September 22, 1942

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

SORDY CHROME MINE — Illinois River Area

The new access chrome road to Chrome Ridge was traveled on Monday, September 21. This road was officially opened about September 2. The distance from Galice to the mine is 20 miles, and it took three hours to make the trip. At present the Forest Service is doing a great deal of work. I encountered about four bulldozers, two power graders, and two outfits with compressors drilling and breaking rocks. At present the road is in very tuff shape, but within the matter of a few days, it should be possible to travel it with ease. I left town at 8 a.m. and got back at 5:30 p.m. and managed to spend one-half hour at the chrome property. The rest of the time was spent in getting over the road.

The only pits seen were those which were close to the road. Apparently, little or no work has been done at this immediate locality this year. Some twenty tons of ore are piled out. One of the local prospectors said that we failed to visit the recent development and that some 600 tons are in sight. This does not check with the story told by Mr. Rynearson who checked the property in some detail a short time ago. His story is that he saw very little chrome mined out.

The road should be in good shape to travel in about two weeks. I think it would be a good idea if Earl could find it feasible to go over the road before the winter rains.

Ray C. Treasher
Field Geologist
9/22/42.

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M060523
RECORD TYPE..... XIM
COUNTRY/ORGANIZATION. USGS
DEPOSIT NO..... OFOMI 100-179
MAP CODE NO. OF REC..

REPORTER
NAME..... JOHNSON, MAUREEN G.
DATE..... 76 05
UPDATED..... 81 04
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... VIOLET
SYNONYM NAME..... BRIGGS CREEK (SORDY)

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA

LATITUDE	LONGITUDE
42-26-33N	123-43-40W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4698951.3	440147.4	+10

TWP..... 36S
RANGE.... 09W
SECTION.. 14
MERIDIAN. WILLAMETTE

ALTITUDE.. 3680 FT

POSITION FROM NEAREST PROMINENT LOCALITY: 2 MILES WEST OF BRIGGS VALLEY

COMMODITY INFORMATION

OCCURRENCE(S) OR POTENTIAL PRODUCT(S):
POTENTIAL.....
OCCURRENCE..... RH

COMMODITY SPECIALIST INFORMATION:
PGM OCCUR

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHROMITE; SULFIDES

ANALYTICAL DATA(GENERAL)
ORE CONCENTRATES TO A UNIFORM HIGH GRADE ABOUT 5?% CR2O?, 14% FE; CONCENTRATES MADE FROM DISSEMINATED ORE CONTAINING 11.35% CR2O3 NOTE: 52.3% CR2O3, 17.6% FE, 1.3% SIO2, 13.0% MGO, 11.2% AL2O3; RH 0.018 PPM

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. B

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
DISSEMINATED
FORM/SHAPE OF DEPOSIT: LAYERS

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
COMMENTS(DESCRIPTION OF DEPOSIT):
OFFSET BY ENECHELON FAULTS, FOLDED: GLORY HOLE DATA GIVEN

PRODUCTION
YES
MEDIUM PRODUCTION

CUMULATIVE PRODUCTION (ORE,COMMOD.,CONC.,OVERBUR.)

ITEM	ACC	AMOUNT	THOUS.UNITS	YEAR	GRADE,REMARKS
15 ORE	EST	1.012	TONS	1942-1944	39% CR2O3, 2.4:1 CR:FE
16 ORE	EST	1.506	TONS	1951-1955	44% CR2O3 TO 52% CR2O3 (CONC)
21 TOTAL		2.518	TONS		44.99 % CR2O3 (WEIGHTED AVERAGE GRADE)

PRODUCTION COMMENTS.... PRODUCTION LISTED FOR SORDY GROUP, MOST FROM VIOLET.

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... DUNITE

LOCAL GEOLOGY

GENERAL COMMENTS

RECORD NUMBER (MD13435) HAS BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES

1) RAMP, LEN, 1951, CHROMITE IN SOUTHWESTERN OREGON: OREGON DEPT. GEOLOGY AND MINERAL IND. BULL. 52, 169 P.

2) WELLS, F. G., PAGE, L. R., AND JAMES, H. L., 1940, CHROMITE DEPOSITS IN THE SOURDOUGH AREA, CURRY COUNTY, AND THE BRIGGS CREEK AREA, JOSEPHINE COUNTY, OREGON: U.S. GEOL. SURVEY BULL. 922-P, PT. 4, P. 461-496.

