
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	23.20 N, 04.10 E
6.	Altitude :	1,950 m
7.	Name of the mine :	Baltadeğmez (2,000) (northern chrome zone)
8.	Location and communication :	Baltadeğmez Sr., Cancıkkomu, Aşkale, Erzurum, 45 minutes from Sıçankale Y., by car
9.	Type etc. :	trench or pit for exploration, covered by soil completely
10.	Host rock :	*
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; E )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the	
	orebody ;	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	*
	Ore minerals ;	*
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the	
	orebody estimated :	extension to strike-side * m
		extension to dip-side * m
		width * m
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	< 1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches	
	and galleries :	TA-5,6,7,8
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-6



## List of trenches and galleries

1.	Number of trench :	TA-10
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	23.78 N, 04.44 E
6.	Altitude :	2,110 m
7.	Name of the mine :	Dikyokuş (2,000) (northern chrome zone)
8.	Location and communication :	Baltadeğmez Sr. , Cancıkkomu, Aşkale, Erzurum, 60 minutes from Sığankale Y. , on foot and by car
9.	Type etc. :	trench for exploration
10.	Host rock :	strongly serpentinized dunite and serpen- tinite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 85° E dip 32° N (Direction of the ore zone ; N 85° W )
	Scale of the orebody observed ;	extension to strike-side 0.1 m extension to dip-side 0.5 m width 0.9 m (unit layer of the ore is 0.03 - 0.15 m)
	Shape of the orebody ;	layered, network
12.	Chromite banding around the orebody ;	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated, powdery
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 15- 40 % Cr <sub>2</sub> O <sub>3</sub> (disseminated massive) analytical value, 19.49% Cr <sub>2</sub> O <sub>3</sub> from the outcrop, random sample
15.	The largest scale of the orebody estimated :	extension to strike-side 9 m extension to dip-side 2 m width 0.8 m
16.	Volume of the trench estimated :	50 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	50 ton
18.	Amount of stock of the ore :	20 ton
19.	Relation to the other trenches and galleries :	TB-4,5
20.	Laboratorical tests :	polished section (Acr-12) chemical analysis of
21.	Remarks :	refer Plate 7-6 the ore (Acr-13)

## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-11   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdağ  |
| 4.  | Map No. :  | Erzincan, i-44, a2, No.2  |
| 5.  | Coordinates :  | 24.32 N, 05.21 E  |
| 6.  | Altitude :   | 2,195 m   |
| 7.  | Name of the mine :   | Pembe Gül (2,000) (northern chrome zone)  |
| 8.  | Location and communication :   | Keşan Tepe, Cancıközü Aşkale, Erzurum,<br>80 minutes from Sığirci Y., on foot and<br>by car |
| 9.  | Type etc. :  | pit for exploration   |
| 10. | Host rock :  | serpentinite (powdery)  |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in<br>ultrabasic rocks ;                                 | upper horizon (footwall-side orebody)   |
|     | Amount of the orebody ;  | 1   |
|     | Direction of the orebody ;   | strike N 25° E dip 16° – 20° W<br>(Direction of the ore zone ; N 10° E )                    |
|     | Scale of the orebody observed ;  | extension to strike-side * m<br>extension to dip-side * m<br>width 0.05 – 0.2 m             |
|     | Shape of the orebody ;   | lenticular  |
| 12. | Chromite banding around the<br>orebody :                                       | not observed  |
| 13. | Fault around the orebody :   | not observed  |
| 14. | Ore :  |   |
|     | Type of the ore ;  | massive, powdery  |
|     | Ore minerals ;   | chromite (uvarovite)  |
|     | Grade of the ore ;   | macroscopic estimation, ★ (high-grade)  |
| 15. | The largest scale of the<br>orebody estimated :                                | extension to strike-side 1.8 m<br>extension to dip-side 1 m<br>width 0.3 m                  |
| 16. | Volume of the trench estimated :   | 1 m <sup>3</sup>  |
| 17. | The largest amount of the ore<br>estimated which is taken<br>from the trench : | < 1 ton   |
| 18. | Amount of stock of the ore :   | 0.4 ton (50 % Cr <sub>2</sub> O <sub>3</sub> estimated)                                     |
| 19. | Relation to the other trenches<br>and galleries :                              | TA-12,13,14,15,16   |
| 20. | Laboratorial tests :   | polished section (Acr-7)  |
| 21. | Remarks :  | refer Plate 7-5   |

## List of trenches and galleries

1.	Number of trench :	TA-12
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, 1-44, a2, No.2
5.	Coordinates :	24.33 N, 05.22 E
6.	Altitude :	2,195 m
7.	Name of the mine :	Pembe Gül (2,000) (northern chrome zone)
8.	Location and communication :	Keşan Tepe, Cancıkkomu Aşkale, Erzurum, 80 minutes from Sığankale Y., on foot and by car
9.	Type etc. :	pit for exploration
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 5° E dip 40° W (Direction of the ore zone ; N 10° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width >0.15 m
	Shape of the orebody ;	
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	assumed, strike N 45° W dip*
14.	Ore :	
	Type of the ore ;	massive, powdery
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, ★ (high-grade)
15.	The largest scale of the orebody estimated :	extension to strike-side 2 m extension to dip-side 1.2 m width 0.2 m
16.	Volume of the trench estimated :	1 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18.	Amount of stock of the ore :	refer TA-11
19.	Relation to the other trenches and galleries :	TA-11,13,14,15,16
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-5

## List of trenches and galleries

1. Number of trench :	TA-13
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	24.35 N, 05.21 E
6. Altitude :	2,195 m
7. Name of the mine :	Pembe Gül (2,000) (northern chrome zone)
8. Location and communication :	Keşan Tepe, Cancıkkonu Aşkale, Erzurum, 80 minutes from Sığankale Y., on foot and by car
9. Type etc. :	pit for exploration
10. Host rock :	serpentine (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike N 40° E dip 18° NW (Direction of the ore zone ; N 20° E )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width > 0.16 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody ;	not observed
13. Fault around the orebody ;	assumed, strike N45° W dip *
14. Ore :	
Type of the ore ;	massive, disseminated, powdery
Ore minerals ;	chromite (uvarovite)
Grade of the ore ;	macroscopic estimation, 40 - 45 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 1.6 m extension to dip-side 1.2 m width 0.2 m
16. Volume of the trench estimated :	1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TA-11,12,14,15,16
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-5

## List of trenches and galleries

1. Number of trench :	TA-14 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, 1-44, a2, No.2
5. Coordinates :	24.39 N, 05.21 E
6. Altitude :	2,185 m
7. Name of the mine :	Pembe Gül (2,000) (northern chrome zone)
8. Location and communication :	Keşan Tepe, Cancıkköyü Aşkale, Erzurum, 90 minutes from Sığankale Y., on foot and by car
9. Type etc. :	pit for exploration, covered by soil completely
10. Host rock :	*
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; N 20° E )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	assumed, strike N45° W dip *
14. Ore :	
Type of the ore ;	*
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated ;	extension to strike-side 0.8 m
	extension to dip-side 0.5 m
	width 0.2 m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore ;	-
19. Relation to the other trenches and galleries :	TA-11,12,13,15,16
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-5

## List of trenches and galleries

1.	Number of trench :	TA-15
2.	Project No. :	78/26
3.	Area :	Kopdag
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	24.40 N, 05.21 E
6.	Altitude :	2,185 m
7.	Name of the mine :	Pembe Gül (2,000) (northern chrome zone)
8.	Location and communication :	Keşan Tepe, Cancıkkomu Aşkale, Erzurum, 90 minutes from Sığankale Y., on foot and by car
9.	Type etc. :	pit for exploration
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 48° E dip 38° NW (Direction of the ore zone ; N 20° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width 0.55 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated, powdery
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 40 – 45 % Cr <sub>2</sub> O <sub>3</sub> analytical value, 40.35% Cr <sub>2</sub> O <sub>3</sub> from the out- crop, random sample
15.	The largest scale of the orebody estimated :	extension to strike-side 0.8 m extension to dip-side 0.5 m width 0.6 m
16.	Volume of the trench estimated :	1 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-11,12,13,14,16
20.	Laboratorial tests :	chemical analysis of the ore (Acr-9)
21.	Remarks :	refer Plate 7-5

## List of trenches and galleries

1. Number of trench :	TA-16 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	24.41 N, 05.22 E
6. Altitude :	2,185 m
7. Name of the mine :	Pembe Gül (2,000) (northern chrome zone)
8. Location and communication :	Keşan Tepe, Cancıkkomu Aşkale, Erzurum, 90 minute from Sığankale Y., on foot and by car
9. Type etc. :	pit for exploration, covered by soil com- pletely
10. Host rock :	*
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; N 20° E )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	extension to strike-side 0.6 m
	extension to dip-side 0.4 m
	width 0.2 m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	very small
19. Relation to the other trenches and galleries :	TA-11,12,13,14,15
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-5

## List of trenches and galleries

1.	Number of trench :	TA-17
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	25.84 N, 06.40 E
6.	Altitude :	1,980 m
7.	Name of the mine :	Civelek (2,000) (northern chrome zone)
8.	Location and communication :	Yayladere, Sığankale Y., Aşkale, Erzurum, 40 minutes from Sığankale Y., on foot and by car
9.	Type etc. :	trench for exploration
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 20° - 38° E dip 28° - 72° NW (Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side 6 m extension to dip-side 0.5 m width 1.5 m
	Shape of the orebody ;	layered
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N 82° E dip 72° N
14.	Ore :	
	Type of the ore ;	massive, disseminated, powdery
	Ore minerals ;	chromite
	Gangue minerals	serpentine, stichtite
	Grade of the ore ;	macroscopic estimation, 30 - 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 6 m extension to dip-side 0.5 m width 2 m
16.	Volume of the trench estimated :	30 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	20 ton
18.	Amount of stock of the ore :	very small
19.	Relation to the other trenches and galleries :	TB-23
20.	Laboratorical tests :	X-ray diffractive analysis (Acr-4)
21.	Remarks :	refer Plate 7-5



## List of trenches and galleries

1. Number of trench :	TA-18
2. Project No. :	78/26
3. Area :	Kopdag <sup>v</sup>
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	26.25 N, 06.50 E
6. Altitude :	1,980 m
7. Name of the mine :	Civelek (2,000) (northern chrome zone)
8. Location and communication :	Kırıcakdere, Sıçankale Y., Aşkale, Erzurum, 35 minutes from Sıçankale Y., by car
9. Type etc. :	trench for exploitation
10. Host rock :	strongly serpentized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike E dip 90°
Scale of the orebody observed ;	(Direction of the ore zone ; N 65° E )
	extension to strike-side 3.5 m
	extension to dip-side 1.6 m
	width 0.7 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive, brecciated, powdery
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 25 - 40 % Cr <sub>2</sub> O <sub>3</sub> analytical value, 35.87 % Cr <sub>2</sub> O <sub>3</sub> from the outcrop, random sample
15. The largest scale of the orebody estimated :	extension to strike-side 15 m
	extension to dip-side 2.5 m
	width 2.5 m
16. Volume of the trench estimated :	300 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	315 ton
18. Amount of stock of the ore :	30 ton (25 - 35 % Cr <sub>2</sub> O <sub>3</sub> estimated)
19. Relation to the other trenches and galleries :	TB-1,2
20. Laboratorial tests :	chemical analysis of the ore (Acr-3)
21. Remarks :	refer Plate 7-5

## List of trenches and galleries

1.	Number of trench :	TA-19.
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	21.60 N, 99.18 E
6.	Altitude :	1,710 m
7.	Name of the mine :	Hacıbektaşkomu (10,000)
8.	Location and communication :	Kaynıdıdere, Hacıbektaşkomu, Çayırılı, Erzincan, 20 minutes from Hacıbektaşkomu on foot and by jeep
9.	Type etc. :	trench for exploitation
10.	Host rock :	strongly serpentized dunite and serpen- tinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 35° - 55° W dip 40° - 80° NE (Direction of the ore zone ; N 30° W )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 0.5 m width 0.15 m
	Shape of the orebody ;	lenticular, network Orebody is disse- minated or spread into branches in the host rock
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N 15° W dip 70° E
14.	Ore :	
	Type of the ore ;	massive, disseminated, powdery
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, 35 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 11 m extension to dip-side 1.5 m width 2 m
16.	Volume of the trench estimated :	50 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	115 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-20,21,22,23,24,25, TB-7
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

# List of trenches and galleries

1. Number of trench :	TA-20
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.1
5. Coordinates :	21.61 N, 99.18 E
6. Altitude :	1,705 m
7. Name of the mine :	Hacıbektaşkomu (10,000)
8. Location and communication :	Kayınılıdere, Hacıbektaşkomu, Çayırılı Erzincan, 20 minutes from Hacıbektaşkomu on foot and by jeep
9. Type etc. :	trench for exploitation
10. Host rock :	strongly serpentized dunite and serpenti- nite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike N 20°W, N 30°E dip 85°E, 70°W (in turn) (Direction of the ore zone ; N 30°W )
Scale of the orebody observed ;	extension to strike-side 0.3 m extension to dip-side 0.3 m width 0.15 m
Shape of the orebody ;	lenticular, Orebody is disseminated or spread into branches in the hostrock
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	strike N80°E, N30°-45°E dip 60°S, 60°-90°NW (in turn)
14. Ore :	
Type of the ore ;	massive, disseminated, powdery
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 35 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 11 m extension to dip-side 1.5 m width 1.5 m
16. Volume of the trench estimated :	75 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	85 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TA-19, 21, 22, 23, 24, 25, TB-7
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-21
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	21.67N, 99.17 E
6.	Altitude :	1,708 m
7.	Name of the mine :	Hacıbektaşkomu (10,000)
8.	Location and communication :	Kayınılıdere, Hacıbektaşkomu, Çayırılı, Erzincan, 20 minutes from Hacıbektaşkomu on foot and by jeep
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 30° W )
	Scale of the orebody observed ;	extension to strike-side 0.1 m
		extension to dip-side 0.3 m
		width 0.05 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike N 30° W dip 50° E
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated, powdery
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 10 - 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 4 m
		extension to dip-side 2 m
		width 1 m
16.	Volume of the trench estimated :	10 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	30 ton
18.	Amount of stock of the ore :	1.5 ton (high-grade)
19.	Relation to the other trenches and galleries :	TA-19,20,22,23,24, 25, TB-7
20.	Laboratorical tests :	polished section (Acr-25)
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-22
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	21.68 N, 99.15 E
6.	Altitude :	1,708 m
7.	Name of the mine :	Hacıbektaşkomu (10,000)
8.	Location and communication :	Kayınılıdere, Hacıbektaşkomu, Çayırılı, Erzincan, 20 minutes from Hacıbektaşkomu on foot and by jeep
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1 - 2
	Direction of the orebody ;	strike N 10° W, N 70° W dip 65° W, 65° N (in turn) (Direction of the ore zone ; N 30° W )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width 0.1 m
	Shape of the orebody ;	lenticular Orebody becomes thin at the end.
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N 70° E dip 40° N
14.	Ore :	
	Type of the ore ;	massive, disseminated, powdery
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 10 - 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 8 m extension to dip-side 3 m width 1.5 m
16.	Volume of the trench estimated :	140 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	125 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-19,20,21,23,24,25, TB-7
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

- |  |  |
|--|--|
| 1. Number of trench :  | TA-23  |
| 2. Project No. :   | 78/26  |
| 3. Area :  | Kopdağ   |
| 4. Map No. :   | Erzincan, i-44, a2, No.1   |
| 5. Coordinates :   | 21.63 N, 99.13 E   |
| 6. Altitude :  | 1,707 m  |
| 7. Name of the mine :  | Hacıbektaşkomu (10,000)  |
| 8. Location and communication :  | Kayınılıdere, Hacıbektaşkomu, Çayırılı,<br>Erzincan, 20 minutes from Hacıbektaşkomu<br>on foot and by jeep<br>pit, for exploration |
| 9. Type etc. :   |  |
| 10. Host rock :  | serpentinized dunite   |
| 11. Orebody :  |  |
| Stratigraphic horizon in<br>ultrabasic rocks ;                                     | middle horizon   |
| Amount of the orebody ;  | 1  |
| Direction of the orebody ;   | strike N 16°W dip 75°W<br>(Direction of the ore zone ; N 40°W )  |
| Scale of the orebody observed ;  | extension to strike-side 2 m<br>extension to dip-side 0.8 m<br>width 0.15 m  |
| Shape of the orebody ;   | layered  |
| 12. Chromite banding around the<br>orebody :                                       | strike N 10°W dip 75°W   |
| 13. Fault around the orebody :   | strike N 80°E dip 60°S   |
| 14. Ore :  |  |
| Type of the ore ;  | disseminated   |
| Ore minerals ;   | chromite   |
| Grade of the ore ;   | macroscopic estimation, 15 % Cr <sub>2</sub> O <sub>3</sub>  |
| 15. The largest scale of the<br>orebody estimated :                                | extension to strike-side 3.5 m<br>extension to dip-side 1 m<br>width 0.2 m   |
| 16. Volume of the trench estimated :   | 10 m <sup>3</sup>  |
| 17. The largest amount of the ore<br>estimated which is taken<br>from the trench : | 2.5 ton  |
| 18. Amount of stock of the ore :   | -  |
| 19. Relation to the other trenches<br>and galleries :                              | TA-19,20,21,22,24,25, TB-7   |
| 20. Laboratorial tests :   | -  |
| 21. Remarks :  | refer Plate 7-6  |

### List of trenches and galleries

1.	Number of trench :	TA-24 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	21.63 N, 99.12 E
6.	Altitude :	1,706 m
7.	Name of the mine :	Hacıbektaşkomu (10,000)
8.	Location and communication :	Kayınılıdere, Hacıbektaşkomu, Çayırılı, Erzincan, 20 minutes from Hacıbektaşkomu on foot and by jeep
9.	Type etc. :	trench or pit for exploration, covered by soil completely
10.	Host rock :	*
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 40°W )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	*
	Ore minerals ;	*
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the orebody estimated :	extension to strike-side * m
		extension to dip-side * m
		width * m
16.	Volume of the trench estimated :	5 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	* ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-19, 20, 21, 22, 23, 25, TB-7
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

# List of trenches and galleries

1. Number of trench :	TA-25 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.1
5. Coordinates :	21.63 N, 99.16 E
6. Altitude :	1,745 m
7. Name of the mine :	Hacıbektaşkomu (10,000)
8. Location and communication :	Kayınılıdere, Hacıbektaşkomu, Çayırılı, Erzincan, 20 minutes from Hacıbektaşkomu on foot and by jeep
9. Type etc. :	trench or pit for exploration, covered by soil completely
10. Host rock :	*
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 30° W )
	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	*
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	
	extension to strike-side * m
	extension to dip-side * m
	width * m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench ;	*
18. Amount of stock of the ore :	*
19. Relation to the other trenches and galleries :	TA-19, 20, 21, 22, 23, 24, TB-7
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-6



## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-26   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdağ  |
| 4.  | Map No. :  | Erzincan, i-44, a2, No.1  |
| 5.  | Coordinates :  | 21.54 N, 99.48 E  |
| 6.  | Altitude :   | 1,750 m   |
| 7.  | Name of the mine :   | Hacıbektaşkomu (10,000)   |
| 8.  | Location and communication :   | Hacıbektaşkomu, Çayırılı Erzincan, 15 minutes from Hacıbektaşkomu on foot                       |
| 9.  | Type etc. :  | pit for exploration   |
| 10. | Host rock :  | serpentinized harzburgite   |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in ultrabasic rocks ;                              | middle horizon  |
|     | Amount of the orebody ;  | 1   |
|     | Direction of the orebody ;   | strike N 40° E dip 55° NW<br>(Direction of the ore zone ; N 55° W )                             |
|     | Scale of the orebody observed ;  | extension to strike-side * m<br>extension to dip-side * m<br>width * m                          |
|     | Shape of the orebody ;   | layered   |
| 12. | Chromite banding around the orebody :                                    | strike N 40° E dip 55° NW   |
| 13. | Fault around the orebody :   | not observed  |
| 14. | Ore :  |   |
|     | Type of the ore ;  | disseminated  |
|     | Ore minerals ;   | chromite  |
|     | Grade of the ore ;   | macroscopic estimation, very low-grade<br>Very small amount of chromite banded or disseminated. |
| 15. | The largest scale of the orebody estimated :                             | extension to strike-side * m<br>extension to dip-side * m<br>width * m                          |
| 16. | Volume of the trench estimated :   | < 1 m <sup>3</sup>  |
| 17. | The largest amount of the ore estimated which is taken from the trench : | -   |
| 18. | Amount of stock of the ore :   | -   |
| 19. | Relation to the other trenches and galleries :                           | TA-27, 28, TB-6   |
| 20. | Laboratorial tests :   | -   |
| 21. | Remarks :  | refer Plate 7-6   |

## List of trenches and galleries

1.	Number of trench :	TA-27
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	21.54 N, 99.49 E
6.	Altitude :	1,745 m
7.	Name of the mine :	Hacıbektaşkomu (10,000)
8.	Location and communication :	Hacıbektaşkomu, Çayırılı, Erzincan, 15 minutes from Hacıbektaşkomu on foot
9.	Type etc. :	trench for exploration, covered by soil in part (3 trenches are defined)
10.	Host rock :	serpentinized harzburgite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike N 85° W dip 60° N (Direction of the ore zone ; N 55° W )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width 0.45 m
	Shape of the orebody ;	layered
12.	Chromite banding around the orebody :	strike N 85° W dip 60° N
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated, banded
	Ore minerals ;	chromite
	Gangue minerals ;	serpentine
	Grade of the ore ;	macroscopic estimation, very low-grade
15.	The largest scale of the orebody estimated :	extension to strike-side * m extension to dip-side * m width * m
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	-
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-26, 28, TB-6
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-28	
2.	Project No. :	78/26	
3.	Area :	Kopdağ	
4.	Map No. :	Erzincan, i-44, a2, No.1	
5.	Coordinates :	21.52 N, 99.50 E	
6.	Altitude :	1,770 m	
7.	Name of the mine :	Hacıbektaşkomu (10,000)	
8.	Location and communication :	Hacıbektaşkomu, Çayırılı, Erzincan, 20 minutes from Hacıbektaşkomu on foot	
9.	Type etc. :	trench for exploration	
10.	Host rock :	serpentinized harzburgite	
11.	Orebody :		
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon	
	Amount of the orebody ;	1 2	
	Direction of the orebody ;	strike N40°E, 75°E dip 70°NW, 40°N (in turn) (Direction of the ore zone ; N 55°W )	
	Scale of the orebody observed ;	extension to strike-side 0.5 m extension to dip-side * m width 0.45 m	
	Shape of the orebody ;	lenticular	
12.	Chromite banding around the orebody :	not observed	
13.	Fault around the orebody :	not observed	
14.	Ore :		
	Type of the ore ;	disseminated	
	Ore minerals ;	chromite (uvarovite)	
	Grade of the ore ;	macroscopic estimation,	very low-grade
15.	The largest scale of the orebody estimated :	extension to strike-side 4 m extension to dip-side 1.2 m width 0.6 m	
16.	Volume of the trench estimated :	6	m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :		10 ton
18.	Amount of stock of the ore :	-	
19.	Relation to the other trenches and galleries :	TA-26, 27, TB-6	
20.	Laboratorical tests :	-	
21.	Remarks :	refer Plate 7-6	

## List of trenches and galleries

1.	Number of trench :	TA-29
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.4
5.	Coordinates :	19.22 N, 00.13 E
6.	Altitude :	1,590 m
7.	Name of the mine :	Mağaradere (25,000) (southern chrome zone)
8.	Location and communication :	Kemsakal Sr. , Karaali komu, Çayırılı, Erzincan, 30 minutes from Erbaş station on foot and by jeep
9.	Type etc. :	trench for exploration
10.	Host rock :	silicified, lateritized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 80° E dip 60° N (Direction of the ore zone ; N 75° E )
	Scale of the orebody observed ;	extension to strike-side 5.5 m extension to dip-side 0.5 m width 0.3 m
	Shape of the orebody ;	layered
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated,
	Ore minerals ;	chromite (uvarovite)
	Gangue minerals ;	serpentine, silica mineral
	Grade of the ore ;	macroscopic estimation, 30 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 7 m extension to dip-side 0.5 m width 0.5 m
16.	Volume of the trench estimated :	4 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	6 ton
18.	Amount of stock of the ore :	1.5 ton (more than 45% Cr <sub>2</sub> O <sub>3</sub> estimated)
19.	Relation to the other trenches and galleries :	TA-30,31,32,32A,32B
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-7

## List of trenches and galleries

1.	Number of trench :	TA-30
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.4
5.	Coordinates :	19.21 N, 00.10 E
6.	Altitude :	1,587 m
7.	Name of the mine :	Mağaradere (25,000) (southern chrome zone)
8.	Location and communication :	Kemsakal Sr., Karaalikomu, Çayırılı, Erzincan, 30 minutes from Erbaş station on foot and by jeep
9.	Type etc. :	trench for exploration
10.	Host rock :	silicified, lateritized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 65° E dip 75° N (Direction of the ore zone ; N 75° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 0.5 m width 0.15 m
	Shape of the orebody ;	layered
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Gangue minerals ;	serpentine, silica mineral
	Grade of the ore ;	macroscopic estimation, 30 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 5 m extension to dip-side 0.5 m width 0.2 m
16.	Volume of the trench estimated :	2 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	2 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-29,31,32,32A,32B
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-7

## List of trenches and galleries

1. Number of trench :	TA-31
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.4
5. Coordinates :	19.19 N, 00.14 E
6. Altitude :	1,570 m
7. Name of the mine :	Mağaradere (25,000) (southern chrome zone)
8. Location and communication :	Kemsakal Sr. , Karaali komu, Çayırılı, Erzincan, 30 minutes from Erbaş station on foot and by jeep
9. Type etc. :	trench for exploration
10. Host rock :	silicified, lateritized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; * )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	The orebody is included as gravels (5 - 20 cm subround size) in talus deposit
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive, disseminated
Ore minerals ;	chromite (uvarovite)
Grade of the ore ;	macroscopic estimation, > 40 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side * m
	extension to dip-side * m
	width * m
16. Volume of the trench estimated :	4 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	*
18. Amount of stock of the ore :	0.3 ton ( 40 % Cr <sub>2</sub> O <sub>3</sub> estimated)
19. Relation to the other trenches and galleries :	TA-29,30,32,32A,32B
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-7

## List of trenches and galleries

- |  |  |
|--|--|
| 1. Number of trench :  | TA-32  |
| 2. Project No. :   | 78/26  |
| 3. Area :  | Kopdağ   |
| 4. Map No. :   | Erzincan, i-44, a2, No.4   |
| 5. Coordinates :   | 19.31 N, 00.52 E   |
| 6. Altitude :  | 1,555 m  |
| 7. Name of the mine :  | Mağaradere (25,000) (southern chrome zone)   |
| 8. Location and communication :  | Kemsakal Sr. , Karaali komu, Çayırılı,<br>Erzincan, 30 minutes from Erbaş station<br>on foot and by jeep |
| 9. Type etc. :   | pit for exploration  |
| 10. Host rock :  | serpentinized dunite   |
| 11. Orebody :  |  |
| Stratigraphic horizon in<br>ultrabasic rocks ;                                     | middle horizon   |
| Amount of the orebody ;  | 1  |
| Direction of the orebody ;   | strike N 80°W dip 85°S<br>(Direction of the ore zone ; N 75°E )  |
| Scale of the orebody observed ;  | extension to strike-side 2 m<br>extension to dip-side 1.5 m<br>width 0.45 m                              |
| Shape of the orebody ;   | lenticular, network  |
| 12. Chromite banding around the<br>orebody ;                                       | not observed   |
| 13. Fault around the orebody :   | strike N 60°E, N 25°E dip 15°N, 75°W (in turn)   |
| 14. Ore :  |  |
| Type of the ore ;  | massive, disseminated  |
| Ore minerals ;   | chromite (uvarovite)   |
| Grade of the ore ;   | macroscopic estimation, 15 – 35 % Cr <sub>2</sub> O <sub>3</sub>   |
| 15. The largest scale of the<br>orebody estimated :                                | extension to strike-side 11.5 m<br>extension to dip-side 4 m<br>width 1.2 m                              |
| 16. Volume of the trench estimated :   | 220 m <sup>3</sup>   |
| 17. The largest amount of the ore<br>estimated which is taken<br>from the trench : | 200 ton  |
| 18. Amount of stock of the ore :   | 20 ton (30 % Cr <sub>2</sub> O <sub>3</sub> estimated)   |
| 19. Relation to the other trenches<br>and galleries :                              | TA-29,30,31,32A,32B  |
| 20. Laboratorial tests :   | -  |
| 21. Remarks :  | refer Plate 7-7  |

## List of trenches and galleries

1.	Number of trench :	TA-32A		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, a2, No.4		
5.	Coordinates :	19.32 N, 00.54 E		
6.	Altitude :	1,550 m		
7.	Name of the mine :	Mağaradere (25,000) (southern chrome zone)		
8.	Location and communication :	Kemsakal Sr. , Karaali komu, Çayırılı, Erzincan, 30 minutes from Erbaş station on foot and by jeep		
9.	Type etc. :	trench for exploration		
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N 75° E )		
	Scale of the orebody observed ;	extension to strike-side	* m	
		extension to dip-side	* m	
		width	* m	
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	disseminated		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation,	*	
15.	The largest scale of the orebody estimated :	extension to strike-side	5.5 m	
		extension to dip-side	0.5 m	
		width	0.4 m	
16.	Volume of the trench estimated :		3 m <sup>3</sup>	
17.	The largest amount of the ore estimated which is taken from the trench :		4 ton	
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TA-29,30,31,32,32B		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-7		



## List of trenches and galleries

1.	Number of trench :	TA-32B (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.4
5.	Coordinates :	19.28 N, 00.48 E
6.	Altitude :	1,552 m
7.	Name of the mine :	Mağaradere (25,000) (southern chrome zone)
8.	Location and communication :	Kemsakal Sr. , Karaali komu Çayırılı, Erzincan, 30 minutes from Erbaş station on foot and by jeep
9.	Type etc. :	trench for exploration
10.	Host rock :	silicified, serpentized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 70° W dip 63° N (Direction of the ore zone ; N 75° E )
	Scale of the orebody observed ;	extension to strike-side 4 m extension to dip-side * m width 0.1 m
	Shape of the orebody ;	layered
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, < 20 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 4 m extension to dip-side 0.6 m width 0.2 m
16.	Volume of the trench estimated :	2 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench ;	2 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-29,30,31,32,32A
20.	Laboratorical tests :	-
21.	Remarks :	no sketch map.

## List of trenches and galleries

- |  |   |
|--|---|
| 1. Number of trench :  | TA-33   |
| 2. Project No. :   | 78/26   |
| 3. Area :  | Kopdag <sup>v</sup>   |
| 4. Map No. :   | Erzincan, i-44, a2, No.4  |
| 5. Coordinates :   | 16.49 N, 00.92 E  |
| 6. Altitude :  | 1,650 m   |
| 7. Name of the mine :  | Kârhanekomu (25,000) (southern chrome zone)   |
| 8. Location and communication :  | Killikdere, Kârhanekomu Tercan, Erzurum<br>20 minutes from Kârhanekomu on foot and<br>by jeep |
| 9. Type etc. :   | trench for exploration  |
| 10. Host rock :  | strongly serpentized harzburgite and<br>serpentinite  |
| 11. Orebody :  |   |
| Stratigraphic horizon in<br>ultrabasic rocks ;                                     | lower part of the middle horizon  |
| Amount of the orebody ;  | 1   |
| Direction of the orebody ;   | strike N 30°E dip 30°W*<br>(Direction of the ore zone ; * )                                   |
| Scale of the orebody observed ;  | extension to strike-side * m<br>extension to dip-side 0.5 m<br>width 0.3 - 0.75 m             |
| Shape of the orebody ;   | lenticular. Orebody becomes thin or spreads<br>into branches in the host rock at the end.     |
| 12. Chromite banding around the<br>orebody :                                       | not observed  |
| 13. Fault around the orebody :   | assumed, strike N 60°W dip 20°N   |
| 14. Ore :  |   |
| Type of the ore ;  | massive, disseminated, powdery  |
| Ore minerals ;   | chromite (uvarovite)  |
| Grade of the ore ;   | macroscopic estimation, 25 - 40 Cr <sub>2</sub> O <sub>3</sub>                                |
| 15. The largest scale of the<br>orebody estimated :                                | extension to strike-side 14 m<br>extension to dip-side 6 m<br>width 1 m                       |
| 16. Volume of the trench estimated :   | 180 m <sup>3</sup>  |
| 17. The largest amount of the ore<br>estimated which is taken<br>from the trench : | 300 ton   |
| 18. Amount of stock of the ore :   | 3 ton ( > 40 % Cr <sub>2</sub> O <sub>3</sub> estimated)                                      |
| 19. Relation to the other trenches<br>and galleries :                              | -   |
| 20. Laboratorial tests :   | -   |
| 21. Remarks :  | refer Plate 7-7   |

## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-34   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdağ  |
| 4.  | Map No. :  | Erzincan, i-44, a2, No.2  |
| 5.  | Coordinates :  | 21.63 N, 05.36 E  |
| 6.  | Altitude :   | 1,690 m   |
| 7.  | Name of the mine :   | Cancikkomu (10,000) (southern chrome zone)  |
| 8.  | Location and communication :   | Taşocağı Tepe, Cancikkomu, Aşkale<br>Erzurum, 45 minutes from Sıçankale Y.,<br>by jeep                              |
| 9.  | Type etc. :  | trench for exploitation   |
| 10. | Host rock :  | latertic serpentinite from harzburgite  |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in   |   |
|     | ultrabasic rocks ;   | middle horizon  |
|     | Amount of the orebody ;  | *   |
|     | Direction of the orebody ;   | strike * dip *  |
|     |  | (Direction of the ore zone ; N 25° W )  |
|     | Scale of the orebody observed ;  | extension to strike-side * m  |
|     |  | extension to dip-side * m   |
|     |  | width * m   |
|     | Shape of the orebody ;   | lenticular, network. Orebody coexist with<br>carbonate rock (dolomite). Lenticular carbonate<br>body is much found. |
| 12. | Chromite banding around the<br>orebody :                                       | not observed  |
| 13. | Fault around the orebody :   | not observed  |
| 14. | Ore :  |   |
|     | Type of the ore ;  | massive, disseminated   |
|     | Ore minerals ;   | chromite (uvarovite)  |
|     | Gangue minerals ;  | serpentine, magnetite, dolomite (abundant)  |
|     | Grade of the ore ;   | macroscopic estimation, 20 - 40 % Cr <sub>2</sub> O <sub>3</sub>  |
| 15. | The largest scale of the<br>orebody estimated :                                | extension to strike-side 10 m<br>extension to dip-side 3 m<br>width 1 m   |
| 16. | Volume of the trench estimated :   | 85 m <sup>3</sup>   |
| 17. | The largest amount of the ore<br>estimated which is taken<br>from the trench : | 100 ton   |
| 18. | Amount of stock of the ore :   | 20 ton ( > 40 % Cr <sub>2</sub> O <sub>3</sub> )  |
| 19. | Relation to the other trenches<br>and galleries :                              | TA-35, TB-11  |
| 20. | Laboratorial tests :   | thin section (A-49) polished section (Acr-51)<br>X-ray diffractive analysis (A-49)                                  |
| 21. | Remarks :  | refer Plate 7-6   |

## List of trenches and galleries

1.	Number of trench :	TA-35
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, 1-44, a2, No.2
5.	Coordinates :	21.60 N, 05.48 E
6.	Altitude :	1,675 m
7.	Name of the mine :	Cancıkkomu (10,000) (southern chrome zone)
8.	Location and communication :	Taşocağı Tepe, Cancıkkomu, Aşkale, Erzurum, 45 minutes from Sıçankale Y., by jeep
9.	Type etc. :	trench for exploration
10.	Host rock :	lateritic serpentinite from harzburgite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1 *
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 25° W )
	Scale of the orebody observed ;	extension to strike-side 0.2 m
		extension to dip-side 0.15 m
		width 0.1 m
	Shape of the orebody ;	network. Chromite is found in carbonate rock (dolomite). Lenticular carbonate is much found.
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated
	Ore minerals ;	chromite
	Gangue minerals ;	serpentine, magnetite, dolomite (abundant)
	Grade of the ore ;	macroscopic estimation, 20 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 2 m
		extension to dip-side 0.6 m
		width 0.3 m
16.	Volume of the trench estimated :	1 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-34, TB-11
20.	Laboratorical tests :	thin section (A-48)
21.	Remarks :	refer Plate 7-6

# List of trenches and galleries

1.	Number of trench :	TA-36
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.3
5.	Coordinates :	18.72 N, 03.31 E
6.	Altitude :	1,685 m
7.	Name of the mine :	Güney Erbaş (25,000) (southern chrome zone)
8.	Location and communication :	Yayla Br., Erbaş istasyon, Tercan, Erzincan, 20 minutes from Erbaş station on foot across Karasu
9.	Type etc. :	trench for exploration covered by soil mostly
10.	Host rock :	serpentinized dunite and serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike N 75° W * dip * (Direction of the ore zone ; N 60° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	strike N75° W dip 42° N
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the orebody estimated :	extension to strike-side 7 m extension to dip-side 3 m width 1 m
16.	Volume of the trench estimated :	20 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	70 ton
18.	Amount of stock of the ore :	30 ton (high-grade ore taken from trenches TA-36~41, 40 - 45% Cr <sub>2</sub> O <sub>3</sub> )
19.	Relation to the other trenches and galleries :	TA-37,38,39,40,41, TB-12
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-37 (not surveyed in detail)		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, a2, No.3		
5.	Coordinates :	18.71 N, 03.32 E		
6.	Altitude :	1,685 m		
7.	Name of the mine :	Güney Erbaş (25,000) (southern chrome zone)		
8.	Location and communication :	Yayla Br. , Erbaş istasyon, Tercan, Erzincan, 20 minutes from Erbaş station on foot across Karasu pit for exploration, covered by soil completely		
9.	Type etc. :			
10.	Host rock :	*		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N 60° E )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	*		
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the orebody estimated :	extension to strike-side 1.6 m		
		extension to dip-side 0.3 m		
		width 1 m		
16.	Volume of the trench estimated :	1 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	1 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TA-36,38,39,40,41, TB-12		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-6		