3) THAYER, T. P., 1974, UNPUBL. DATA

4) PAGE, N.J, JOHNSON, M.G., HAFFTY, JOSEPH, AND RAMP, LEN, 1975, OCCURRENCE OF PLATINUM GROUP METALS IN ULTRAMAFIC ROCKS OF THE MEDFORD-COOS BAY 2 DEGREE QUADRANGLE, SOUTHWESTERN OREGON: U.S. GEOL. SURVEY MISC. FIEL STUDIES MAP MF-694

5) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M061555
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
DEPOSIT NO..... DDGMI 100-176
MAP CODE NO. OF REC..

REPORTER
UPDATED..... 81 03
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... P.D.Q. CLAIM
SYNONYM NAME..... PART OF SORDY GROUP

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA

LATITUDE	LONGITUDE
42-27-54N	123-44-11W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4701450.	439450.	+10

TWP..... 036S
RANGE.... 009W
SECTION.. 02
MERIDIAN. W.M.

ALTITUDE.. 4440

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

CHROMITE

ANALYTICAL DATA(GENERAL)
DISSEMINATED ZONE - 40 TO 60% CR IN DUNITE; ASSAY ON MASSIVE CR LAYER: 42.03% CR2O3 & 14.86% FE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 2

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MASSIVE CHROMITE; DISSEMINATED
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA

SIZE OF DEPOSIT.....	SMALL	
MAX LENGTH.....	60	FT
MAX WIDTH.....	1	FT
STRIKE OF OREBODY....	N 20 E	
DIP OF OREBODY.....	60 SE	

COMMENTS(DESCRIPTION OF DEPOSIT):
SCHLIEREN

DESCRIPTION OF WORKINGS
SURFACE

PRODUCTION
YES
SMALL PRODUCTION

PRODUCTION COMMENTS.... LOW GRADE MILL ORE; NO ACCURATE RECORD

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... DUNITE AND SAXONITE

LOCAL GEOLOGY

SIGNIFICANT LOCAL STRUCTURES:
BADLY SHATTERED CHAOS OF ORE, ORE IS SHEARED BUT COUNTRY ROCK IS NOT SLICKENTITED. (THAYER FILES)

GENERAL COMMENTS
RECORD NUMBER (MO13433) HAS BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES
1) RAMP, LEN, 1961, CHROMITE IN SOUTHWESTERN OREGON: OREGON DEPT. GEOLOGY AND MINERAL IND. BULL. 52, 169 P.

ASSAY FROM CONCENTRATE: 55.50% CR203, 13.24% FE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. B
PRESENT/LAST OPERATOR.... J. T. SEIFERT

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
DISSEMINATED
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL

DESCRIPTION OF WORKINGS
SURFACE

PRODUCTION
YES
SMALL PRODUCTION

ANNUAL PRODUCTION (ORE,COMMOD.,CONC.,OVERBURD.)

	ITEM	ACC	AMOUNT	THOUS.UNITS	YEAR	GRADE,REMARKS
1	ORE	ACC	.071	TONS	1957	53% CR203
21	TOTAL		.071	TONS		53.00 % CR203 (WEIGHTED AVERAGE GRADE)

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... SERPENTINE

GENERAL COMMENTS
RECORD NUMBER (MD13514) HAS BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES
1) THAYER, T. P., 1974, UNPUBL. DATA
2) RAMP, LEN, 1961, CHROMITE IN SOUTHWESTERN OREGON: OREGON DEPT. GEOLOGY AND MINERAL IND. BULL. 52, 169 P.
3) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M061552
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
DEPOSIT NO..... DDGMI 100-178
MAP CODE NO. OF REC..

REPORTER
UPDATED..... 81 02
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... BUSTER
SYNONYM NAME..... ONE OF SORDY GROUP

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA

LATITUDE	LONGITUDE
42-26-52N	123-43-38W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4699525.	440200.	+10

TWP..... 36S
RANGE.... 09W
SECTION.. 11
MERIDIAN. W.M.

ALTITUDE.. 4000

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

CHROMITE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 2

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MASSIVE CHROMITE, DISSEMINATE)
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
MAX WIDTH..... 8 FT
STRIKE OF OREBODY.... NNW
COMMENTS(DESCRIPTION OF DEPOSIT):
OFFSET BY FAULTS, FOLDED

DESCRIPTION OF WORKINGS
SURFACE

PRODUCTION
UNDETERMINED

ANNUAL PRODUCTION (ORE,COMMOD.,CONC.,OVERBURD.)

PRODUCTION COMMENTS.... NO RECORD; POSSIBLY PRODUCED WWII

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... DUNITE

GENERAL COMMENTS
RECORD NUMBER (MD13432) HAS BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES
1) RAMP, LEN, 1961, CHROMITE IN SOUTHWESTERN OREGON: OREGON DEPT. GEOLOGY AND MINERAL IND. BULL. 52, 169 P.
2) WELLS, F. G., PAGE, L. R., AND JAMES, H. L., 1940, CHROMITE DEPOSITS IN THE SOURDOUGH AREA, CURRY COUNTY, AND THE BRIGGS CREEK AREA, JOSEPHINE COUNTY, OREGON: U.S. GEOL. SURVEY BULL. 922-P, PT. 4, P. 461-496.
3) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... MO13492
RECORD TYPE..... K1M
COUNTRY/ORGANIZATION. USGS
FILE LINK ID..... CONSV
MAP CODE NO. OF REC..

REPORTER
NAME..... LEE, W
DATE..... 74 01

NAME AND LOCATION
DEPOSIT NAME..... CHROME CREST CLAIM

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE

QUAD SCALE 1: QUAD NO OR NAME SELMA

TWP..... 35S
RANGE.... 09W
SECTION.. 35
MERIDIAN. W.M.

POSITION FROM NEAREST PROMINENT LOCALITY: NW1/4

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHROMITE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 8

PRODUCTION
YES

PRODUCTION COMMENTS.... ABOUT 3 TONS OF ORE.

GEOLOGY AND MINERALOGY
HOST ROCK TYPES..... COUNTRY ROCK IS A SHEARED AND CONTORTED DARK BLUISH-GRAY SERPENTINE.

GENERAL REFERENCES
1) ORE BIN, VOL. 18, NO. 3, P. 20-21
2) ODGMI BULL. 52, P. 76

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
- RECORD NO..... M061558
- RECORD TYPE..... XIM
- COUNTRY/ORGANIZATION. USGS
- DEPOSIT NO..... ODGMI 100-175
- MAP CODE NO. OF REC..

REPORTER
- UPDATED..... 81 02
- BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
- DEPOSIT NAME..... CHROME CREST CLAIM
- SYNONYM NAME..... PART OF SORDY GROUP

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA

LATITUDE	LONGITUDE
42-29-23N	123-42-56W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4704200.	441200.	+10

TWP..... 035S
RANGE.... 009W
SECTION.. 36
MERIDIAN. W.M.

ALTITUDE.. 4000

COMMODITY INFORMATION
- COMMODITIES PRESENT..... CR

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHROMITE

ANALYTICAL DATA(GENERAL)
2 SAMPLES ASSAYED 44.44% CR2O3, 16.22% FE; 42.06% CR2O3, 14.94% FE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 2

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MASSIVE CHROMITE
FORM/SHAPE OF DEPOSIT: LENS

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
COMMENTS(DESCRIPTION OF DEPOSIT):
NO ORE SEEN IN PLACE

DESCRIPTION OF WORKINGS
SURFACE

PRODUCTION
NO PRODUCTION

PRODUCTION COMMENTS.... 3 TONS OF MASSIVE CHROMITE LYING NEAR CUT

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... SERPENTINE

LOCAL GEOLOGY

SIGNIFICANT LOCAL STRUCTURES:
IN CEDAR MTN. FAULT ZONE

SIGNIFICANT ALTERATION:
POSSIBLE HYDROTHERMAL ALTERATION

GENERAL REFERENCES
1) RAMP, LEN, 1961, CHROMITE IN SOUTHWESTERN OREGON: OREGON DEPT. GEOLOGY AND MINERAL IND. BULL. 52, 169 P.
2) RAMP, L. AND PETERSON, N.V., 1979, GEOLOGY AND MINERAL RESOURCES OF JOSEPHINE COUNTY, OREGON; ODGMI BULL. 100, 45P

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M013480
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
FILE LINK ID..... CONSV
MAP CODE NO. OF REC..

REPORTER
NAME..... LEE, W
DATE..... 74 01

NAME AND LOCATION
DEPOSIT NAME..... CHROME FLAT MINE

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE

QUAD SCALE	QUAD NO OR NAME
1:	SELMA

LATITUDE	LONGITUDE
42-26-25N	123-45-55W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4698706.9	439799.9	+10

TWP.....: 36S
RANGE.... 09W
SECTION.. 14
MERIDIAN. W.M.

POSITION FROM NEAREST PROMINENT LOCALITY: NE1/4 SW1/4

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHROMITE

DESCRIPTION OF WORKINGS

COMMENTS(DESCRIP. OF WORKINGS):
DEVELOPED BY AN OPEN CUT AND A SHORT INCLINED SHAFT.