## List of trenches and galleries

1.	Number of trench :	TA-38 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, 1-44, a2, No.3
5.	Coordinates :	18.71 N, 03.33 E
6.	Altitude :	1,685 m
7.	Name of the mine :	Güney Erbaş (25,000) (southern chrome zone)
8.	Location and communication :	Yayla Br., Erbaş istasyon, Tercan, Erzincan, 20 minutes from Erbaş station on foot across Karasu
9.	Type etc. :	pit for exploration, covered by soil completely
10.	Host rock :	*
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 65° E )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	*
	Ore minerals ;	*
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the orebody estimated :	extension to strike-side 4 m
		extension to dip-side 0.8 m
		width 1 m
16.	Volume of the trench estimated :	7 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	10 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-36,37,39,40,41, TB-12
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TA-39 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.3
5.	Coordinates :	18.71 N, 03.34 E
6.	Altitude :	1,685 m
7.	Name of the mine :	Güney Erbaş (25,000) (southern chrome zone)
8.	Location and communication :	Yayla Br., Erbaş istasyon, Tercan, Erzincan, 20 minutes from Erbaş station on foot across Karasu
9.	Type etc. :	pit for exploration, covered by soil com- pletely
10.	Host rock :	*
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 60° E )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the	
	orebody ;	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the	
	orebody estimated :	extension to strike-side 1 m
		extension to dip-side 0.3 m
		width 0.3 m
16.	Volume of the trench estimated :	1 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	1 ton
18.	Amount of stock of the ore :	0.1 ton (45 % Cr <sub>2</sub> O <sub>3</sub> )
19.	Relation to the other trenches	
	and galleries :	TA-36,37,38,40,41, TB-12
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-6



## List of trenches and galleries

1. Number of trench :	TA-40 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, 1-44, a2, No.3
5. Coordinates :	18.71 N, 03.35 E
6. Altitude :	1,685 m
7. Name of the mine :	Güney Erbaş (25,000) (souther chrome zone)
8. Location and communication :	Yayla Br. , Erbaş istasyon, Tercan, Erzincan, 20 minutes from Erbaş station on foot across Karasu
9. Type etc. :	pit for exploration, covered by soil com- pletely
10. Host rock :	*
11. Orebody :	
Stratigraphic horizon in	
ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; N 60° E )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the	
orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	*
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the	
orebody estimated :	extension to strike-side 2 m
	extension to dip-side 0.3 m
	width 0.8 m
16. Volume of the trench estimated :	1 m <sup>3</sup>
17. The largest amount of the ore	
estimated which is taken	
from the trench :	1 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches	
and galleries :	TA-36,37,38,39,41, TB-12
20. Laboratorical tests :	-
21. Remarks :	refer Plate 7-6

# List of trenches and galleries

1. Number of trench :	TA-41 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.3
5. Coordinates :	18.71 N, 03.37 E
6. Altitude :	1,681 m
7. Name of the mine :	Güney Erbaş (25,000) (southern chrome zone)
8. Location and communication :	Yayla Br., Erbaş istasyon, Tercan, Erzincan, 20 minutes from Erbaş station on foot across Karasu
9. Type etc. :	trench for exploration, covered by soil mostly
10. Host rock :	serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; N 60° E )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	strike N 10° W dip 40° W
14. Ore :	
Type of the ore ;	*
Ore minerals ;	*
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	extension to strike-side 12 m
	extension to dip-side 2 m
	width 1 m
16. Volume of the trench estimated :	10 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	80 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TA-36,37,38,39,40,TB-12
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-6

## List of trenches and galleries

- |  |   |
|--|---|
| 1. Number of trench :  | TA-42   |
| 2. Project No. :   | 78/26   |
| 3. Area :  | Kopdağ  |
| 4. Map No. :   | Tortum, H-45, d4, No.4  |
| 5. Coordinates :   | 32.90 N, 31.91 E  |
| 6. Altitude :  | 2,445 m   |
| 7. Name of the mine :  | Orta Tepe (25,000) (east Kop chrome zone)                                       |
| 8. Location and communication :  | Orta Tepe, Dencik Aşkale Erzurum, 35 minutes from Pirnakapan by car             |
| 9. Type etc. :   | pit for exploration   |
| 10. Host rock :  | serpentinized dunite  |
| 11. Orebody :  |   |
| Stratigraphic horizon in ultrabasic rocks ;                                  | middle horizon  |
| Amount of the orebody ;  | 1   |
| Direction of the orebody ;   | strike N 62° E * dip 66° N *<br>(Direction of the ore zone ; N 32° E )          |
| Scale of the orebody observed ;  | extension to strike-side 3.5 m<br>extension to dip-side 0.5 m<br>width 0.2 m    |
| Shape of the orebody ;   | layered   |
| 12. Chromite banding around the orebody ;                                    | strike N 62° E dip 66° N  |
| 13. Fault around the orebody :   | not observed  |
| 14. Ore :  |   |
| Type of the ore ;  | disseminated, banded, nodule  |
| Ore minerals ;   | chromite  |
| Grade of the ore ;   | macroscopic estimation, 15 - 25 % Cr <sub>2</sub> O <sub>3</sub>                |
| 15. The largest scale of the orebody estimated :                             | extension to strike-side 5.5 m<br>extension to dip-side 1.3 m<br>width 0.8 m    |
| 16. Volume of the trench estimated :   | 14 m <sup>3</sup>   |
| 17. The largest amount of the ore estimated which is taken from the trench : | 20 ton  |
| 18. Amount of stock of the ore :   | 30 ton (20 - 30 % Cr <sub>2</sub> O <sub>3</sub> , taken from trenches TA42-46) |
| 19. Relation to the other trenches and galleries :                           | TA-43,44,45,46  |
| 20. Laboratorial tests :   | thin section (Acr-79) polished section (Acr-80)                                 |
| 21. Remarks :  | refer Plate 7-7   |

## List of trenches and galleries

- |     |  |  |
|-----|--|--|
| 1.  | Number of trench :   | TA-43  |
| 2.  | Project No. :  | 78/26  |
| 3.  | Area :   | Kopdağ   |
| 4.  | Map No. :  | Tortum, H-45, d4, No.4   |
| 5.  | Coordinates :  | 32.89 N, 31.90 E   |
| 6.  | Altitude :   | 2,444 m  |
| 7.  | Name of the mine :   | Orta Tepe (25,000) (east Kop chrome zone)                                    |
| 8.  | Location and communication :   | Orta Tepe, Dencik Aşkale Erzurum, 35 minutes from Pırnakapan by car          |
| 9.  | Type etc. :  | pit for exploration  |
| 10. | Host rock :  | serpentinized dunite   |
| 11. | Orebody :  |  |
|     | Stratigraphic horizon in ultrabasic rocks ;                              | middle horizon   |
|     | Amount of the orebody ;  | 1  |
|     | Direction of the orebody ;   | strike N 72° E* dip 18° N*<br>(Direction of the ore zone ; N 32° E )         |
|     | Scale of the orebody observed ;  | extension to strike-side 1.5 m<br>extension to dip-side 0.4 m<br>width 0.3 m |
|     | Shape of the orebody ;   | layered  |
| 12. | Chromite banding around the orebody :                                    | strike N 72° E dip 18° N   |
| 13. | Fault around the orebody :   | not observed   |
| 14. | Ore :  |  |
|     | Type of the ore ;  | disseminated, banded   |
|     | Ore minerals ;   | chromite   |
|     | Grade of the ore ;   | macroscopic estimation, 15 - 25 % Cr <sub>2</sub> O <sub>3</sub>             |
| 15. | The largest scale of the orebody estimated :                             | extension to strike-side 8 m<br>extension to dip-side 0.5 m<br>width 0.5 m   |
| 16. | Volume of the trench estimated :   | 4 m <sup>3</sup>   |
| 17. | The largest amount of the ore estimated which is taken from the trench : | 7 ton  |
| 18. | Amount of stock of the ore :   | -  |
| 19. | Relation to the other trenches and galleries :                           | TA-42,44,45,46   |
| 20. | Laboratorical tests :  | -  |
| 21. | Remarks :  | refer Plate 7-7  |

## List of trenches and galleries

1.	Number of trench :	TA-44 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Tortum, H-45, d4, No.4
5.	Coordinates :	32.88 N, 31.90 E
6.	Altitude :	2,444 m
7.	Name of the mine :	Orta Tepe (25,000) (east Kop chrome zone)
8.	Location and communication :	Orta Tepe, Dencik Aşkale, Erzurum, 35 minutes from Pınakapan by car
9.	Type etc. :	pit for exploration, covered by soil completely
10.	Host rock :	*
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 32° E )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	*
	Ore minerals ;	*
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the orebody estimated :	extension to strike-side 0.4 m
		extension to dip-side 0.2 m
		width 0.2 m
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-42,43,45,46
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-7

## List of trenches and galleries

1. Number of trench :	TA-45 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Tortum, H-45, d4, No.4
5. Coordinates :	32.88 N, 31.90 E
6. Altitude :	2,443 m
7. Name of the mine :	Orta Tepe (25,000) (east Kop chrome zone)
8. Location and communication :	Orta Tepe, Dencik Aşkale, Erzurum, 35 minutes from Pınakapan by car
9. Type etc. :	pit for exploration, covered by soil completely
10. Host rock :	
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; N 32° E )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	*
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	extension to strike-side 0.7 m
	extension to dip-side 0.2 m
	width 0.3 m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TA-42,43,44,46
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-7

## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-46   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdag  |
| 4.  | Map No. :  | Tortum, H-45, d4, No.4  |
| 5.  | Coordinates :  | 32.87 N, 31.89 E  |
| 6.  | Altitude :   | 2,443 m   |
| 7.  | Name of the mine :   | Orta Tepe (25,000) (east Kop chrome zone)   |
| 8.  | Location and communication :   | Orta Tepe, Dencik Aşkale, Erzurum,<br>35 minutes from Pirnakapan by car             |
| 9.  | Type etc. :  | trench for exploration  |
| 10. | Host rock :  | serpentinized dunite  |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in<br>ultrabasic rocks ;                                 | middle horizon  |
|     | Amount of the orebody ;  | 1   |
|     | Direction of the orebody ;   | strike N 30° W dip 62° SW<br>(Direction of the ore zone ; N 32° E )                 |
|     | Scale of the orebody observed ;  | extension to strike-side 2 m<br>extension to dip-side 0.2 m<br>width 0.1 m          |
|     | Shape of the orebody ;   | lenticular. Massive, lenticular orebody has<br>sharp fault contact to the host rock |
| 12. | Chromite banding around the<br>orebody :                                       | not observed  |
| 13. | Fault around the orebody :   | along the hangingwall of the orebody.   |
| 14. | Ore :  |   |
|     | Type of the ore ;  | massive, disseminated   |
|     | Ore minerals ;   | chromite  |
|     | Grade of the ore ;   | macroscopic estimation, 10 – 35 % Cr <sub>2</sub> O <sub>3</sub>                    |
| 15. | The largest scale of the<br>orebody estimated :                                | extension to strike-side 7.5 m<br>extension to dip-side 0.5 m<br>width 0.4 m        |
| 16. | Volume of the trench estimated :   | 5 m <sup>3</sup>  |
| 17. | The largest amount of the ore<br>estimated which is taken<br>from the trench : | 5 ton   |
| 18. | Amount of stock of the ore :   | -   |
| 19. | Relation to the other trenches<br>and galleries :                              | TA-42,43,44,45  |
| 20. | Laboratorial tests :   | -   |
| 21. | Remarks :  | refer Plate 7-7   |

## List of trenches and galleries

- |  |   |
|--|---|
| 1. Number of trench :  | TA-47   |
| 2. Project No. :   | 78/26   |
| 3. Area :  | Kopdağ  |
| 4. Map No. :   | Erzurum, i-45, a1, No.1   |
| 5. Coordinates :   | 27.88 N, 33.50 E  |
| 6. Altitude :  | 1,840 m   |
| 7. Name of the mine :  | Pırnakapan (25,000) (east Kop chrome zone)  |
| 8. Location and communication :  | Kurudere, Pırnakapan, Aşkale, Erzurum,<br>20 minutes from Pırnakapan on foot and by car |
| 9. Type etc. :   | trench for exploration, covered by soil mostly  |
| 10. Host rock :  | serpentinized dunite  |
| 11. Orebody :  |   |
| Stratigraphic horizon in ultrabasic rocks ;                                  | middle horizon  |
| Amount of the orebody ;  | *   |
| Direction of the orebody ;   | strike * dip *  |
|  | (Direction of the ore zone ; N 70° W )  |
| Scale of the orebody observed ;  | extension to strike-side * m  |
|  | extension to dip-side * m   |
|  | width * m   |
| Shape of the orebody ;   | lenticular, layered,  |
| 12. Chromite banding around the orebody ;                                    | not observed  |
| 13. Fault around the orebody :   | strike N 80° E dip 70° N  |
| 14. Ore :  |   |
| Type of the ore ;  | disseminated  |
| Ore minerals ;   | chromite  |
| Gangue minerals ;  | serpentine, magnesite, magnetite, olivine   |
| Grade of the ore ;   | macroscopic estimation, *   |
| 15. The largest scale of the orebody estimated :                             | extension to strike-side * m  |
|  | extension to dip-side * m   |
|  | width * m   |
| 16. Volume of the trench estimated :   | 12 m <sup>3</sup>   |
| 17. The largest amount of the ore estimated which is taken from the trench : | * ton   |
| 18. Amount of stock of the ore.:   | 3 ton (40 % Cr <sub>2</sub> O <sub>3</sub> , taken from trenches TA-47,48,49)           |
| 19. Relation to the other trenches and galleries :                           | TA-48,49,50,50(A),50(B)   |
| 20. Laboratorial tests :   | thin section (Acr-85)   |
| 21. Remarks :  | refer Plate 7-8   |



## List of trenches and galleries

1.	Number of trench :	TA-48
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzurum, i-45, a1, No.1
5.	Coordinates :	27.86 N, 33.54 E
6.	Altitude :	1,845 m
7.	Name of the mine :	Pırnakapan (25,000) (east Kop chrome zone)
8.	Location and communication :	Kurudere, Pırnakapan, Aşkale, Erzurum, 20 minutes from Pırnakapan on foot and by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1 *
	Direction of the orebody ;	strike N 70° W dip *
		(Direction of the ore zone ; N 70° W )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	assumed, strike N dip *
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the orebody estimated :	extension to strike-side 17 m
		extension to dip-side 4 m
		width 1 m
16.	Volume of the trench estimated :	240 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	240 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-47,49,50,50(A),50(B)
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-8

## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-49   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdağ  |
| 4.  | Map No. :  | Erzurum, i-45, a1, No.1   |
| 5.  | Coordinates :  | 27.83 N, 33.60 E  |
| 6.  | Altitude :   | 1,857 m   |
| 7.  | Name of the mine :   | Pirnakapan (25,000) (east Kop chrome zone)  |
| 8.  | Location and communication :   | Kurudere, Pirnakapan, Aşkale, Erzurum,<br>20 minutes from Pirnakapan on foot and by car |
| 9.  | Type etc. :  | trench, gallery (open) for exploitation   |
| 10. | Host rock :  | serpentinized dunite  |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in ultrabasic rocks ;                              | middle horizon  |
|     | Amount of the orebody ;  | 1 *   |
|     | Direction of the orebody ;   | strike * dip *  |
|     |  | (Direction of the ore zone ; N 70° W )  |
|     | Scale of the orebody observed ;  | extension to strike-side * m  |
|     |  | extension to dip-side * m   |
|     |  | width * m   |
|     | Shape of the orebody ;   | *   |
| 12. | Chromite banding around the orebody :                                    | not observed  |
| 13. | Fault around the orebody :   | strike N 45° E dip 76° NW   |
| 14. | Ore :  |   |
|     | Type of the ore ;  | disseminated  |
|     | Ore minerals ;   | chromite  |
|     | Grade of the ore ;   | macroscopic estimation, *   |
| 15. | The largest scale of the orebody estimated :                             | extension to strike-side 30 m   |
|     |  | extension to dip-side 3.5 m   |
|     |  | width 1.2 m   |
| 16. | Volume of the trench estimated :   | 730 m <sup>3</sup>  |
| 17. | The largest amount of the ore estimated which is taken from the trench : | (Length of the gallery 19.5 m)<br>430 ton   |
| 18. | Amount of stock of the ore :   | -   |
| 19. | Relation to the other trenches and galleries :                           | TA-47,48,50,50(A),50(B)   |
| 20. | Laboratorial tests :   | -   |
| 21. | Remarks :  | refer Plate 7-8   |

## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-50   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdağ  |
| 4.  | Map No. :  | Erzurum, i-45, a1, No.1   |
| 5.  | Coordinates :  | 27.73 N, 33.62 E  |
| 6.  | Altitude :   | 1,875 m   |
| 7.  | Name of the mine :   | Pirnakapan (25,000) (east Kop chrome zone)  |
| 8.  | Location and communication :   | Kurudere, Pirnakapan, Aşkale, Erzurum,<br>20 minutes from Pirnakapan on foot and by car |
| 9.  | Type etc. :  | pit for exploration   |
| 10. | Host rock :  | serpentinized dunite  |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in ultrabasic rocks ;                              | middle horizon  |
|     | Amount of the orebody ;  | 1   |
|     | Direction of the orebody ;   | strike N 78° E dip 32° N<br>(Direction of the ore zone ; * )                            |
|     | Scale of the orebody observed ;  | extension to strike-side 4 m<br>extension to dip-side 3 m<br>width 0.1 m                |
|     | Shape of the orebody ;   | lenticular  |
| 12. | Chromite banding around the orebody :                                    | strike N 78° E dip 32° N  |
| 13. | Fault around the orebody :   | not observed  |
| 14. | Ore :  |   |
|     | Type of the ore ;  | massive, disseminated, banded   |
|     | Ore minerals ;   | chromite  |
|     | Grade of the ore ;   | macroscopic estimation, 20 - 35 % Cr <sub>2</sub> O <sub>3</sub>                        |
| 15. | The largest scale of the orebody estimated :                             | extension to strike-side 3.2 m<br>extension to dip-side 3.5 m<br>width 0.3 m            |
| 16. | Volume of the trench estimated :   | 30 m <sup>3</sup>   |
| 17. | The largest amount of the ore estimated which is taken from the trench : | 10 ton  |
| 18. | Amount of stock of the ore :   | very small  |
| 19. | Relation to the other trenches and galleries :                           | TA-47,48,49,50(A),50(B)   |
| 20. | Laboratorial tests :   | polished section (Acr-86)   |
| 21. | Remarks :  | refer Plate 7-8   |