PRODUCTION
YES

ANNUAL PRODUCTION (ORE,COMMOD.,CONC.,OVERBURD.)

PRODUCTION COMMENTS.... SMALL PRODUCTION

GEOLOGY AND MINERALOGY
HOST ROCK TYPES..... SERPENTINIZED DUNITE

IMPORTANT ORE CONTROL/LOCUS.. ORE OCCURS AS DISSEMINATED AND AS SMALL MASSIVE LENSES OF HIGHGRADE CHROMITE.

GENERAL REFERENCES
1) ORE BIN, VOL. 18, NO. 3, P. 20
2) ODGMI BULL. 52, P. 81

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M061564
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
DEPOSIT NO..... ODGMI 100-226
MAP CODE NO. OF REC..

REPORTER
UPDATED..... 81 02
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... CHROME FLAT
SYNONYM NAME..... HORNET CLAIM OF SORDY GROUP

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA

LATITUDE	LONGITUDE
42-26-09N	123-43-42W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4698200.	440100.	+10

TWP..... 038S
RANGE.... 009W
SECTION.. 14
MERIDIAN. W.M.

ALTITUDE.. 4000

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHROMITE

ANALYTICAL DATA(GENERAL)
45 TO 50% CR2O3, ABOUT 15% FE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. B

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MASSIVE CHROMITE, DISSEMINATED
FORM/SHAPE OF DEPOSIT: LENS

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
MAX WIDTH..... 4 FT
STRIKE OF OREBODY.... N 10 W
DIP OF OREBODY..... 15 - 35 NE
COMMENTS(DESCRIPTION OF DEPOSIT):
IN SHEAR ZONE

PRODUCTION
YES
SMALL PRODUCTION

CUMULATIVE PRODUCTION (ORE,COMMOD.,CONC.,OVERBUR.)

	ITEM	ACC	AMOUNT	THOUS.UNITS	YEAR	GRADE,REMARKS
15	ORE	EST	0000.050	TONS	1953-1955	
21	TOTAL		.050	TONS		

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... DUNITE

LOCAL GEOLOGY

SIGNIFICANT LOCAL STRUCTURES:
SHEAR ZONE

GENERAL COMMENTS
RECORD NUMBER (MO15245) HAS BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE.

GENERAL REFERENCES

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M061750
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS

NAME AND LOCATION
DEPOSIT NAME..... CHROME RIDGE
SYNONYM NAME..... PROBABLY ANY ONE OF SORDY GROUP

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 8
PRESENT/LAST OPERATOR.... TULARE BROS. 1954; BOWSER 1952

PRODUCTION
YES
SMALL PRODUCTION

ANNUAL PRODUCTION (ORE,COMMOD.,CONC.,OVERBURD.)

ITEM		ACC	AMOUNT	THOUS.UNITS	YEAR	GRADE,REMARKS
1	ORE	ACC	.048	TONS	1954	46% CR2O3
2	ORE	ACC	.052	TONS	1954	52% CR2O3 (CONC.)
3	ORE	ACC	.006	TONS	1952	51% CR2O3
21	TOTAL		.106	TONS	49.21	% CR2O3 (WEIGHTED AVERAGE GRADE)

GENERAL REFERENCES
1) THAYER, T. P., 1974, UNPUBL. DATA

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... MO15242
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
FILE LINK ID..... CONSV
MAP CODE NO. OF REC..

REPORTER
NAME..... LEE, W.
DATE..... 77 01

NAME AND LOCATION
DEPOSIT NAME..... P.D.Q. CLAIM

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA QUAD.

LATITUDE	LONGITUDE
42-27-55N	123-44-15W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4704854.8	274931.8	+27

TWP..... 036S
RANGE.... 009W
SECTION.. 02
MERIDIAN. WM

LOCATION COMMENTS: SW 1/4 SW 1/4

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. B

DESCRIPTION OF WORKINGS

DEVELOPED BY 3 BULLDOZER CUTS.

PRODUCTION
YES
SMALL PRODUCTION

GEOLOGY AND MINERALOGY
HOST ROCK TYPES..... DUNITE, SAXONITE
IGNEOUS ROCK TYPES..... DUNITE, SAXONITE

IMPORTANT ORE CONTROL/LOCUS.. CHROMITE OCCURS AS DISSEMINATED AND SCHLIEREN-BANDED.

LOCAL GEOLOGY

COMMENTS (GEOLOGY AND MINERALOGY):
COUNTRY ROCK IS DUNITE GRADING INTO SAXONITE

GENERAL REFERENCES
1) ORE BIN, VOL. 18, NO. 3, P. 20
2) ODGMI BULL. 52, P. 77

CRIB MINERAL RESOURCES FILE 12

RECORD IDENTIFICATION
RECORD NO..... M061554
RECORD TYPE..... X1M
COUNTRY/ORGANIZATION. USGS
MAP CODE NO. OF REC..

REPORTER
UPDATED..... 81 01
BY..... FERNS, MARK L. (BROOKS, HOWARD C.)

NAME AND LOCATION
DEPOSIT NAME..... ALTA
SYNONYM NAME..... ONE OF SORDY GROUP

MINING DISTRICT/AREA/SUBDIST. CHROME RIDGE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JOSEPHINE
DRAINAGE AREA..... 17100311 PACIFIC NORTHWEST
PHYSIOGRAPHIC PROV..... 13 KLAMATH MOUNTAINS
LAND CLASSIFICATION..... 41

QUAD SCALE	QUAD NO OR NAME
1: 62500	SELMA

LATITUDE	LONGITUDE
42-25-41N	123-43-49W

UTM NORTHING	UTM EASTING	UTM ZONE NO
4697350.	439925.	+10

TWP..... 036S
RANGE.... 009W
SECTION.. 23
MERIDIAN. W.M.

ALTITUDE.. 3200

COMMODITY INFORMATION
COMMODITIES PRESENT..... CR

OCCURRENCE..... CR

ORE MATERIALS (MINERALS,ROCKS,ETC.):
CHROMITE

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV. 1

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:
MASSIVE CHROMITE
FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA
SIZE OF DEPOSIT..... SMALL
MAX WIDTH..... 3 IN
STRIKE OF OREBODY.... N 50 E
DIP OF OREBODY..... 45 NW

DESCRIPTION OF WORKINGS
SURFACE

PRODUCTION
NO PRODUCTION

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... JUR
HOST ROCK TYPES..... SERPENTINE

GENERAL COMMENTS
RECORD NUMBERS (M013466) AND (M015239) HAVE BEEN MERGED WITH THIS RECORD AND DELETED FROM THE OREGON FILE

GENERAL REFERENCES
1) RAMP, LEN, 1961, CHROMITE IN SOUTHWESTERN OREGON: OREGON DEPT. GEOLOGY AND MINERAL IND. BULL. 52, 169 P.

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

SORDY CHROME DEPOSITS

LOCATION and OWNERSHIP

The Sordy property is situated in the Briggs Creek area, Josephine County, Oregon, and is accessible by 19 miles of road extending southwest from Galice, Oregon. Several deposits occur over an area about 1-1/4 miles long by about 1/2 mile wide. Most of them are small, but three were considered large enough to warrant a comprehensive exploration program by the Bureau of Mines in 1942.

All of the principal deposits are covered by 26 unpatented claims held by Harry Sordy of Galice, Oregon. Howard Bielenberg of Galice owns three unpatented claims covering a few of the smaller and less important deposits. The Sordy claims are under lease to the Pacific Co., of which John S. Day, 32 N. Central Ave., Medford, Oregon, is president.

Metallurgical testing was conducted on a composite sample of ore taken from the three chief Sordy claims by Bureau of Mines engineers during the exploration program.

Nature of Ore

Physical

Chromium in the Sordy ore occurs as impure chromite disseminated through an altered olivine gangue. The gangue minerals, in order of abundance, are olivine, serpentine, chlorite, calcite, pyrite, and chalcopyrite.

The chromite grain size ranges from 35- to 150-mesh, with an average size of about 48-mesh. Many of the grains contained minute inclusions of serpentine and chlorite about 560-mesh (theoretical) in size. The amount of gangue thus represented does not warrant extremely fine grinding for its rejection.

Chemical

The chemical analysis of the Sordy ore sample is given in table 22.

TABLE 22. - Analysis of ore

	Assay, percent								
	Cr_2O_3	Fe	SiO_2	MgO	Al_2O_3	CaO	P	S	Cu
Sordy chromite ore.	11.85	8.95	61.4	17.95	9.0	3.3	0.05	0.05	Tr

Concentration

Preliminary testing indicated that optimum results could be obtained by table concentration, with flotation of sulphides from final concentrate to aid in rejection of iron and sulphur.