## List of trenches and galleries

- |     |  |   |
|-----|--|---|
| 1.  | Number of trench :   | TA-50(A) (not surveyed in detail)   |
| 2.  | Project No. :  | 78/26   |
| 3.  | Area :   | Kopdağ  |
| 4.  | Map No. :  | Erzurum, i-45, a1, No.1   |
| 5.  | Coordinates :  | 27.77 N, 33.65 E  |
| 6.  | Altitude :   | 1,885 m   |
| 7.  | Name of the mine :   | Pırnakapan (25,000) (east Kop chrome zone)  |
| 8.  | Location and communication :   | Kurudere, Pırnakapan, Aşkale, Erzurum,<br>20 minutes from Pırnakapan on foot and by car |
| 9.  | Type etc. :  | trench for exploration  |
| 10. | Host rock :  | dunite, harzburgite   |
| 11. | Orebody :  |   |
|     | Stratigraphic horizon in ultrabasic rocks ;                              | middle horizon  |
|     | Amount of the orebody ;  | -   |
|     | Direction of the orebody ;   | strike - dip -  |
|     |  | (Direction of the ore zone ; * )  |
|     | Scale of the orebody observed ;  | extension to strike-side - m  |
|     |  | extension to dip-side - m   |
|     |  | width - m   |
|     | Shape of the orebody ;   | -   |
|     |  | Orebody is not observed in the trench.  |
| 12. | Chromite banding around the orebody ;                                    | not observed  |
| 13. | Fault around the orebody :   | not observed  |
| 14. | Ore :  |   |
|     | Type of the ore ;  | -   |
|     | Ore minerals ;   | -   |
|     | Grade of the ore ;   | macroscopic estimation, -   |
| 15. | The largest scale of the orebody estimated :                             | extension to strike-side - m  |
|     |  | extension to dip-side - m   |
|     |  | width - m   |
| 16. | Volume of the trench estimated :   | 4 m <sup>3</sup>  |
| 17. | The largest amount of the ore estimated which is taken from the trench : | -   |
| 18. | Amount of stock of the ore :   | -   |
| 19. | Relation to the other trenches and galleries :                           | TA-47,48,49,50,50(B)  |
| 20. | Laboratorial tests :   | -   |
| 21. | Remarks :  | refer Plate 7-8   |

## List of trenches and galleries

1.	Number of trench :	TA-50(B)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzurum, i-45, a1, No.1
5.	Coordinates :	27.74 N, 33.65 E
6.	Altitude :	1,876 m
7.	Name of the mine :	Pirnakapan (25,000) (east Kop chrome zone)
8.	Location and communication :	Kurudere, Pirnakapan, Aşkale, Erzurum, 20 minutes from Pirnakapan on foot and by car
9.	Type etc. :	trench for exploration
10.	Host rock :	dunite, harzburgite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	-
	Direction of the orebody ;	strike - dip - (Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side - m extension to dip-side - m width - m
	Shape of the orebody ;	-
		Orebody is not observed in the trench.
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	-
	Ore minerals ;	-
	Grade of the ore ;	macroscopic estimation, -
15.	The largest scale of the orebody estimated :	extension to strike-side - m extension to dip-side - m width - m
16.	Volume of the trench estimated :	5 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	-
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-47,48,49,50,50(A)
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-8

## List of trenches and galleries

1. Number of trench :	TB-1
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	26.24 N, 06.40 E
6. Altitude :	1,980 m
7. Name of the mine :	Civelek (2,000) (northern chrome zone)
8. Location and communication :	Kırıcakdere, Sığankale Y., Aşkale, Erzurum, 40 minutes from Sığankale Y., by jeep
9. Type etc. :	trench for exploitation
10. Host rock :	strongly serpentized dunite, serpentinite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; N 65° E )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive, brecciated (disseminated)
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 30 - 35 % Cr <sub>2</sub> O <sub>3</sub> analytical value, 30.65 % Cr <sub>2</sub> O <sub>3</sub> from the stockpile, random sample
15. The largest scale of the orebody estimated :	extension to strike-side 20 m
	extension to dip-side 2 m
	width 0.8 m
16. Volume of the trench estimated :	590 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	110 ton
18. Amount of stock of the ore :	2.6 ton
19. Relation to the other trenches and galleries :	TB-2, TA-18
20. Laboratorial tests :	chemical analysis of the ore (Bcr-1)
21. Remarks :	refer Plate 7-5

## List of trenches and galleries

1. Number of trench :	TB-2
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	26.18 N, 06.32 E
6. Altitude :	2,005 m
7. Name of the mine :	Civelek (2,000) (norther chrome zone)
8. Location and communication :	Kırıcakdere, Sıçankale Y., Aşkale, Erzurum, 40 minutes from Sıçankale Y., by jeep
9. Type etc. :	trench for exploitation
10. Host rock :	strongly serpentized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike N 70° E dip 50° SE (Direction of the ore zone ; N 65° E )
Scale of the orebody observed ;	extension to strike-side 5 m extension to dip-side * m width 1.2 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive, brecciated (disseminated)
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 40 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 10 m extension to dip-side 4 m width 1.2 m
16. Volume of the trench estimated :	1,500 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	170 ton
18. Amount of stock of the ore :	3.8 ton
19. Relation to the other trenches and galleries :	TB-1, TA-18
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-5

## List of trenches and galleries

- |                                      |   |             |        |
|--------------------------------------|---|-------------|--------|
| 1. Number of trench :                | TB-3  |             |        |
| 2. Project No. :                     | 78/26   |             |        |
| 3. Area :                            | Kopdağ  |             |        |
| 4. Map No. :                         | Erzincan, i-44, a2, No.2  |             |        |
| 5. Coordinates :                     | 24.10 N,  | 04.09       | E      |
| 6. Altitude :                        | 2,115 m   |             |        |
| 7. Name of the mine :                | Pembe Gül (2,000) (northern chrome zone)  |             |        |
| 8. Location and communication :      | Keşandere, Cancıkköyü Aşkale, Erzurum,<br>60 minutes from Sığircikale Y., on foot and<br>by car |             |        |
| 9. Type etc. :                       | trench for exploration  |             |        |
| 10. Host rock :                      | serpentinite (powdery)  |             |        |
| 11. Orebody :                        |   |             |        |
| Stratigraphic horizon in             |   |             |        |
| ultrabasic rocks ;                   | upper horizon   |             |        |
| Amount of the orebody ;              | 1   |             |        |
| Direction of the orebody ;           | strike  | N 15° E dip | 65° NW |
|                                      | (Direction of the ore zone ; * )  |             |        |
| Scale of the orebody observed ;      | extension to strike-side  | *           | m      |
|                                      | extension to dip-side   | 0.2         | m      |
|                                      | width   | 0.1         | m      |
| Shape of the orebody ;               | lenticular  |             |        |
| 12. Chromite banding around the      |   |             |        |
| orebody :                            | not observed  |             |        |
| 13. Fault around the orebody :       | not observed  |             |        |
| 14. Ore :                            |   |             |        |
| Type of the ore ;                    | massive, powdery  |             |        |
| Ore minerals ;                       | chromite  |             |        |
| Grade of the ore ;                   | macroscopic estimation, 30 - 40 % Cr <sub>2</sub> O <sub>3</sub>                                |             |        |
| 15. The largest scale of the         |   |             |        |
| orebody estimated ;                  | extension to strike-side  | 2           | m      |
|                                      | extension to dip-side   | 0.7         | m      |
|                                      | width   | 0.2         | m      |
| 16. Volume of the trench estimated : | 2 m <sup>3</sup>  |             |        |
| 17. The largest amount of the ore    |   |             |        |
| estimated which is taken             |   |             |        |
| from the trench :                    | 1 ton   |             |        |
| 18. Amount of stock of the ore :     | 0.8 ton   |             |        |
| 19. Relation to the other trenches   |   |             |        |
| and galleries :                      | TM-3,4  |             |        |
| 20. Laboratorial tests :             | -   |             |        |
| 21. Remarks :                        | refer Plate 7-5   |             |        |



## List of trenches and galleries

1.	Number of trench :	TB-4
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.2
5.	Coordinates :	23.90 N, 04.00 E
6.	Altitude :	2,030 m
7.	Name of the mine :	Dikyokuş (10,000) (northern chrome zone)
8.	Location and communication :	Baltadeğmezdere, Cancıkkomu, Aşkale Erzurum, 60 minutes from Sığankale Y., on foot and by car
9.	Type etc. :	pit for exploration
10.	Host rock :	serpentinized dunite, serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
	Amount of the orebody ;	1 *
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 85° W )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the	
	orebody :	strike N 70° W dip 47° N
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the	
	orebody estimated :	extension to strike-side 2 m
		extension to dip-side 0.7 m
		width 0.2 m
16.	Volume of the trench estimated :	2 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	< 1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches	
	and galleries :	TA-10, TB-5
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

# List of trenches and galleries

1. Number of trench :	TB-5
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.2
5. Coordinates :	23.87 N, 03.93 E
6. Altitude :	2,010 m
7. Name of the mine :	Dikyokuş (10,000) (northern chrome zone)
8. Location and communication :	Baltadeğmezdere, Cancıkkomu, Aşkale Erzurum, 60 minutes from Sığankale Y., on foot and by car
9. Type etc. :	pit for exploration
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 85° W )
	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	strike N 85° W dip 20° S
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	extension to strike-side 1 m
	extension to dip-side 0.3 m
	width 0.2 m
16. Volume of the trench estimated :	1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore ;	-
19. Relation to the other trenches and galleries :	TA-10, TB-4
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-6

# List of trenches and galleries

1.	Number of trench :	TB-6
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	21.69 N, 99.57 E
6.	Altitude :	1,785 m
7.	Name of the mine :	Hacıbektaşkomu (10,000)
8.	Location and communication :	Hacıbektaşkomu, Çayırılı, Erzincan, 15 minutes from Hacıbektaşkomu on foot
9.	Type etc. :	trench for exploration
10.	Host rock :	serpentinized dunite and serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	strike N 70° E dip 53° N
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 3 m
		extension to dip-side 0.3 m
		width 0.3 m
16.	Volume of the trench estimated :	3 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	<1 ton
18.	Amount of stock of the ore :	0.3 ton
19.	Relation to the other trenches and galleries :	TA-26 - 28
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

- |     |  |   |       |       |
|-----|--|---|-------|-------|
| 1.  | Number of trench :   | TB-7  |       |       |
| 2.  | Project No. :  | 78/26   |       |       |
| 3.  | Area :   | Kopdağ  |       |       |
| 4.  | Map No. :  | Erzincan, i-44,a2, No.1   |       |       |
| 5.  | Coordinates :  | 21.50 N,  | 98.09 | E     |
| 6.  | Altitude :   | 1,685 m   |       |       |
| 7.  | Name of the mine :   | Hacıbektaşkomu (10,000)   |       |       |
| 8.  | Location and communication :   | Kale Tepe, Hacıbektaşkomu, Çayırılı<br>Erzincan 20 minutes from Hacıbektaşkomu<br>on foot and by jeep |       |       |
| 9.  | Type etc. :  | trench for exploration  |       |       |
| 10. | Host rock :  | serpentinized dunite and harzburgite  |       |       |
| 11. | Orebody :  |   |       |       |
|     | Stratigraphic horizon in<br>ultrabasic rocks ;                                 | middle horizon  |       |       |
|     | Amount of the orebody ;  | *   |       |       |
|     | Direction of the orebody ;   | strike  | *     | dip * |
|     |  | (Direction of the ore zone ; * )  |       |       |
|     | Scale of the orebody observed ;  | extension to strike-side  | *     | m     |
|     |  | extension to dip-side   | *     | m     |
|     |  | width   | *     | m     |
|     | Shape of the orebody ;   | *   |       |       |
| 12. | Chromite banding around the<br>orebody :                                       | not observed  |       |       |
| 13. | Fault around the orebody :   | not observed  |       |       |
| 14. | Ore :  |   |       |       |
|     | Type of the ore ;  | *   |       |       |
|     | Ore minerals ;   | chromite  |       |       |
|     | Grade of the ore ;   | macroscopic estimation, *   |       |       |
| 15. | The largest scale of the<br>orebody estimated :                                | extension to strike-side  | 2.4   | m     |
|     |  | extension to dip-side   | 0.4   | m     |
|     |  | width   | 0.2   | m     |
| 16. | Volume of the trench estimated :   | 4 m <sup>3</sup>  |       |       |
| 17. | The largest amount of the ore<br>estimated which is taken<br>from the trench : | < 1 ton   |       |       |
| 18. | Amount of stock of the ore :   | -   |       |       |
| 19. | Relation to the other trenches<br>and galleries :                              | TA-19 - 25  |       |       |
| 20. | Laboratorial tests :   | -   |       |       |
| 21. | Remarks :  | refer Plate 7-6   |       |       |

## List of trenches and galleries

1.	Number of trench :	TB-8
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	22.96 N, 97.79 E
6.	Altitude :	1,820 m
7.	Name of the mine :	Kayınlı Tepe (10,000)
8.	Location and communication :	Kayınlı Tepe, Mirzaoğlu, Çayırılı, Erzincan, 60 minutes from Hacıbektaşkomu on foot
9.	Type etc. :	pit for exploration
10.	Host rock :	lateritized, serpentized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 60° W )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 35 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 3.3 m
		extension to dip-side 0.6 m
		width 0.3 m
16.	Volume of the trench estimated :	9 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	2 ton
18.	Amount of stock of the ore :	2 ton
19.	Relation to the other trenches and galleries :	TB-9,10
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	TB-9		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, a2, No.1		
5.	Coordinates :	22.93 N,	97.77 E	
6.	Altitude :	1,810 m		
7.	Name of the mine :	Kayınlı Tepe (10,000)		
8.	Location and communication :	Kayınlı Tepe, Mirzaoğlu, Çayırılı, Erzincan, 60 minutes from Hacıbektaşkomu on foot		
9.	Type etc. :	trench for exploration		
10.	Host rock :	lateritized, serpentized dunite		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike	N 65° W	* dip *
		(Direction of the ore zone ; N 60° W )		
	Scale of the orebody observed ;	extension to strike-side	*	m
		extension to dip-side	*	m
		width	*	m
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	strike N 85° E dip 33° S		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	disseminated		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation,	*	
15.	The largest scale of the orebody estimated :	extension to strike-side	4.5	m
		extension to dip-side	0.6	m
		width	0.3	m
16.	Volume of the trench estimated :		16	m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :		3	ton
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TB-8,10		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-6		

## List of trenches and galleries

1.	Number of trench :	TB-10
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, a2, No.1
5.	Coordinates :	22.96 N, 97.73 E
6.	Altitude :	1,812 m
7.	Name of the mine :	Kayınlı Tepe (10,000)
8.	Location and communication :	Kayınlı Tepe, Mirzaoğlu, Çayırılı, Erzincan, 60 minutes from Hacıbektaşkomu on foot
9.	Type etc. :	trench for exploration
10.	Host rock :	lateritized, serpentized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	*
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 60° W )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	strike N 60° W dip 35° SW
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the orebody estimated :	extension to strike-side 4 m
		extension to dip-side 0.6 m
		width 0.3 m
16.	Volume of the trench estimated ;	19 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	3 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TB-8,9
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-6

## List of trenches and galleries

1. Number of trench :	TB-11
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.3
5. Coordinates :	20.64 N, 04.76 E
6. Altitude :	1,565 m
7. Name of the mine :	Kara Tepe (25,000) (southern chrome zone)
8. Location and communication :	Fındıkdere, Cancıkkomu, Aşkale, Erzurum, 15 minutes from Erbaş station by jeep
9. Type etc. :	trench for exploration
10. Host rock :	lateritized, serpentized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike N 60° E dip *
	(Direction of the ore zone ; * )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 45 % Cr <sub>2</sub> O <sub>3</sub> analytical value, 52.53 % Cr <sub>2</sub> O <sub>3</sub> from the stockpile, high-grade part
15. The largest scale of the orebody estimated :	extension to strike-side 3.5 m
	extension to dip-side 0.5 m
	width 0.2 m
16. Volume of the trench estimated :	14 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	1 ton
18. Amount of stock of the ore :	0.7 ton
19. Relation to the other trenches and galleries :	TA-34,35
20. Laboratorial tests :	chemical analysis of the ore (Bcr-9)
21. Remarks :	refer Plate 7-6



# List of trenches and galleries

1. Number of trench :	TB-12 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, a2, No.3
5. Coordinates :	19.19 N, 03.96 E
6. Altitude :	1,530 m
7. Name of the mine :	Güney Erbaş (southern chrome zone)
8. Location and communication :	Karaalidere, Erbaş istasyon, Tercan, Erzurum, 20 minutes from Erbaş station on foot across Karasu
9. Type etc. :	trench for exploration covered by soil mostly
10. Host rock :	serpentinized dunite and harzburgite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	middle horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike N 55° E dip * (Direction of the ore zone ; N 60° E )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 30 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 2 m extension to dip-side 0.3 m width 0.15 m
16. Volume of the trench estimated :	2 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	3 ton
18. Amount of stock of the ore :	0.3 ton
19. Relation to the other trenches and galleries :	TA-36 - 41
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-6

## List of trenches and galleries

1.	Number of trench :	<b>TB-13</b>		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, a2, No.3		
5.	Coordinates :	18.33 N, 04.55 E		
6.	Altitude :	1,690 m		
7.	Name of the mine :	Topkayın Tepe (25,000) (southern chrome zone)		
8.	Location and communication :	Topkayın Tepe, Kâğışna Erzurum, 35 minutes from Erbaş station on foot across the Karasu trench for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinized dunite		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	lower part of the middle horizon		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike N 40° E dip *		
		(Direction of the ore zone ; * )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	*		
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the orebody estimated :	extension to strike-side 3 m		
		extension to dip-side 0.3 m		
		width 0.1 m		
16.	Volume of the trench estimated :	1 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	3 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	-		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-6		

## List of trenches and galleries

1.	Number of trench :	TB-14
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzurum, i-45, a1, No.2
5.	Coordinates :	28.40 N, 34.35 E
6.	Altitude :	★ m
7.	Name of the mine :	Yassı Tepe (25,000) (east Kop chrome zone)
8.	Location and communication :	Değirmendere, Pırnakapan Aşkale, Erzurum, 30 minutes from Pırnakapan on foot and by car
9.	Type etc. :	pit for exploration
10.	Host rock :	dunite and harzburgite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 70° E dip *
	Scale of the orebody observed ;	(Direction of the ore zone ; * ) extension to strike-side * m extension to dip-side * m width * m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	strike N 60° W, N 85° E dip 62° N, 28° N (in turn)
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 5 m extension to dip-side 0.8 m width 0.2 m
16.	Volume of the trench estimated :	19 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	3 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA-47 - 50B, TB-15, 16
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-8