A sample of ore was stage-crushed to minus 20-mesh, hydraulically classified, and tabled to produce a concentrate and a tailing. The tailing product was reground through 48-mesh and retabled to produce a concentrate, middling, and tailing. The middling thus made was retabled after being ground to minus 100-mesh to make a concentrate, middling, and tailing. The combined concentrates were ground through 100-mesh, and the small amount of sulfides was floated with 1.0 pound sulfuric acid, 0.3 pound potassium ethyl xanthate, and 0.16 pound pine oil per ton of flotation feed. Results are given in table 23.

TABLE 23. - Table concentration of Sordy ore

Product	Weight, percent	Assay, percent							Distribution, percent
		Cr_2O_3	Fe	SiO_2	MgO	Al_2O_3	S	P	Cu	Cr_2O_3
Concentrate.	18.5	52.3	17.6	1.3	13.0	11.2	.05	.004	-	79.7
Middling ...	8.8	9.3	13.2	-	-	-	-	-	-	6.7
Tailing	72.4	2.2	7.1	-	-	-	-	-	-	13.1
Sulfide conc.	0.3	19.3	29.0	-	-	-	-	-	9.5	0.5
Calculated head	100.0	12.1	9.6	-	-	-	-	-	-	100.0

By tabling minus 20-mesh hydraulically sized ore, with retreatment of tailings ground through 48-mesh, a concentrate was made which, after removal of a small pyrite product, assayed 52.3 percent Cr_2O_3, had a Cr to Fe ratio of 2.03, and represented a chromite recovery of 79.7 percent.

Magnetic separation treatment of the concentrate increased the Cr to Fe ratio to 2.26 but entailed a loss of 13.6 percent of the chromite in the concentrate.

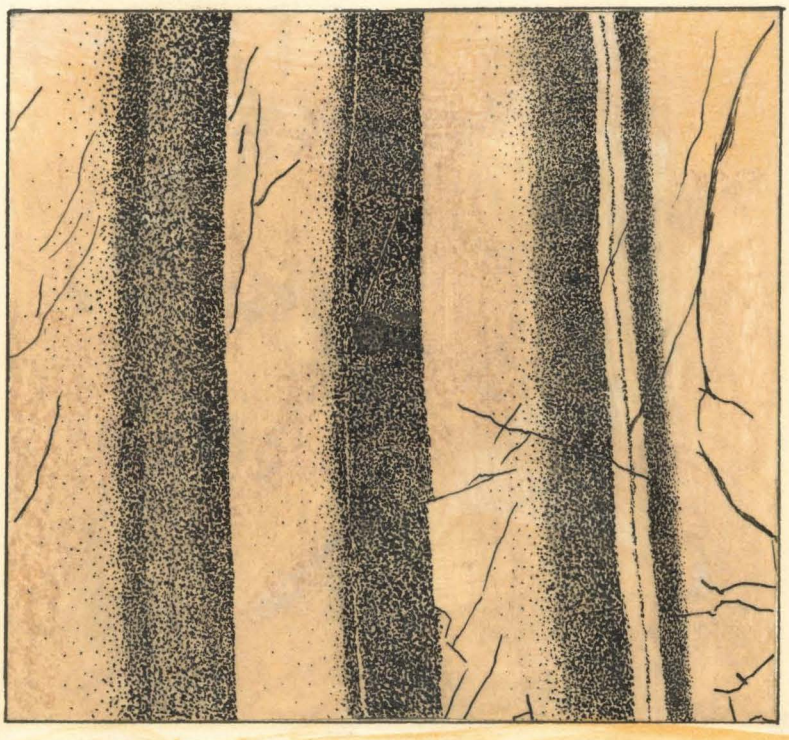
In an attempt to lower grinding requirements, a tabling test was made on minus 20-mesh ore with regrinding and retreatment of the middling fractions only. Over 76 percent of the chromite was recovered at a grade of 51.8 percent Cr_2O_3, but the Cr to Fe ratio dropped to 1.93.

Summary

The Sordy chromite ore was found to be amenable to the production of plus 50 percent Cr_2O_3 concentrates with about 2.0 Cr to Fe ratio and plus 75 percent chromite recovery. Procedure involved tabling of 20-mesh ore with retreatment of tailings and middlings at finer sizes. Combined concentrate was ground to minus 100-mesh, and the sulfides were floated to aid in rejection of iron and sulphur.

U.S.B.M. R.I. 4079--June 1947 pp. 21,22,23.

TO LEN



Ink tracing from photograph of layered chromite exposed in vertical north wall of glory hole at Lower Violet Mine. Note composite nature of layers and gradational west edges. Layers strike N. 10° E. and dip 85° E.