## List of trenches and galleries

- |     |                                  |  |                |   |
|-----|----------------------------------|--|----------------|---|
| 1.  | Number of trench :               | TB-15  |                |   |
| 2.  | Project No. :                    | 78/26  |                |   |
| 3.  | Area :                           | Kopdağ   |                |   |
| 4.  | Map No. :                        | Erzurum, i-45, a1, No.2  |                |   |
| 5.  | Coordinates :                    | 28.30 N,   | 34.55          | E |
| 6.  | Altitude :                       | ★  | m              |   |
| 7.  | Name of the mine :               | Yassı Tepe (25,000) (east Kop chrome zone)   |                |   |
| 8.  | Location and communication :     | Değirmendere, Pırnakapan Aşkale Er-<br>zurum, 30 minutes from Pırnakapan on foot<br>and by car |                |   |
| 9.  | Type etc. :                      | pit for exploration  |                |   |
| 10. | Host rock :                      | lateritized, serpentized dunite  |                |   |
| 11. | Orebody :                        |  |                |   |
|     | Stratigraphic horizon in         |  |                |   |
|     | ultrabasic rocks ;               | middle horizon   |                |   |
|     | Amount of the orebody ;          | *  |                |   |
|     | Direction of the orebody ;       | strike   | N 20° W dip    | * |
|     |                                  | (Direction of the ore zone ; * )   |                |   |
|     | Scale of the orebody observed ;  | extension to strike-side   | *              | m |
|     |                                  | extension to dip-side  | *              | m |
|     |                                  | width  | *              | m |
|     | Shape of the orebody ;           | *  |                |   |
| 12. | Chromite banding around the      |  |                |   |
|     | orebody :                        | strike N, N 50° W dip 48° W, 61° SW (in turn)  |                |   |
| 13. | Fault around the orebody :       | not observed   |                |   |
| 14. | Ore :                            |  |                |   |
|     | Type of the ore ;                | disseminated, banded   |                |   |
|     | Ore minerals ;                   | chromite   |                |   |
|     | Grade of the ore ;               | macroscopic estimation,  | ★              |   |
| 15. | The largest scale of the         |  |                |   |
|     | orebody estimated :              | extension to strike-side   | 5              | m |
|     |                                  | extension to dip-side  | 0.8            | m |
|     |                                  | width  | 0.2            | m |
| 16. | Volume of the trench estimated : | 19   | m <sup>3</sup> |   |
| 17. | The largest amount of the ore    |  |                |   |
|     | estimated which is taken         |  |                |   |
|     | from the trench :                | 3  | ton            |   |
| 18. | Amount of stock of the ore :     | -  |                |   |
| 19. | Relation to the other trenches   |  |                |   |
|     | and galleries :                  | TA-47 - 50B, TB-14,16  |                |   |
| 20. | Laboratorial tests :             | -  |                |   |
| 21. | Remarks :                        | refer Plate 7-8  |                |   |

# List of trenches and galleries

1.	Number of trench :	TB-16
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzurum, i-45, a1, No.2
5.	Coordinates :	28.00 N, 34.05 E
6.	Altitude :	★ m
7.	Name of the mine :	Yassı Tepe (25,000) (east Kop chrome zone)
8.	Location and communication :	Yassı Tepe, Pırnakapan Aşkale, Erzurum, 30 minutes from Pırnakapan on foot and by car
9.	Type etc. :	trench for exploration
10.	Host rock :	lateritized, serpentized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	3
	Direction of the orebody ;	strike N 25°W - N 50°E dip * (Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width * m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	N 24°E - N 75°E, 30-80N, NW strike N 27°W dip 57°W
13.	Fault around the orebody :	strike N 40°W, N 80°W dip 60°NE, 50 S (in turn)
14.	Ore :	
	Type of the ore ;	disseminated, banded, massive
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 3, 5.5, 5 m extension to dip-side 0.8, 1.2, 1.2 m width 0.3, 0.5, 0.4 m (in turn)
16.	Volume of the trench estimated :	260 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	22 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TA 47 - 50B, TB-14,15
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-8

## List of trenches and galleries

- |  |  |       |                |
|--|--|-------|----------------|
| 1. Number of trench :  | TB-17  |       |                |
| 2. Project No. :   | 78/26  |       |                |
| 3. Area :  | Kopdağ   |       |                |
| 4. Map No. :   | Tortum, H-45, d4, No.3   |       |                |
| 5. Coordinates :   | 30.90 N,   | 36.55 | E              |
| 6. Altitude :  | ★ m  |       |                |
| 7. Name of the mine :  | Habiboğlukomu (25,000) (east Kop chrome zone)  |       |                |
| 8. Location and communication :  | Kirişlidere, Habiboğlukomu Aşkale, Erzurum, 40 minutes from Pırnakapan on foot and by jeep |       |                |
| 9. Type etc. :   | pit for exploration  |       |                |
| 10. Host rock :  | serpentinized dunite and harzburgite   |       |                |
| 11. Orebody :  |  |       |                |
| Stratigraphic horizon in ultrabasic rocks ;                                  | middle horizon   |       |                |
| Amount of the orebody ;  | *  |       |                |
| Direction of the orebody ;   | strike   | *     | dip *          |
|  | (Direction of the ore zone ; N 20° E )   |       |                |
| Scale of the orebody observed ;  | extension to strike-side   | *     | m              |
|  | extension to dip-side  | *     | m              |
|  | width  | *     | m              |
| Shape of the orebody ;   | *  |       |                |
| 12. Chromite banding around the orebody :                                    | not observed   |       |                |
| 13. Fault around the orebody :   | not observed   |       |                |
| 14. Ore :  |  |       |                |
| Type of the ore ;  | massive  |       |                |
| Ore minerals ;   | chromite   |       |                |
| Grade of the ore ;   | macroscopic estimation, 40 % Cr <sub>2</sub> O <sub>3</sub>                                |       |                |
| 15. The largest scale of the orebody estimated :                             | extension to strike-side   | 1.7   | m              |
|  | extension to dip-side  | 0.5   | m              |
|  | width  | 0.3   | m              |
| 16. Volume of the trench estimated :   |  | 3     | m <sup>3</sup> |
| 17. The largest amount of the ore estimated which is taken from the trench : |  | < 1   | ton            |
| 18. Amount of stock of the ore :   | 0.8 ton  |       |                |
| 19. Relation to the other trenches and galleries :                           | TB-18,19   |       |                |
| 20. Laboratorial tests :   | -  |       |                |
| 21. Remarks :  | refer Plate 7-7  |       |                |

## List of trenches and galleries

1.	Number of trench :	TB-18
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Tortum, H-45, d4, No.3
5.	Coordinates :	31.05 N, 36.55 E
6.	Altitude :	★ m
7.	Name of the mine :	Habiboğlukomu (25,000) (east Kop chrome zone)
8.	Location and communication :	Kirişlidere, Habiboğlukomu, Aşkale, Erzurum, 40 minutes from Pırnakapan on foot and by jeep
9.	Type etc. :	trench for exploration
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 0° - 15° E dip 50° - 80° W (Direction of the ore zone ; N 20° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side * m width 0.5 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 4 m extension to dip-side 1.1 m width 0.5 m
16.	Volume of the trench estimated :	36 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	8 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TB-17,19
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-7

## List of trenches and galleries

- |  |   |         |                |
|--|---|---------|----------------|
| 1. Number of trench :  | TB-19   |         |                |
| 2. Project No. :   | 78/26   |         |                |
| 3. Area :  | Kopdağ  |         |                |
| 4. Map No. :   | Tortum, H-45, d4, No.3  |         |                |
| 5. Coordinates :   | 30.95 N,  | 36.50   | E              |
| 6. Altitude :  | ★ m   |         |                |
| 7. Name of the mine :  | Habiboğlukomu (25,000) (east Kop chrome zone)   |         |                |
| 8. Location and communication :  | Kirişlidere, Habiboğlukomu, Askale,<br>Erzurum, 40 minutes from Pırnakapan on<br>foot and by jeep |         |                |
| 9. Type etc. :   | trench for exploration  |         |                |
| 10. Host rock :  | serpentinized dunite  |         |                |
| 11. Orebody :  |   |         |                |
| Stratigraphic horizon in<br>ultrabasic rocks ;                                     | middle horizon  |         |                |
| Amount of the orebody ;  | 1   |         |                |
| Direction of the orebody ;   | strike  | N 35° E | dip 75° NW     |
|  | (Direction of the ore zone ; N 20° E )  |         |                |
| Scale of the orebody observed ;  | extension to strike-side  | *       | m              |
|  | extension to dip-side   | *       | m              |
|  | width   | 0.7     | m              |
| Shape of the orebody ;   | lenticular  |         |                |
| 12. Chromite banding around the<br>orebody :                                       | not observed  |         |                |
| 13. Fault around the orebody :   | not observed  |         |                |
| 14. Ore :  |   |         |                |
| Type of the ore ;  | massive, disseminated   |         |                |
| Ore minerals ;   | chromite  |         |                |
| Grade of the ore ;   | macroscopic estimation, 35 % Cr <sub>2</sub> O <sub>3</sub>                                       |         |                |
| 15. The largest scale of the<br>orebody estimated :                                | extension to strike-side  | 4.5     | m              |
|  | extension to dip-side   | 1.1     | m              |
|  | width   | 0.6     | m              |
| 16. Volume of the trench estimated :   |   | 35      | m <sup>3</sup> |
| 17. The largest amount of the ore<br>estimated which is taken<br>from the trench : |   | 10      | ton            |
| 18. Amount of stock of the ore :   | -   |         |                |
| 19. Relation to the other trenches<br>and galleries :                              | TB-17,18  |         |                |
| 20. Laboratorial tests :   | -   |         |                |
| 21. Remarks :  | refer Plate 7-7   |         |                |



### List of trenches and galleries

1.	Number of trench :	TB-20
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Tortum, i-45, d4, No.3
5.	Coordinates :	33.10 N, 34.30 E
6.	Altitude :	★ m
7.	Name of the mine :	Körösmân Tepe (25,000) (east Kop chrome zone)
8.	Location and communication :	Körösmân Tepe Dencik Aşkale, Erzurum, 60 minutes from Pınakapan by jeep
9.	Type etc. :	trench for exploration
10.	Host rock :	dunite and harzburgite
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	middle horizon
	Amount of the orebody ;	2 *
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side * m
		width * m
	Shape of the orebody ;	*
12.	Chromite banding around the	
	orebody :	strike N 30° E dip 35° SE
13.	Fault around the orebody :	strike N 80° W dip 70° N
14.	Ore :	
	Type of the ore ;	massive, disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 30 - 40 % Cr <sub>2</sub> O <sub>3</sub> analytical value, 31.96 % Cr <sub>2</sub> O <sub>3</sub> from the stockpile, random sample
15.	The largest scale of the	
	orebody estimated :	extension to strike-side 25, 17 m
		extension to dip-side 1.5, 1.2 m
		width 0.8, 0.8 m (in turn)
16.	Volume of the trench estimated :	2,290 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	220 ton
18.	Amount of stock of the ore :	150 ton
19.	Relation to the other trenches	
	and galleries :	-
20.	Laboratorical tests :	chemical analysis of the ore (Bcr-11)
21.	Remarks :	refer Plate 7-7

## List of trenches and galleries

- |     |  |  |
|-----|--|--|
| 1.  | Number of trench :   | TB-21  |
| 2.  | Project No. :  | 78/26  |
| 3.  | Area :   | Kopdağ   |
| 4.  | Map No. :  | Tortum, 1-45, d4, No.3   |
| 5.  | Coordinates :  | 31.15 N,                      34.50 E  |
| 6.  | Altitude :   | ★ m  |
| 7.  | Name of the mine :   | Şehirdere (25,000) (east Kop chrome zone)  |
| 8.  | Location and communication :   | Şehirdere, Şehirderekomu, Aşkale, Erzurum,<br>70 minutes from Pirnakapan on foot and by<br>car   |
| 9.  | Type etc. :  | trench for exploration   |
| 10. | Host rock :  | serpentinized dunite   |
| 11. | Orebody :  |  |
|     | Stratigraphic horizon in<br>ultrabasic rocks ;                                 | middle horizon   |
|     | Amount of the orebody ;  | 1  |
|     | Direction of the orebody ;   | strike                      N 25° E * dip *<br>(Direction of the ore zone ; *                      )   |
|     | Scale of the orebody observed ;  | extension to strike-side                      *                      m<br>extension to dip-side                      *                      m<br>width                      *                      m |
|     | Shape of the orebody ;   | lenticular   |
| 12. | Chromite banding around the<br>orebody :                                       | strike N 27° E, N dip 33° SE, 50° E (in turn)  |
| 13. | Fault around the orebody :   | not observed   |
| 14. | Ore :  |  |
|     | Type of the ore ;  | disseminated   |
|     | Ore minerals ;   | chromite   |
|     | Grade of the ore ;   | macroscopic estimation, 30 % Cr <sub>2</sub> O <sub>3</sub>  |
| 15. | The largest scale of the<br>orebody estimated :                                | extension to strike-side                      8 m<br>extension to dip-side                      1.2 m<br>width                      0.8 m  |
| 16. | Volume of the trench estimated :   | 135 m <sup>3</sup>   |
| 17. | The largest amount of the ore<br>estimated which is taken<br>from the trench : | 27 ton   |
| 18. | Amount of stock of the ore :   | 3 ton  |
| 19. | Relation to the other trenches<br>and galleries :                              | -  |
| 20. | Laboratorial tests :   | -  |
| 21. | Remarks :  | refer Plate 7-7  |

## List of trenches and galleries

1.	Number of trench :	TB-22		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b2, No.1		
5.	Coordinates :	27.66 N, 20.18 E		
6.	Altitude :	2,470 m		
7.	Name of the mine :	Delavlıardağ (25,000)		
8.	Location and communication :	Delavlıardağ, Sıçankale Y., Aşkale Erzurum 40 minutes from Sıçankale Y., on foot and by car 2 plt for exploration		
9.	Type etc. :			
10.	Host rock :	dunite and harzburgite		
11.	Orebody :			
	Stratigraphic horizon in			
	ultrabasic rocks ;	middle horizon		
	Amount of the orebody ;	2		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; * )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	lenticular		
12.	Chromite banding around the			
	orebody :	strike N 20° E dip 66° SE		
13.	Fault around the orebody :	strike N 35° E, N 60° E dip 75° W, 30° SE (in turn)		
14.	Ore :			
	Type of the ore ;	massive, disseminated		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, 30 - 35 % Cr <sub>2</sub> O <sub>3</sub>		
15.	The largest scale of the			
	orebody estimated :	extension to strike-side 10 m		
		extension to dip-side 1 m		
		width 0.4 m		
16.	Volume of the trench estimated :	23 m <sup>3</sup>		
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :	10 ton		
18.	Amount of stock of the ore :	5 ton		
19.	Relation to the other trenches			
	and galleries :	-		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-7		

## List of trenches and galleries

- |  |  |             |        |
|--|--|-------------|--------|
| 1. Number of trench :  | TB-23 (not surveyed in detail)   |             |        |
| 2. Project No. :   | 78/26  |             |        |
| 3. Area :  | Kopdağ   |             |        |
| 4. Map No. :   | Erzincan, i-44, a2, No.2   |             |        |
| 5. Coordinates :   | 25.54 N,   | 06.18       | E      |
| 6. Altitude :  | 2,133 m  |             |        |
| 7. Name of the mine :  | Civelek (2,000) (northern chrome zone)   |             |        |
| 8. Location and communication :  | Yayladere, Sıçankale Y., Aşkale, Erzurum,<br>60 minutes from Sıçankale Y., on foot and<br>by car |             |        |
| 9. Type etc. :   | trench for exploration   |             |        |
| 10. Host rock :  | serpentinized dunite   |             |        |
| 11. Orebody :  |  |             |        |
| Stratigraphic horizon in<br>ultrabasic rocks ;                                     | upper horizon (footwall-side * orebody)  |             |        |
| Amount of the orebody ;  | *  |             |        |
| Direction of the orebody ;   | strike   | N 70° E dip | 40° NW |
|  | (Direction of the ore zone ; * )   |             |        |
| Scale of the orebody observed ;  | extension to strike-side   | *           | m      |
|  | extension to dip-side  | *           | m      |
|  | width  | *           | m      |
| Shape of the orebody ;   | *  |             |        |
| 12. Chromite banding around the<br>orebody :                                       | strike N 60° E dip 57° NW  |             |        |
| 13. Fault around the orebody :   | not observed   |             |        |
| 14. Ore :  |  |             |        |
| Type of the ore ;  | (massive), disseminated  |             |        |
| Ore minerals ;   | chromite   |             |        |
| Grade of the ore ;   | macroscopic estimation, 35 % Cr <sub>2</sub> O <sub>3</sub>                                      |             |        |
| 15. The largest scale of the<br>orebody estimated :                                | extension to strike-side   | 1           | m      |
|  | extension to dip-side  | 0.2         | m      |
|  | width  | 0.1         | m      |
| 16. Volume of the trench estimated :   | < 1 m <sup>3</sup>   |             |        |
| 17. The largest amount of the ore<br>estimated which is taken<br>from the trench : | < 1 ton  |             |        |
| 18. Amount of stock of the ore :   | -  |             |        |
| 19. Relation to the other trenches<br>and galleries :                              | TA-17  |             |        |
| 20. Laboratorial tests :   | -  |             |        |
| 21. Remarks :  | no sketch map.   |             |        |

## List of trenches and galleries

1.	Number of trench :	TC-1 *
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.38 N, 06.65 E
6.	Altitude :	1,991 m
7.	Name of the mine :	Armutlu (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçan- kale Y., by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 40° E dip 47° NW (Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side 20 m extension to dip-side 6 m width 15 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N 60° E dip 56° N
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite
	Gangue minerals ;	serpentine, magnesite, magnetite, zeolite, stichtite
	Grade of the ore ;	macroscopic estimation, 35 - 45 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 50 m extension to dip-side 6 m width 20 m
16.	Volume of the trench estimated :	15,900 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	15,750 ton
18.	Amount of stock of the ore :	2,000 ton
19.	Relation to the other trenches and galleries :	TC-32
20.	Laboratorical tests :	X-ray diffractive analysis (Bx-2)
21.	Remarks :	refer Plate 7-4

## List of trenches and galleries

1.	Number of trench :	TC-2
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.01 N, 06.92 E
6.	Altitude :	2,025 m
7.	Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	strongly serpentized dunite and serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 0 - 48° E dip 55 - 60 W (Direction of the ore zone ; N 35° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 4 m width 0.5 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, disseminated
	Ore minerals ;	chromite (uvarovite)
	Gangue minerals ;	serpentine, magnesite, magnetite (common)
	Grade of the ore ;	macroscopic estimation, 30 - 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 30 m extension to dip-side 10 m width 5 m
16.	Volume of the trench estimated :	3,300 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	3,500 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-33,42
20.	Laboratorial tests :	polished section (Ccr-33)
21.	Remarks :	refer Plate 7-5

## List of trenches and galleries

1. Number of trench :	TC-3 *
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	26.10 N, 07.02 E
6. Altitude :	1,990 m
7. Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8. Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9. Type etc. :	trench for exploration
10. Host rock :	serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (lowermost part)
Amount of the orebody ;	1
Direction of the orebody ;	strike N 40° E dip * (Direction of the ore zone ; N 10° W )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 5 m width 0.1 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	strike N 10° W dip 60° W
13. Fault around the orebody :	strike N 55° E dip 80° NW
14. Ore :	
Type of the ore ;	massive, disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 25 - 30 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 30 m extension to dip-side 5 m width 3 m
16. Volume of the trench estimated :	2,130 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	525 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-4,35
20. Laboratorial tests :	polished section (Ccr-34)
21. Remarks :	refer Plate 7-5

# List of trenches and galleries

1. Number of trench :	TC-4
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	26.00 N, 07.08 E
6. Altitude :	1,945 m
7. Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8. Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale Erzurum, 30 minutes from Sıçankale Y., by car
9. Type etc. :	trench for exploration
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (lowermost part)
Amount of the orebody ;	1
Direction of the orebody ;	strike N 34° E dip 60° NW (Direction of the ore zone ; N 10° W )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 2 m width 0.5 m
Shape of the orebody ;	lenticular, layered
12. Chromite banding around the orebody :	strike N 35° E dip 60° NW
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, ★
15. The largest scale of the orebody estimated :	extension to strike-side 13 m extension to dip-side 2 m width 0.5 m
16. Volume of the trench estimated :	75 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	23 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-3,35
20. Laboratorical tests :	-
21. Remarks :	refer Plate 7-5



## List of trenches and galleries

1.	Number of trench :	TC-5
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.19 N, 06.97 E
6.	Altitude :	1,973 m
7.	Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9.	Type etc. :	trench for exploration
10.	Host rock :	strongly serpentinized dunite and serpentinite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	3-4
	Direction of the orebody ;	strike N 30° E dip 80° NW (Direction of the ore zone ; N 30° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 3 m width 0.1 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 5 m extension to dip-side 3 m width 0.5 m
16.	Volume of the trench estimated :	160 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	50 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-6,42
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-5

## List of trenches and galleries

1.	Number of trench :	TC-6
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.22 N, 07.02 E
6.	Altitude :	1,936 m
7.	Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale Erzurum 30 minutes from Sıçankale Y., by car
9.	Type etc. :	trench for exploration
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 30°E dip 75°NW (Direction of the ore zone ; N 30°E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 3 m width 1.5 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody ;	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 5 m extension to dip-side 4 m width 1.5 m
16.	Volume of the trench estimated :	40 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	70 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-5, GC-5
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-5

## List of trenches and galleries

1.	Number of trench :	TC-7 *
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.84 N, 06.95 E
6.	Altitude :	2,109 m
7.	Name of the mine :	Batı Ezan (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
	Amount of the orebody ;	2
	Direction of the orebody ;	strike N 85° E dip N, steep (Direction of the ore zone ; N 70° E )
	Scale of the orebody observed ;	extension to strike-side 55 m extension to dip-side 20 m width 7 - 10 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N 84° - 86° E dip 70° - 78° N
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite
	Gangue minerals (remarkably observed) ;	magnetite, brucite, stichtite
	Grade of the ore ;	macroscopic estimation, 35 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 60 m extension to dip-side 18 m width 20 m
16.	Volume of the trench estimated :	35,570 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	50,400 ton
18.	Amount of stock of the ore :	variable
19.	Relation to the other trenches and galleries :	TZ-1,3, GC-7
20.	Laboratorial tests :	X-ray diffractive analysis (Cx-1)
21.	Remarks :	refer Plate 7-4

## List of trenches and galleries

- |                                      |  |
|--------------------------------------|--|
| 1. Number of trench :                | TC-8 *   |
| 2. Project No. :                     | 78/26  |
| 3. Area :                            | Kopdağ   |
| 4. Map No. :                         | Erzincan, i-44, b1, No.1   |
| 5. Coordinates :                     | 26.57 N, 06.98 E   |
| 6. Altitude :                        | 2,038 m  |
| 7. Name of the mine :                | Orta Ezan (2,000) (northern chrome zone)   |
| 8. Location and communication :      | Büyükgüllünün Sr., Sıçankale Y., Aşkale,<br>Erzurum, 30 minutes from Sıçankale Y.,<br>by car |
| 9. Type etc. :                       | trench for exploitation  |
| 10. Host rock :                      | serpentinite (powdery)   |
| 11. Orebody :                        |  |
| Stratigraphic horizon in             |  |
| ultrabasic rocks ;                   | upper horizon (footwall-side orebody)  |
| Amount of the orebody ;              | 1  |
| Direction of the orebody ;           | strike N 60° E - N 70° W dip 25 - 68° N<br>(Direction of the ore zone ; N 55° E )            |
| Scale of the orebody observed ;      | extension to strike-side 50 m<br>extension to dip-side 10 m<br>width 6 m                     |
| Shape of the orebody ;               | lenticular   |
| 12. Chromite banding around the      |  |
| orebody :                            | not observed   |
| 13. Fault around the orebody :       | not observed   |
| 14. Ore :                            |  |
| Type of the ore ;                    | massive, disseminated  |
| Ore minerals ;                       | chromite   |
| Grade of the ore ;                   | macroscopic estimation, 40 % Cr <sub>2</sub> O <sub>3</sub>                                  |
| 15. The largest scale of the         |  |
| orebody estimated :                  | extension to strike-side 85 m<br>extension to dip-side 15 m<br>width 10 m                    |
| 16. Volume of the trench estimated : | 78,000 m <sup>3</sup>  |
| 17. The largest amount of the ore    |  |
| estimated which is taken             |  |
| from the trench :                    | 36,400 ton   |
| 18. Amount of stock of the ore :     | 3,600 ton  |
| 19. Relation to the other trenches   |  |
| and galleries :                      | TC-9, GB-1 GM-1,   |
| 20. Laboratorical tests :            | -  |
| 21. Remarks :                        | refer Plate 7-4  |

# List of trenches and galleries

1.	Number of trench :	TC-9
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.63 N, 07.12 E
6.	Altitude :	2,065 m
7.	Name of the mine :	Doğu Ezan (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9.	Type etc. :	trench, gallery (closed), for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	2
	Direction of the orebody ;	strike N 50° - 65° E, dip 47° - 50° NW (Direction of the ore zone ; N50°E )
	Scale of the orebody observed ;	extension to strike-side 13 m extension to dip-side 5 m width 3 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N60°E, dip 72°S
14.	Ore :	
	Type of the ore ;	massive, disseminated,
	Ore minerals ;	chromite (kaemmererite)
	Grade of the ore ;	macroscopic estimation, * %Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 35, 65 m extension to dip-side 5, 5 m width 3, 1.5 m (in turn)
16.	Volume of the trench estimated :	22,000 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	3,670 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-3,4, TC-8, TZ-2, GB-1
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-4

# List of trenches and galleries

1. Number of trench :	TC-10
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	27.18 N, 07.72 E
6. Altitude :	2,095 m
7. Name of the mine :	Sulu (2,000) (northern chrome zone)
8. Location and communication :	Güllüünder, Sığankale Y., Aşkale, Erzurum 30 minutes from Sığankale Y., by car pit for exploration
9. Type etc. :	
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike N85°E dip 45°N (Direction of the ore zone ; N60°E )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 2 m width 3 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	strike N55°E dip 66°NW
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, * % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 5 m extension to dip-side 2 m width 3.5 m
16. Volume of the trench estimated :	9 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	5 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-11 - 13, TM-1 - 2, GC-2
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-3

## List of trenches and galleries

1.	Number of trench :	TC-11		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.18 N, 7.73 E		
6.	Altitude :	2,102 m		
7.	Name of the mine :	Sulu (2,000) (northern chrome zone)		
8.	Location and communication :	Güllünüdere, Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car trench for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N60°E )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the orebody estimated :	extension to strike-side 1.5 m		
		extension to dip-side 0.3 m		
		width 1 m		
16.	Volume of the trench estimated :	4 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	1 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TC-10, 12, 13, TM-1, GC-2		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1.	Number of trench :	TC-12
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	27.18 N, 07.74 E
6.	Altitude :	2,107 m
7.	Name of the mine :	Sulu (2,000) (northern chrome zone)
8.	Location and communication :	Güllüdüdere, Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9.	Type etc. :	trench for exploitation
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N65°W, dip 35°NE (Direction of the ore zone ; N60°E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1.5 m width 4 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike N35°W, dip 55°NE
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★ % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 6 m extension to dip-side 1.5 m width 4 m
16.	Volume of the trench estimated :	20 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	30 ton
18.	Amount of stock of the ore :	very small
19.	Relation to the other trenches and galleries :	TC-10, 11, 13, TM-1, GC-2
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-3



## List of trenches and galleries

1.	Number of trench :	TC-13 *
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	27.15 N, 07.84 E
6.	Altitude :	2,148 m
7.	Name of the mine :	Sulu (northern chrome zone)
8.	Location and communication :	Güllününder, Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car trench, for exploitation
9.	Type etc. :	
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N70°E, dip 23°N (Direction of the ore zone ; N60°E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1.5 m width 0.5 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike N65°E dip 45°NW N45°E, 60°NW
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, banded
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, ★ %Cr <sub>2</sub> O <sub>3</sub> ,
15.	The largest scale of the orebody estimated :	extension to strike-side 60 m extension to dip-side 5 m width 7 m
16.	Volume of the trench estimated :	9,600 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench ;	4,900 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-10 - 12, TM-1, GC-2
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-3

## List of trenches and galleries

1.	Number of trench :	TC-14		
2.	Project No. :	78/26		
3.	Area :	Kopdag		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.02 N, 07.90 E		
6.	Altitude :	2,102 m		
7.	Name of the mine :	Sulu (2,000) (northern chrome zone)		
8.	Location and communication :	Güllünündere, Sıçankale Y., Aşkale, Erzurum		
9.	Type etc. :	30 minutes from Sıçankale Y., by car trench, for exploitation		
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in	upper horizon		
	ultrabasic rocks ;	(footwall-side orebody)		
	Amount of the orebody ;	1		
	Direction of the orebody ;	strike N60°W, dip *		
		(Direction of the ore zone ; N85°E )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side 1 m		
		width 0.5 m		
	Shape of the orebody ;	lenticular		
12.	Chromite banding around the			
	orebody :	strike N75°W, dip 35°NE		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	(massive) brecciated		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, 30 % Cr <sub>2</sub> O <sub>3</sub>		
15.	The largest scale of the			
	orebody estimated :	extension to strike-side 8 m		
		extension to dip-side 1 m		
		width 1.5 m		
16.	Volume of the trench estimated :	40 m <sup>3</sup>		
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :	42 ton		
18.	Amount of stock of the ore :	2 ton		
19.	Relation to the other trenches			
	and galleries :	TM-1, 2, TC-31, GX-1, GC-1		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1.	Number of trench :	TC-15		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	26.85 N, 08.20 E		
6.	Altitude :	1,960 m		
7.	Name of the mine :	Sulu (2,000) (northern chrome zone)		
8.	Location and communication :	Güllüdüdere, Sığankale Y., Aşkale, Erzurum, 30 minutes from Sığankale Y., by car trench, for exploitation		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon		
	Amount of the orebody ;	2		
	Direction of the orebody ;	strike N15°E dip 30°W (Direction of the ore zone ; * )		
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 3 m width 1 m		
	Shape of the orebody ;	lenticular Width of orebody is the total of the 2 orebodies.		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	massive		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, ★ %Cr <sub>2</sub> O <sub>3</sub>		
15.	The largest scale of the orebody estimated :	extension to strike-side 7 × 3 m extension to dip-side 3 × 3 m width 1 × 3 m		
16.	Volume of the trench estimated :	320 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	294 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	-		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1.	Number of trench :	TC-16		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.58 N, 10.17 E		
6.	Altitude :	2,231 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Camlıtepenin Sr., Sıçankale Y., Aşkale, Erzurum, 25 minutes from Sıçankale Y. on foot and by car pit, for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N30°E )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;			
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the orebody estimated :	extension to strike-side 1 m		
		extension to dip-side 0.5 m		
		width 0.5 m		
16.	Volume of the trench estimated :	4 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TC-17,18,19,20,21,22		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1.	Number of trench :	TC-17		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.58 N, 10.15 E		
6.	Altitude :	2,262 m		
7.	Name of the mine :	Gökyokuşun Sr.(2,000) (northern chrome zone)		
8.	Location and communication :	Camlıtepenin Sr., Sığankale Y., Aşkale, Erzurum, 25 minutes from Sığankale Y. on foot and by car pit, for exploration		
9.	Type etc. :			
10.	Host rock :	strongly serpentized dunite and serpentinite		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (hangingwall-side orebody)		
	Amount of the orebody ;	1		
	Direction of the orebody ;	strike N15°E, dip 68°W (Direction of the ore zone ; N30°E )		
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1.5 m width 3 m		
	Shape of the orebody ;	layered		
12.	Chromite banding around the orebody :	strike N15°E, dip 68°W		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	banded		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, ★		
15.	The largest scale of the orebody estimated :	extension to strike-side 1.5 m extension to dip-side 1.5 m width 3 m		
16.	Volume of the trench estimated :	9 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench ;	17 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TC-16,18,19,20,21,22		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

- |                                      |   |
|--------------------------------------|---|
| 1. Number of trench :                | TC-18   |
| 2. Project No. :                     | 78/26   |
| 3. Area :                            | Kopdağ  |
| 4. Map No. :                         | Erzincan, i-44, b1, No.1  |
| 5. Coordinates :                     | 27.57 N, 10.15 E  |
| 6. Altitude :                        | 2,250 m   |
| 7. Name of the mine :                | Gökyokuşun Sr. (2,000) (northern chrome zone)   |
| 8. Location and communication :      | Camlitepenin Sr., Sığankale Y.,<br>Aşkale, Erzurum,<br>25 minutes from Sığankale Y. on foot and by car<br>trench, for exploration                           |
| 9. Type etc. :                       |   |
| 10. Host rock :                      | serpentinite (powdery)  |
| 11. Orebody :                        |   |
| Stratigraphic horizon in             | upper horizon   |
| ultrabasic rocks ;                   | (hangingwall-side orebody)  |
| Amount of the orebody ;              | 1   |
| Direction of the orebody ;           | strike N8°W, dip 66°W<br>(Direction of the ore zone ; N30°E )   |
| Scale of the orebody observed ;      | extension to strike-side 5 m<br>extension to dip-side 1.5 m<br>width 1.2 m  |
| Shape of the orebody ;               | lenticular  |
| 12. Chromite banding around the      |   |
| orebody :                            | strike N45°E, dip 48°NW   |
| 13. Fault around the orebody :       | strike N35°E, dip 30°NW   |
| 14. Ore : Type of the ore ;          | massive, banded   |
| Ore minerals ;                       | chromite  |
| Gangue minerals ;                    | serpentine, magnesite, magnetite (abundant)   |
| Grade of the ore ;                   | macroscopic estimation, ★ %Cr <sub>2</sub> O <sub>3</sub><br>analytical value, 45.09 %Cr <sub>2</sub> O <sub>3</sub><br>from the stockpile, high-grade part |
| 15. The largest scale of the         |   |
| orebody estimated :                  | extension to strike-side 7 m<br>extension to dip-side 1.5 m<br>width 1.2 m  |
| 16. Volume of the trench estimated : | 63 m <sup>3</sup>   |
| 17. The largest amount of the ore    |   |
| estimated which is taken             |   |
| from the trench :                    | 15 ton  |
| 18. Amount of stock of the ore :     | 4.5 ton   |
| 19. Relation to the other trenches   |   |
| and galleries :                      | TC-16,17,19,20,21,22  |
| 20. Laboratorial tests :             | polished section (Ccr-9)<br>chemical analysis of the ore (Ccr-9)  |
| 21. Remarks :                        | refer Plate 7-3   |

## List of trenches and galleries

1. Number of trench :	TC-19
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	27.55 N, 10.14 E
6. Altitude :	2,255 m
7. Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)
8. Location and communication :	Camlıtepenin Sr., Sığankale Y., Aşkale, Erzurum 25 minutes from Sığankale Y. on foot and by car pit, for exploration
9. Type etc. :	
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	(hangingwall-side orebody)
Direction of the orebody ;	* strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N30°E )
	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	*
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated ;	extension to strike-side * m
	extension to dip-side 0.5 m
	width 1 m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench ;	< 1 ton *
18. Amount of stock of the ore ;	-
19. Relation to the other trenches and galleries ;	TC-16,17,18,20,21,22
20. Laboratorial tests ;	-
21. Remarks :	refer Plate 7-3

## List of trenches and galleries

1.	Number of trench :	TC-20		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.88 N, 10.24 E		
6.	Altitude :	2,232 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Camlıtepenin Sr., Sıçankale Y., Aşkale, Erzurum, 25 minutes from Sıçankale Y. on foot and by car pit, for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in	upper horizon		
	ultrabasic rocks ;	(hangingwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N30°E )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the			
	orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, ★		
15.	The largest scale of the			
	orebody estimated :	extension to strike-side 0.4 m		
		extension to dip-side 0.3 m		
		width 0.2 m		
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>		
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :	< 1 ton		
18.	Amount of stock of the ore :	very small		
19.	Relation to the other trenches			
	and galleries :	TC-16,17,18,19,21,22		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-3		



## List of trenches and galleries

1.	Number of trench :	TC-21		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.84 N, 10.29 E		
6.	Altitude :	2,200 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Camlıtepenin Sr., Sığankale Y., Aşkale, Erzurum, 25 minutes from Sığankale Y. on foot and by car trench for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in	upper horizon		
	ultrabasic rocks ;	(hangingwall-side orebody)		
	Amount of the orebody ;	1		
	Direction of the orebody ;	strike N15°E, dip 52°W		
		(Direction of the ore zone ; N30°E )		
	Scale of the orebody observed ;	extension to strike-side 1.8 m		
		extension to dip-side 0.3 m		
		width 0.5 m		
	Shape of the orebody ;	layered		
12.	Chromite banding around the			
	orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, ★		
15.	The largest scale of the			
	orebody estimated :	extension to strike-side 0.9 m		
		extension to dip-side 0.5 m		
		width 0.2 m		
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>		
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :	< 1 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches			
	and galleries :	TC-16,17,18,19,20,22		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1.	Number of trench :	TC-22		
2.	Project No. :	78/26		
3.	Area :	Kopdag		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.90 N, 10.34 E		
6.	Altitude :	2,220 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Camlıtepenin Sr., Sıçankale Y., Aşkale, Erzurum		
9.	Type etc. :	25 minutes from Sıçankale Y. on foot and by car trench for exploration		
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in	upper horizon		
	ultrabasic rocks ;	(hangingwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike E* dip *		
		(Direction of the ore zone ; N30°E )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the			
	orebody :	strike N42°E dip 45°NW		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the			
	orebody estimated :	extension to strike-side 1 m		
		extension to dip-side 0.4 m		
		width 0.3 m		
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>		
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :	< 1 ton		
18.	Amount of stock of the ore :	very small		
19.	Relation to the other trenches			
	and galleries :	TC-16,17,18,19,20,21		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1. Number of trench :	TC-23
2. Project No. :	78/26
3. Area :	Kopdag
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	28.01 N, 10.98 E
6. Altitude :	2,277 m
7. Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)
8. Location and communication :	Gökyokuşun Sr., Sıçankale Y., Aşkale, Erzurum, 20 minutes from Sıçankale Y. on foot and by car trench for exploration
9. Type etc. :	
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike E* dip *
	(Direction of the ore zone ; N30°W )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side 0.5 m
	width 0.2 m
Shape of the orebody ;	lenticular*
12. Chromite banding around the orebody :	strike N35°E dip 75°NW
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	massive, banded
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, ★
15. The largest scale of the orebody estimated :	extension to strike-side 8 m
	extension to dip-side 2 m
	width 0.5 m
16. Volume of the trench estimated :	10 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	28 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-24,25,26,27,28
20. Laboratorical tests :	-
21. Remarks :	refer Plate 7-3