(We will use this as a plate— very good drawing)

CHROMITE CONCENTRATION IN GRANTS PASS AREA

A small pilot mill for concentrating chromite has been built on Galice Creek about 3 miles southwest of Galice by Dana W. Bowers, 48 Rose Avenue, Medford, Oregon. The mill is on the Dickey placer claims which together with the Sordy lode claims in the Bridge Creek area have been leased to Bowers. These lode claims, owned by the Harry Sordy estate, contain considerable concentrating ore. The present mill includes a small jaw crusher, a 25-ton ball mill with classifier, and one shaking table. Several shipments of concentrates totaling about 50 tons have been delivered to the stockpile at Grants Pass. Initial returns have shown an average of about 53 percent Cr_2O_3 with a 2.6 to 1 chrome-iron ratio.

A second concentrating mill is under construction on the Dickey ground a few hundred feet south of the Bowers mill by the Strategic Minerals Corporation, Ltd., 307 Laurel Street, Medford, Oregon. Officers in this company are W. D. Plumley, President; James Daley, Vice-President; and Robert Brewer, Secretary-Treasurer. The mill site has been leased to the Strategic Minerals Corporation by Bowers. This mill is expected to be in operation by November 1. The equipment will include a hammermill, a ball mill rated at about 50 tons per day, a small classifier, and two concentrating tables. The ore for the second mill will be obtained from the Bowers lease on the Sordy property and the mining by open pit operation, using a power shovel and seven automotive trucks, will be by Strategic Minerals both for its own and Bowers' mill. It is planned to make a stockpile for the two mills of 3,000 and 5,000 tons respectively. Several hundred tons have already been trucked to the mill sites.

It is reported that a third mill of 50 tons capacity will be constructed at a location a few hundred feet north of the Bowers mill for Ernest Foster of Grants Pass, and that ore for this mill also will be obtained from the Sordy mine. Mr. Bowers reports that prospecting for additional ore on the Sordy property is continuing.

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Ore-Bin Vol 13, No 10, p 64
(1951)

March 31, 1942

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

CHROME REPORT NO. 71 (Supp. to Report 16)

OUTLINE OF METAL MINE REPORT

for use by

The Engineers of the U. S. Bureau of Mines

1. Reported by F. B. Caldwell — August 11-12, 1918
2. Name of Mine - Swede Basin Mine
3. Operator or Owner:
   (b) Manager — R. H. Spencer, Grants Pass, Oregon.

12. Estimated Quantity of Ore Available:

(a)	Blocked out	1500 tons 40% plus grade 6000 tons 20 to 30% grade
(b)	Probable	1000 tons 40% plus grade 6000 tons 20 to 30% grade
(c)	Possible	1000 to 5000 tons 40% plus grade 10,000 to 30,000 tons 20 to 30% grade

13. Production: 40 to 50 men working on road and tramway very short of labor and hard to keep.

18. Surface Equipment: Have 4 camps established along route from mine over roads and tramway. Doing all possible to keep men.

20. Reasons for estimate of probable and possible ore: Since last visit more work has been done on the Violet Claim and those adjoining, at the writer's suggestion, with the result that an apparently almost continuous ore body of mixed high and second grade has been opened, over to a distance of over 200 ft. in length, an average width of over 20 ft. and to a depth of over 20 ft., with every indication that it will extend in each dimension.
For a lineal distance of over 1500 ft. wherever pits or cuts have been sunk, ore has been found of varying grades, with croppings between. Croppings and workings would indicate that more than one zone of mineral, more or less parallel, will be opened with more development.
The ore is of the sandy disseminated character, 40 to 48%, mixed with lower 15 to 30% grade. It is fairly soft, easily broken, and mining costs will be very low. Believe the possibilities are by far the largest of any mine visited, particularly as to good concentrating grade, and would not be surprised if 50,000 or even 100,000 tons were developed.

Installations

Roads: Of the 6 to 6½ miles of truck roads about ½ is finished. With present force and speed, will be finished Sept. 15 to Oct. 1st.

Tramway: The management advised that their intention now is to put two rope jig back tramway. But they will use 7/16" telephone cable for rails.

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With having made any calculations for a 5000 ft. span and 1100 ft. fall, it is entirely too light to pass any load, if not too even put necessary tension to tighten. So advised them, but was informed that they could not get any heavier cable. However, believe they will. Very little has been done on tramway work.

General

The property, although it will produce a large tonnage of shipping grade ore, looks like a concentrating proposition, and should be tested for treatment and a mill installed without delay to make available the low grade chrome ore.