## List of trenches and galleries

1.	Number of trench :	TC-24		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.99 N, 11.00 E		
6.	Altitude :	2,272 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Gökyokuşun Sr., Sıçankale Y., Aşkale, Erzurum		
9.	Type etc. :	20 minutes from Sıçankale Y. on foot and by car trench for exploration		
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in	upper horizon		
	ultrabasic rocks ;	(footwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N30°W )		
	Scale of the orebody observed ;	extension to strike-side	* m	
		extension to dip-side	* m	
		width	* m	
	Shape of the orebody ;	*		
12.	Chromite banding around the			
	orebody ;	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	★		
	Ore minerals ;	chromite		
	Grade of the ore ;	macroscopic estimation,	★	
15.	The largest scale of the			
	orebody estimated :	extension to strike-side	2 m	
		extension to dip-side	0.5 m	
		width	0.5 m	
16.	Volume of the trench estimated :		6 m <sup>3</sup>	
17.	The largest amount of the ore			
	estimated which is taken			
	from the trench :		2 ton	
18.	Amount of stock of the ore :		0.9 ton	
19.	Relation to the other trenches			
	and galleries :	TC-23,25,26,27,28		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

## List of trenches and galleries

1.	Number of trench :	TC-25		
2.	Project No. :	78/26		
3.	Area :	Kopdag		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.83 N, 11.17 E		
6.	Altitude :	2,240 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Gökyokuşun Sr., Sıçankale Y., Aşkale, Erzurum, 20 minutes from Sıçankale Y. on foot and by car pit, for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N30°W )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	*		
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the orebody estimated :	extension to strike-side 1 m		
		extension to dip-side 0.5 m		
		width 0.3 m		
16.	Volume of the trench estimated :	9 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TC-23,24,26,27,28		
20.	Laboratorical tests :	-		
21.	Remarks :	refer Plate 7-3		

# List of trenches and galleries

1. Number of trench :	TC-26
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	27.76 N, 11.21 E
6. Altitude :	2,218 m
7. Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)
8. Location and communication :	Gökyokuşun Sr., Sıçankale Y., Aşkale, Erzurum, 20 minutes from Sıçankale Y. on foot and by car pit, for exploration
9. Type etc. :	
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N30°W ) extension to strike-side * m extension to dip-side * m width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	*
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated ;	extension to strike-side 0.6 m extension to dip-side 0.5 m width 0.4 m
16. Volume of the trench estimated :	9 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-23,24,25,27,28
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-3

# List of trenches and galleries

1.	Number of trench :	TC-27		
2.	Project No. :	78/26		
3.	Area :	Kopdağ		
4.	Map No. :	Erzincan, i-44, b1, No.1		
5.	Coordinates :	27.74 N, 11.21 E		
6.	Altitude :	2,215 m		
7.	Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)		
8.	Location and communication :	Gökyokuşun Sr., Sıçankale Y., Aşkale, Erzurum, 20 minutes from Sıçankale Y. on foot and by car pit, for exploration		
9.	Type etc. :			
10.	Host rock :	serpentinite (powdery)		
11.	Orebody :			
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)		
	Amount of the orebody ;	*		
	Direction of the orebody ;	strike * dip *		
		(Direction of the ore zone ; N30°W )		
	Scale of the orebody observed ;	extension to strike-side * m		
		extension to dip-side * m		
		width * m		
	Shape of the orebody ;	*		
12.	Chromite banding around the orebody :	not observed		
13.	Fault around the orebody :	not observed		
14.	Ore :			
	Type of the ore ;	*		
	Ore minerals ;	*		
	Grade of the ore ;	macroscopic estimation, *		
15.	The largest scale of the orebody estimated :	extension to strike-side 0.9 m		
		extension to dip-side 0.5 m		
		width 0.3 m		
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>		
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton		
18.	Amount of stock of the ore :	-		
19.	Relation to the other trenches and galleries :	TC-23,24,25,26,28		
20.	Laboratorial tests :	-		
21.	Remarks :	refer Plate 7-3		

# List of trenches and galleries

1. Number of trench :	TC-28
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	27.77 N, 11.23 E
6. Altitude :	2,252 m
7. Name of the mine :	Gökyokuşun Sr. (2,000) (northern chrome zone)
8. Location and communication :	Gökyokuşun Sr., Sığankale Y., Aşkale, Erzurum, 20 minutes from Sığankale Y. on foot and by car pit, for exploration
9. Type etc. :	
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike N30°E dip 42°NW (Direction of the ore zone ; N30°W )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1 m width 0.5 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	★
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, ★
15. The largest scale of the orebody estimated :	extension to strike-side 1.7 m extension to dip-side 0.4 m width 0.5 m
16. Volume of the trench estimated ;	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench ;	1 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-23,24,25,26,27
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-3



# List of trenches and galleries

1. Number of trench : TC-29
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.1
5. Coordinates : 24.06 N, 12.05 E
6. Altitude : 1,912 m
7. Name of the mine : Tecer (25,000) (southern chrome zone)
8. Location and communication : Çorakdere, Tecer,  
Aşkale, Erzurum,  
80 minutes from Sığankale Y.on foot  
trench, for exploration
9. Type etc. :
10. Host rock : serpentized dunite
11. Orebody :  
Stratigraphic horizon in  
ultrabasic rocks ; middle horizon  
Amount of the orebody ; 6  
Direction of the orebody ; strike N40°E dip 60°NW  
(Direction of the ore zone ; N75°W )  
Scale of the orebody observed ; extension to strike-side \* m  
extension to dip-side 1.5 m  
width 1 m  
Shape of the orebody ; lenticular
12. Chromite banding around the  
orebody : not observed
13. Fault around the orebody : not observed
14. Ore :  
Type of the ore ; massive, disseminated  
Ore minerals ; chromite  
Grade of the ore ; macroscopic estimation, ★  
analytical value, 43.41 %Cr<sub>2</sub>O<sub>3</sub>  
from the outcrop, high-grade part
15. The largest scale of the  
orebody estimated : extension to strike-side 1.5 m  
extension to dip-side 1.5 m  
width 1 m
16. Volume of the trench estimated : 7 m<sup>3</sup>
17. The largest amount of the ore  
estimated which is taken  
from the trench : 8 ton
18. Amount of stock of the ore : -
19. Relation to the other trenches  
and galleries : TC-40
20. Laboratorial tests : polished section (Ccr-22)  
chemical analysis of the ore (Ccr-22)
21. Remarks : refer Plate 7-9

## List of trenches and galleries

- |     |                                  |  |
|-----|----------------------------------|--|
| 1.  | Number of trench :               | TC-30 *  |
| 2.  | Project No. :                    | 78/26  |
| 3.  | Area :                           | Kopdağ   |
| 4.  | Map No. :                        | Trabzon, H-44, c3, No.4  |
| 5.  | Coordinates :                    | 30.55 N, 18.99 E   |
| 6.  | Altitude :                       | 2,530 m  |
| 7.  | Name of the mine :               | Coşan (2,000) (northern chrome zone)   |
| 8.  | Location and communication :     | Iskınığöndere, Kop,<br>Bayburt, Gümüşhane<br>30 minutes from Sıçankale Y. by car<br>trench, for exploitation |
| 9.  | Type etc. :                      |  |
| 10. | Host rock :                      | strongly serpentinized dunite  |
| 11. | Orebody :                        |  |
|     | Stratigraphic horizon in         |  |
|     | ultrabasic rocks ;               | upper horizon  |
|     | Amount of the orebody ;          | 1  |
|     | Direction of the orebody ;       | strike N 0° - 55°W dip 90° *   |
|     |                                  | (Direction of the ore zone ; N15°W )   |
|     | Scale of the orebody observed ;  | extension to strike-side 35 m  |
|     |                                  | extension to dip-side 6 m  |
|     |                                  | width 3.5 m  |
|     | Shape of the orebody ;           | layered  |
| 12. | Chromite banding around the      |  |
|     | orebody :                        | strike N60°E, dip 35°NW  |
| 13. | Fault around the orebody :       | strike N10°W, dip 75°W   |
| 14. | Ore :                            |  |
|     | Type of the ore ;                | brecciated   |
|     | Ore minerals ;                   | chromite   |
|     | Grade of the ore ;               | macroscopic estimation, ★  |
|     |                                  | analytical value, 39.78 %Cr <sub>2</sub> O <sub>3</sub>  |
|     |                                  | from the outcrop, random sample  |
| 15. | The largest scale of the         |  |
|     | orebody estimated :              | extension to strike-side 20 m  |
|     |                                  | extension to dip-side 10 m   |
|     |                                  | width 4 m  |
| 16. | Volume of the trench estimated : | 22,000 m <sup>3</sup>  |
| 17. | The largest amount of the ore    |  |
|     | estimated which is taken         |  |
|     | from the trench :                | 2,800 ton  |
| 18. | Amount of stock of the ore :     | -  |
| 19. | Relation to the other trenches   |  |
|     | and galleries :                  | TD-29 - 35   |
| 20. | Laboratorial tests :             | chemical analysis of the ore (Ccr-29)  |
| 21. | Remarks :                        | refer Plate 7-1  |

# List of trenches and galleries

1.	Number of trench :	TC-31 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	27.12 N, 07.74 E
6.	Altitude :	2,075 m
7.	Name of the mine :	Sulu (2,000) (northern chrome zone)
8.	Location and communication :	Güllüdüdere, Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y. by car trench, for exploitation
9.	Type etc. :	
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N65°- 90°W dip 30°- 35°N (Direction of the ore zone ; N85°E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 3 m width 1.2 m
	Shape of the orebody ;	lenticular, layered
12.	Chromite banding around the orebody :	strike N25°E dip 35°NW N75°W 35°NE
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive
	Ore minerals ;	chromite (kaemmererite)
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 40 m extension to dip-side 5 m width 7 m
16.	Volume of the trench estimated :	5,250 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	4,900 ton
18.	Amount of stock of the ore :	*
19.	Relation to the other trenches and galleries :	GX-1, GC-1, TM-1,2, TC-14
20.	Laboratorical tests :	polished section (Ccr-47)
21.	Remarks :	no sketch map

## List of trenches and galleries

1. Number of trench :	TC-32 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	26.29 N, 06.07 E
6. Altitude :	2,015 m
7. Name of the mine :	Armutlu (2,000) (northern chrome zone)
8. Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car
9. Type etc. :	trench for exploration
10. Host rock :	serpentinite (powdery)
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone ; * )
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side 0.5 m
	width 0.4 m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	strike N 85° E dip 55° S
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	extension to strike-side 0.4 m
	extension to dip-side 0.3 m
	width 0.2 m
16. Volume of the trench estimated ;	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TC-1
20. Laboratorial tests :	-
21. Remarks :	no sketch map

## List of trenches and galleries

1.	Number of trench :	TC-33 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1 No.1
5.	Coordinates :	25.96 N, 06.72 E
6.	Altitude :	1,970 m
7.	Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car trench for exploration
9.	Type etc. :	
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 40° E dip 60° NW (Direction of the ore zone ; N 35° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1 m width 0.2 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike N 52° W dip 32° NE
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 1 m extension to dip-side 1 m width 0.2 m
16.	Volume of the trench estimated :	2 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-2
20.	Laboratorial tests :	-
21.	Remarks :	no sketch map

# List of trenches and galleries

1.	Number of trench :	TC-34 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.58 N, 07.38 E
6.	Altitude :	2,040 m
7.	Name of the mine :	Doğu Ezan (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car trench for exploration
9.	Type etc. :	
10.	Host rock :	serpentinite (powdery)
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	upper horizon (lowermost horizon)
	Amount of the orebody ;	-
	Direction of the orebody ;	strike - dip - (Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side - m extension to dip-side - m width - m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody ;	strike N 78° E dip 55° N
13.	Fault around the orebody ;	not observed
14.	Ore :	
	Type of the ore ;	banded
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated ;	extension to strike-side * m extension to dip-side * m width * m
16.	Volume of the trench estimated :	120 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	*
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	-
20.	Laboratorical tests :	-
21.	Remarks :	no sketch map

## List of trenches and galleries

1.	Number of trench :	TC-35 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.1
5.	Coordinates :	26.18 N, 07.06 E
6.	Altitude :	1,930 m
7.	Name of the mine :	Tepebaşı (2,000) (northern chrome zone)
8.	Location and communication :	Büyükgüllünün Sr., Sıçankale Y., Aşkale, Erzurum, 30 minutes from Sıçankale Y., by car trench or pit for exploration
9.	Type etc. :	
10.	Host rock :	serpentinite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (lowermost part)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 40° E dip 50° NW (Direction of the ore zone ; N 10° W )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 0.5 m width 0.1 m
	Shape of the orebody ;	★
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	★
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, ★
15.	The largest scale of the orebody estimated :	extension to strike-side 1 m extension to dip-side 1 m width 0.5 m
16.	Volume of the trench estimated :	1 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TC-3,4
20.	Laboratorical tests :	-
21.	Remarks :	no sketch map

# List of trenches and galleries

1. Number of trench :	TC-36 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	28.00 N, 09.11 E
6. Altitude :	2,158 m
7. Name of the mine :	Çalazarlarındere (2,000)(northern chrome zone)
8. Location and communication :	Çalazarlarındere, Sığankale Y. , Aşkale, Erzurum, 60 minutes from Sığankale Y. , on foot and by car
9. Type etc. :	trench or pit
10. Host rock :	serpentinite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1 *
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 15° E ) extension to strike-side * m extension to dip-side 1.5 m width 0.4 m
Shape of the orebody ;	layered
12. Chromite banding around the orebody :	strike N 50° E dip 48° NW
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	★
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, ★
15. The largest scale of the orebody estimated :	extension to strike-side 1 m extension to dip-side 1.5 m width 0.5 m
16. Volume of the trench estimated :	2 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	2 ton
18. Amount of stock of the ore :	*
19. Relation to the other trenches and galleries :	TC-37,38
20. Laboratorial tests :	-
21. Remarks :	no sketch map



# List of trenches and galleries

1. Number of trench :	TC-37 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, 1-44, b1, No.1
5. Coordinates :	28.01 N, 09.12 E
6. Altitude :	2,150 m
7. Name of the mine :	Çalazarlarındere (2,000)(northern chrome zone)
8. Location and communication :	Çalazarlarındere, Sıçankale Y., Aşkale, Erzurum, 50 minutes from Sıçankale Y., on foot and by car
9. Type etc. :	trench or pit
10. Host rock :	serpentinite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	*
Direction of the orebody ;	strike * dip *
	(Direction of the ore zone; N 15°E)
Scale of the orebody observed ;	extension to strike-side * m
	extension to dip-side * m
	width * m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	*
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, *
15. The largest scale of the orebody estimated :	extension to strike-side 1 m
	extension to dip-side 0.5 m
	width 0.3 m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	*
19. Relation to the other trenches and galleries :	TC-36,38,
20. Laboratorial tests :	-
21. Remarks :	no sketch map

# List of trenches and galleries

1. Number of trench :	TC-38 (not surveyed in detail)
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.1
5. Coordinates :	28.01 N, 09.13 E
6. Altitude :	2,145 m
7. Name of the mine :	Çalazarlarındere (2,000)(northern chrome zone)
8. Location and communication :	Çalazarlarındere, Sığankale Y. , Aşkale, Erzurum, 50 minutes from Sığankale Y., on foot and by car
9. Type etc. :	trench or pit
10. Host rock :	serpentinite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 15° E ) extension to strike-side * m extension to dip-side 1 m width 0.3 m
Shape of the orebody ;	★
12. Chromite banding around the orebody :	strike N 30° E dip 58° NW
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	★
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, ★
15. The largest scale of the orebody estimated :	extension to strike-side 1 m extension to dip-side 0.5 m width 0.3 m
16. Volume of the trench estimated :	< 1 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	< 1 ton
18. Amount of stock of the ore :	*
19. Relation to the other trenches and galleries :	TC-36,37
20. Laboratorial tests :	-
21. Remarks :	no sketch map

# List of trenches and galleries

1.	Number of trench :	TC-39 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, 1-44, b1, No.1
5.	Coordinates :	27.28 N, 08.91 E
6.	Altitude :	2,035 m
7.	Name of the mine :	Çalazarlarındere (2,000)(northern chrome zone)
8.	Location and communication :	Çalazarlarındere, Sığankale Y., Aşkale, Erzurum, 30 minutes from Sığankale Y., on foot and by car
9.	Type etc. :	trench or pit
10.	Host rock :	serpentinite
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	upper horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 15° E )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side 0.5 m
		width 0.3 m
	Shape of the orebody ;	*
12.	Chromite banding around the	
	orebody ;	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	*
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, *
15.	The largest scale of the	
	orebody estimated :	extension to strike-side 0.5 m
		extension to dip-side 0.5 m
		width 0.3 m
16.	Volume of the trench estimated :	< 1 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	< 1 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches	
	and galleries :	SZ-1
20.	Laboratorical tests :	-
21.	Remarks :	no sketch map

## List of trenches and galleries

- |                                      |  |       |       |
|--------------------------------------|--|-------|-------|
| 1. Number of trench :                | TC-40 (not surveyed in detail)   |       |       |
| 2. Project No. :                     | 78/26  |       |       |
| 3. Area :                            | Kopdağ   |       |       |
| 4. Map No. :                         | Erzincan, 1-44, b1, No.1   |       |       |
| 5. Coordinates :                     | 24.27 N,   | 11.20 | E     |
| 6. Altitude :                        | 1,910 m  |       |       |
| 7. Name of the mine :                | Tecer (10,000) (southern chrome zone)  |       |       |
| 8. Location and communication :      | Söğütçayırđere, Tecer, Aşkale, Erzurum,<br>80 minutes from Sıçankale Y., on foot |       |       |
| 9. Type etc. :                       | trench for exploration   |       |       |
| 10. Host rock :                      | serpentinite   |       |       |
| 11. Orebody :                        |  |       |       |
| Stratigraphic horizon in             |  |       |       |
| ultrabasic rocks ;                   | middle horizon   |       |       |
| Amount of the orebody ;              | 1  |       |       |
| Direction of the orebody ;           | strike   | *     | dip * |
|                                      | (Direction of the ore zone ; N 75° W )   |       |       |
| Scale of the orebody observed ;      | extension to strike-side   | *     | m     |
|                                      | extension to dip-side  | *     | m     |
|                                      | width  | *     | m     |
| Shape of the orebody ;               | *  |       |       |
| 12. Chromite banding around the      |  |       |       |
| orebody :                            | not observed   |       |       |
| 13. Fault around the orebody :       | not observed   |       |       |
| 14. Ore :                            |  |       |       |
| Type of the ore ;                    | ★  |       |       |
| Ore minerals ;                       | chromite   |       |       |
| Grade of the ore ;                   | macroscopic estimation, ★  |       |       |
| 15. The largest scale of the         |  |       |       |
| orebody estimated :                  | extension to strike-side   | 1     | m     |
|                                      | extension to dip-side  | 1     | m     |
|                                      | width  | 0.5   | m     |
| 16. Volume of the trench estimated : | 4 m <sup>3</sup>   |       |       |
| 17. The largest amount of the ore    |  |       |       |
| estimated which is taken             |  |       |       |
| from the trench :                    | 2 ton  |       |       |
| 18. Amount of stock of the ore :     | *  |       |       |
| 19. Relation to the other trenches   |  |       |       |
| and galleries :                      | TC-29  |       |       |
| 20. Laboratorial tests :             | -  |       |       |
| 21. Remarks :                        | no sketch map  |       |       |

## List of trenches and galleries

1.	Number of trench :	TC-41 (not surveyed in detail)
2.	Project No. :	78/26
3.	Area :	Kopdag
4.	Map No. :	Trabzon, H-44, c3, No.4
5.	Coordinates :	30.32 N, 21.89 E
6.	Altitude :	2,350 m
7.	Name of the mine :	Arapçayırıda (10,000)
8.	Location and communication :	Fatteninyurdu Sr., Kop, Bayburt, Gümü- şhane, 60 minutes from Sığankale Y., on foot and by car
9.	Type etc. :	trench or pit for exploration
10.	Host rock :	strongly serpentized dunite
11.	Orebody :	
	Stratigraphic horizon in	
	ultrabasic rocks ;	middle horizon (upper part)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 40° E * dip 60° NW*
		(Direction of the ore zone ; * )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side 1 m
		width 0.5 m
	Shape of the orebody ;	*
12.	Chromite banding around the	
	orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	massive, brecciated
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, ★ % Cr <sub>2</sub> O <sub>3</sub>
		analytical value, 45.11 % Cr <sub>2</sub> O <sub>3</sub> from the
		outcrop, high-grade part
15.	The largest scale of the	
	orebody estimated :	extension to strike-side * m
		extension to dip-side 1 m
		width 0.5 m
16.	Volume of the trench estimated :	2 m <sup>3</sup>
17.	The largest amount of the ore	
	estimated which is taken	
	from the trench :	3 ton
18.	Amount of stock of the ore :	0.6 ton
19.	Relation to the other trenches	
	and galleries :	-
20.	Laboratorial tests :	chemical analysis of the ore (Ccr-26)
		polished section (Ccr-26)
21.	Remarks :	no sketch map

## List of trenches and galleries

1. Number of trench : TC-42 (nor surveyed in detail)
2. Project No. : 78/26
3. Area : Kopdağ
4. Map No. : Erzincan, i-44, b1, No.1
5. Coordinates : 26.15 N, 06.95 E
6. Altitude : 1,998 m
7. Name of the mine : Tepebaşı (2,000) (northern chrome zone)
8. Location and communication : Büyükgöllünün Sr., Sıçankale Y., Aşkale, Erzurum,  
30 minutes from Sıçankale Y., by car  
trench or pit for exploration
9. Type etc. :
10. Host rock : serpentinite (powdery)
11. Orebody :  
Stratigraphic horizon in ultrabasic rocks ; upper horizon (footwall-side orebody)  
Amount of the orebody ; 1  
Direction of the orebody ; strike \* dip \*  
(Direction of the ore zone ; N 30° E )  
Scale of the orebody observed ; extension to strike-side \* m  
extension to dip-side 0.5 m  
width 0.3 m  
Shape of the orebody ; lenticular
12. Chromite banding around the orebody : strike N 10° E dip 80° E
13. Fault around the orebody : not observed
14. Ore :  
Type of the ore ; ★  
Ore minerals ; chromite  
Gangue minerals ; serpentine, magnesite, stichtite  
Grade of the ore ; macroscopic estimation, ★
15. The largest scale of the orebody estimated :  
extension to strike-side 0.5 m  
extension to dip-side 0.5 m  
width 0.3 m
16. Volume of the trench estimated : < 1 m<sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench : < 1 ton
18. Amount of stock of the ore : -
19. Relation to the other trenches and galleries : TC-2,5
20. Laboratorial tests : X-ray diffractive analysis (Cx-2)
21. Remarks : no sketch map

# List of trenches and galleries.

1. Number of trench :	TD-1
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, Mo.2
5. Coordinates :	27.23 N, 12.34 E
6. Altitude :	2,160 m
7. Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8. Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 10 minutes from Sıçankale Y., on foot trench, gallery (closed) for exploitation
9. Type etc. :	
10. Host rock :	strongly serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 70° E ) extension to strike-side * m extension to dip-side 1 m width 0.6 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	strike N 27° - 40° W dip 28° - 50° SW
13. Fault around the orebody :	strike E dip 50° N
14. Ore :	
Type of the ore ;	brecciated *
Ore minerals ;	chromite (uvarovite)
Grade of the ore ;	macroscopic estimation, 30 - 35 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 5 m extension to dip-side 2 m width 1.5 m
16. Volume of the trench estimated :	24 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	50 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TD-2,3,4,5,6,7,8,9,10
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-2

# List of trenches and galleries

1. Number of trench :	TD-2
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, 1-44, b1, No.2
5. Coordinates :	27.29 N, 12.48 E
6. Altitude :	2,211 m
7. Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8. Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 10 minutes from Sıçankale Y., on foot pit for exploration
9. Type etc. :	
10. Host rock :	serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 70° E ) extension to strike-side * m extension to dip-side 0.7 m width 1 m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	strike N 86° E dip 60° N
13. Fault around the orebody :	assumed, strike N 80° W dip 60° S
14. Ore :	
Type of the ore ;	(massive *), disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 25 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 3 m extension to dip-side 1 m width 1.4 m
16. Volume of the trench estimated :	16 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	15 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TD-1,3,4,5,6,7,8,9,10
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-2



## List of trenches and galleries

1. Number of trench :	TD-3
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.2
5. Coordinates :	27.26 N, 12.62 E
6. Altitude :	2,210 m
7. Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8. Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale Erzurum, 10 minutes from Sıçankale Y., on foot trench for exploration
9. Type etc. :	
10. Host rock :	serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 70° E ) extension to strike-side * m extension to dip-side 0.5 m width 1 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	strike N 0° – 14° W dip 50° – 70° W
13. Fault around the orebody :	assumed, strike N 45° E dip 78° NW
14. Ore :	
Type of the ore ;	(massive *), disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 25 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 7 m extension to dip-side 1 m width 2 m
16. Volume of the trench estimated :	112 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	49 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TD-1,2,4,5,6,7,8,9,10
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-2

# List of trenches and galleries

1. Number of trench :	TD-4
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, t-44, b1, No.2
5. Coordinates :	27.28 N, 12.65 E
6. Altitude :	2,225 m
7. Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8. Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale Erzurum, 10 minutes from Sıçankale Y., on foot trench, gallery (closed) for exploration
9. Type etc. :	
10. Host rock :	strongly serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 70° E )
	extension to strike-side * m
	extension to dip-side 1 m
	width 2 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	not observed
14. Ore :	
Type of the ore ;	disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 25 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 10 m
	extension to dip-side 1.5 m
	width 4 m
16. Volume of the trench estimated :	75 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	210 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TD-1,2,3,5,6,7,8,9,10
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-2

### List of trenches and galleries

1.	Number of trench :	TD-5
2.	Project No. :	78/26
3.	Area :	Kopdag
4.	Map No. :	Erzincan, i-44, b1, No.2
5.	Coordinates :	27.27 N, 12.69 E
6.	Altitude :	2,225 m
7.	Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8.	Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum,
9.	Type etc. :	10 minutes from Sıçankale Y., on foot trench, gallery (closed) for exploitation
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 60° E dip 20° NW (Direction of the ore zone ; N 70° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1 m width 3 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody ;	not observed
13.	Fault around the orebody :	strike N 40° E dip 40° NW
14.	Ore :	
	Type of the ore ;	brecciated
	Ore minerals ;	chromite (uvarovite)
	Grade of the ore ;	macroscopic estimation, 25 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 10 m extension to dip-side 1.5 m width 1.5 m
16.	Volume of the trench estimated :	206 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	78 ton
18.	Amount of stock of the ore :	90 ton
19.	Relation to the other trenches and galleries :	TD-1,2,3,4,6,7,8,9,10
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-2

# List of trenches and galleries

1. Number of trench :	TD-6
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.2
5. Coordinates :	27.31 N, 12.69 E
6. Altitude :	2,245 m
7. Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8. Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum,
9. Type etc. :	10 minutes from Sıçankale Y., on foot pit for exploration
10. Host rock :	serpentinized dunite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	1
Direction of the orebody ;	strike * dip *
Scale of the orebody observed ;	(Direction of the ore zone ; N 70° E )
	extension to strike-side * m
	extension to dip-side 0.5 m
	width 3 m
Shape of the orebody ;	*
12. Chromite banding around the orebody :	not observed
13. Fault around the orebody :	strike N 80°W dip 70°N
14. Ore :	
Type of the ore ;	disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 25 - 30 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 8 m
	extension to dip-side 1 m
	width 5 m
16. Volume of the trench estimated :	20 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	10 ton
18. Amount of stock of the ore ;	-
19. Relation to the other trenches and galleries :	TD-1,2,3,4,5,7,8,9,10
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-2

## List of trenches and galleries

1.	Number of trench :	TD-7
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.2
5.	Coordinates :	27.27 N, 12.78 E
6.	Altitude :	2,230 m
7.	Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8.	Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 10 minutes from Sıçankale Y., on foot trench, gallery (open) for exploitation
9.	Type etc. :	
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 50° E dip 65° SW* (Direction of the ore zone ; N 70° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1.5 m width 12 m
	Shape of the orebody ;	*
12.	Chromite banding around the orebody :	strike N 20° - 34° W dip 30° - 80° SW
13.	Fault around the orebody :	strike N 18° E dip 50° W
14.	Ore :	
	Type of the ore ;	brecciated, disseminated
	Ore minerals ;	chromite (uvarovite)
	Gangue minerals ;	serpentine, magnetite, brucite, talc
	Grade of the ore ;	macroscopic estimation, 35 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 1.5 m extension to dip-side 1.5 m width 12 m
16.	Volume of the trench estimated :	276 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	(Length of the gallery 16 m) 95 ton
18.	Amount of stock of the ore :	38 ton
19.	Relation to the other trenches and galleries :	TD-1,2,3,4,5,6,8,9,10
20.	Laboratorial tests :	thin section (D-38) X-ray diffractive analysis (D-59)
21.	Remarks :	refer Plate 7-2

# List of trenches and galleries

1.	Number of trench :	TD-8
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.2
5.	Coordinates :	27.30 N, 12.72 E
6.	Altitude :	2,238 m
7.	Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8.	Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 10 minutes from Sıçankale Y., on foot trench for exploration
9.	Type etc. :	
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 50° W dip 50° SW* (Direction of the ore zone ; N 70° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1 m width 5 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	strike N 30° E - N 20° W dip 40 - 60° NW
14.	Ore :	
	Type of the ore ;	brecciated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 35 - 40 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 10 m extension to dip-side 2.5 m width 6 m
16.	Volume of the trench estimated :	281 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	525 ton
18.	Amount of stock of the ore ;	-
19.	Relation to the other trenches and galleries :	TD-1,2,3,4,5,6,7,9,10
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-2

# List of trenches and galleries

1.	Number of trench :	TD-9
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.2
5.	Coordinates :	27.33 N, 12.73 E
6.	Altitude :	2,238 m
7.	Name of the mine :	Sıcankale (2,000) (northern chrome zone)
8.	Location and communication :	Külekçinin Sr., Sıcankale Y., Aşkale, Erzurum, 10 minutes from Sıcankale Y., on foot trench for exploration
9.	Type etc. :	
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon
	Amount of the orebody ;	1
	Direction of the orebody ;	strike * dip *
		(Direction of the ore zone ; N 70° E )
	Scale of the orebody observed ;	extension to strike-side * m
		extension to dip-side 1 m
		width 1 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike N 40° W dip 30° – 40° SW
13.	Fault around the orebody :	strike N 40° W dip 70° SW
14.	Ore :	
	Type of the ore ;	brecciated, disseminated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 10 m
		extension to dip-side 2.5 m
		width 2 m
16.	Volume of the trench estimated :	188 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	175 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TD-1,2,3,4,5,6,7,8,10
20.	Laboratorial tests :	-
21.	Remarks :	refer Plate 7-2

## List of trenches and galleries

1. Number of trench :	TD-10
2. Project No. :	78/26
3. Area :	Kopdağ
4. Map No. :	Erzincan, i-44, b1, No.2
5. Coordinates :	27.32 N, 12.75 E
6. Altitude :	2,245 m
7. Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8. Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 10 minutes from Sıçankale Y., on foot
9. Type etc. :	trench for exploration
10. Host rock :	serpentinite
11. Orebody :	
Stratigraphic horizon in ultrabasic rocks ;	upper horizon
Amount of the orebody ;	
Direction of the orebody ;	strike N 80° W dip 20° S (Direction of the ore zone ; N 70° E )
Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 1 m width 1.5 m
Shape of the orebody ;	lenticular
12. Chromite banding around the orebody :	strike E dip 12° S, strike N 38° E dip 35° NW
13. Fault around the orebody :	strike N 80° W, N 75° E dip 60° S, 60° NW (in turn)
14. Ore :	
Type of the ore ;	brecciated, disseminated
Ore minerals ;	chromite
Grade of the ore ;	macroscopic estimation, 35 – 40 % Cr <sub>2</sub> O <sub>3</sub>
15. The largest scale of the orebody estimated :	extension to strike-side 4 m extension to dip-side 5 m width 2.5 m
16. Volume of the trench estimated :	188 m <sup>3</sup>
17. The largest amount of the ore estimated which is taken from the trench :	175 ton
18. Amount of stock of the ore :	-
19. Relation to the other trenches and galleries :	TD-1,2,3,4,5,6,7,8,9
20. Laboratorial tests :	-
21. Remarks :	refer Plate 7-2



## List of trenches and galleries

1.	Number of trench :	TD-11
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, i-44, b1, No.2
5.	Coordinates :	27.51 N, 13.39 E
6.	Altitude :	2,301 m
7.	Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8.	Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 105 minutes from Sıçankale Y., on foot trench for exploration
9.	Type etc. :	
10.	Host rock :	strongly serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 70° E dip 50° SE (Direction of the ore zone ; N 60° E )
	Scale of the orebody observed ;	extension to strike-side 7 m extension to dip-side 0.5 m width 0.7 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	not observed
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	brecciated
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 30 – 35 % Cr <sub>2</sub> O <sub>3</sub>
15.	The largest scale of the orebody estimated :	extension to strike-side 7 m extension to dip-side 2 m width 1.5 m
16.	Volume of the trench estimated :	216 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	53 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TD-12
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-2

## List of trenches and galleries

1.	Number of trench :	TD-12
2.	Project No. :	78/26
3.	Area :	Kopdağ
4.	Map No. :	Erzincan, 1-44, b1, No.2
5.	Coordinates :	27.53 N, 13.51 E
6.	Altitude :	2,334 m
7.	Name of the mine :	Sıçankale (2,000) (northern chrome zone)
8.	Location and communication :	Külekçinin Sr., Sıçankale Y., Aşkale, Erzurum, 10 minutes from Sıçankale Y., on foot trench for exploitation
9.	Type etc. :	
10.	Host rock :	serpentinized dunite
11.	Orebody :	
	Stratigraphic horizon in ultrabasic rocks ;	upper horizon (footwall-side orebody)
	Amount of the orebody ;	1
	Direction of the orebody ;	strike N 60° E dip 55° SE (Direction of the ore zone ; N 60° E )
	Scale of the orebody observed ;	extension to strike-side * m extension to dip-side 0.2 m width 0.2 m
	Shape of the orebody ;	lenticular
12.	Chromite banding around the orebody :	strike N 25° E dip 60° NW
13.	Fault around the orebody :	not observed
14.	Ore :	
	Type of the ore ;	brecciated *
	Ore minerals ;	chromite
	Grade of the ore ;	macroscopic estimation, 40 % Cr <sub>2</sub> O <sub>3</sub> *
15.	The largest scale of the orebody estimated :	extension to strike-side 10 m extension to dip-side 2.5 m width 3 m
16.	Volume of the trench estimated :	800 m <sup>3</sup>
17.	The largest amount of the ore estimated which is taken from the trench :	131 ton
18.	Amount of stock of the ore :	-
19.	Relation to the other trenches and galleries :	TD-11
20.	Laboratorical tests :	-
21.	Remarks :	refer Plate 7-2

## List of trenches and galleries

- |     |                                  |  |
|-----|----------------------------------|--|
| 1.  | Number of trench :               | TD-13  |
| 2.  | Project No. :                    | 78/26  |
| 3.  | Area :                           | Kopdağ   |
| 4.  | Map No. :                        | Erzincan, 1-44, b1, No.2   |
| 5.  | Coordinates :                    | 27.69 N, 14.15 E   |
| 6.  | Altitude :                       | 2,371 m  |
| 7.  | Name of the mine :               | Sıçankale (2,000) (northern chrome zone)   |
| 8.  | Location and communication :     | Catınardınıdere, Sıçankale Y., Aşkale,<br>Erzurum<br>35 minutes from Sıçankale., on foot<br>trench for exploration   |
| 9.  | Type etc. :                      |  |
| 10. | Host rock :                      | serpentinized dunite   |
| 11. | Orebody :                        |  |
|     | Stratigraphic horizon in         |  |
|     | ultrabasic rocks ;               | upper horizon (footwall-side orebody)  |
|     | Amount of the orebody ;          | 2  |
|     | Direction of the orebody ;       | strike N 80° E, N 55° W dip 55° N, 75° NW (in turn)<br>(Direction of the ore zone ; N 60° E )  |
|     | Scale of the orebody observed ;  | extension to strike-side * m<br>extension to dip-side 0.5 m<br>width 1.5 m   |
|     | Shape of the orebody ;           | lenticular   |
| 12. | Chromite banding around the      |  |
|     | orebody :                        | strike N 10° E dip 45° W, strike N 18° - 35° W   |
| 13. | Fault around the orebody :       | strike N 60° - 70° W dip 68° W, 65° E  |
| 14. | Ore :                            | dip 40°, 80° N   |
|     | Type of the ore ;                | massive, brecciated  |
|     | Ore minerals ;                   | chromite (uvarovite)   |
|     | Gangue minerals ;                | serpentine, magnetite, aragonite   |
|     | Grade of the ore ;               | macroscopic estimation, 35 % Cr <sub>2</sub> O <sub>3</sub><br>analytical value, 32.24 % Cr <sub>2</sub> O <sub>3</sub> , from the stockpile,<br>random sample |
| 15. | The largest scale of the         |  |
|     | orebody estimated :              | extension to strike-side 5, 7 m<br>extension to dip-side 2, 3 m<br>width 1, 1.5 m (in turn)<br>396 m <sup>3</sup>  |
| 16. | Volume of the trench estimated : |  |
| 17. | The largest amount of the ore    |  |
|     | estimated which is taken         |  |
|     | from the trench :                | 125 ton  |
| 18. | Amount of stock of the ore :     | 10 ton   |
| 19. | Relation to the other trenches   |  |
|     | and galleries :                  | TD-14,36   |
| 20. | Laboratorial tests :             | chemical analysis of the ore (Dcr-1)<br>X-ray diffractive analysis (D-60)  |
| 21. | Remarks :                        | refer Plate 7-2  |