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

Chrome Report No. 16

OUTLINE OF METAL MINE REPORT

for use by

THE ENGINEERS OF THE U.S. BUREAU OF MINES

1. Reported by F. B. Caldwell June 17, 1918

2. Oregon Chrome Mine, Briggs Creek Swede Basin Mines (16 claims)

3. Operator:

J. H. Haak, 311 Lumberman Bldg;, Portland, Oregon.

R. H. Spencer, Engr. in charge, Grants Pass, Oregon.

H. Sordy, Superintendent and Owner.

4. Location:

(a)	State	Oregon
(b)	County	Josephine
(c)	Mining Dist.	Briggs Creek district on divide between Briggs Creek and Silver Creek.
(d)	Shipping point	Waters Creek
(e)	What Railroad	C & O C R R
(f)	Supply Point	Grants Pass, Oregon.
(g)	What Railroad	S.P.R.R. and C & O C R R.

5. General description of property

(a) Number of claims and area of group 16 claims

(b) Title to property, by location, patent, fee, etc:

Royalty lease from locating owners.

6. Transportation Facilities

(a) Distance from Railroad: Three to five miles truck road along length of claims along plateau of divide, then one mile aerial tramway across Briggs Creek, then wagon road 3 miles (all of the above to be built; just started) to connect the

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Portland, Oregon

old Swede Basin road, thence 11 miles to Waters Green Sta. on the C. & O. C. R. R.

The ore from each working will be moved up by gasoline hoist to line of truck roads running along the divide.

7. Ore Deposit: The ore occurs in kidneys of various shapes and sizes, all strikes and dips.

8. Character of Ore: The ore varies from heavy, black, clean, high grade, to low grade, disseminated ore. Better grade said to run 43% Cr_2O_3.

Samples 14, 15, 16, 17, 18, 19, 20, 21, and 22 taken from this property.

9. Associated Rocks: The ore is associated with serpentine.

10. Kind and Thickness of Overburden: Little or no overburden.

11. Conditions affecting Mining, Milling, and Marketings:

(a) Topography The topography is favorable as site for mine structures at the exact location of the deposits, as the plateau is fairly level and roads can be easily built and tramway is also easily practical.

(c), (d), (e). Water, Timber, and Fuel Supply: Water, timber, fuel and power abundant for all purposes.

(f) Labor, supply, amount, efficiency and cost: No data as yet on mining costs, but it will not be high; seem to have sufficient labor, and quite efficient. The property seems to be well managed and working easy.

12. Estimated Quantity of Ore Available:

(a) Blocked out 300 tons 40% plus grade on dumps, broken
500 tons 40% plus grade in sight
800 tons 40% plus grade.

400 tons 20-30% grade broken
1000 tons 20-30% in sight
1400 tons 20-30% grade.

(b), (c). Probable and possible: 1000 to 5000 tons possible 40% plus grade and 2000 to 10,000 tons possible of 20-30% grade.

13. Production:

(a) Present production per day, month, year.

No data on actual production; opening up and taking out ore various openings.

(b) Shifts worked per 24 hours: 14 men working one shift per 24 hours, and putting on more as they get them.

15. Mining: Present mining consists of opening up pits in croppings and drifting in where one goes down, timbering as they go. The mining appears to be efficient, and the miner of a better class than usual in the districts visited. They expect to produce ore at $2.00 per ton which is possible.

16-17-18. Equipment, etc; No equipment except a well arranged camp, blacksmith shop, and good tents for workmen.

19. Critical Discussion of Mining and Ore Treatment with Suggestions for ore treatment:

The management has a well equipped camp at the mine, and another at Swede Basin for a road camp; had at time of visit 6 men on the road construction and has, am informed, taken out 12 or more.

They are pushing work all possible and expect to be moving ore in August. Their intentions are to string a light cable across the Briggs Creek gulch, a distance of 5,000 feet span, and 1,100 feet fall, and to chute sacks of ore held by a hock down and across.

This sort of tram they can no doubt install, along with roads, and be ready to move ore in August provided they get the men, and they think they can. They will move the ore up to the narrow guage Ford truck roads along the plateau and down to the tram, thence across by above tram, then on light narrow truck up the hill to the Swede Basin and then in large trucks to Waters Creek. The tram does not look practical.

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20. Reasons for Estimate of Probable and Possible Ore:

My estimates of 3000 to 15,000 tons of high and low grade ore possible is based on the very many and wide areas of mineral, the surface is barren of overburden for the most part, and croppings are easily found; in no place did I find where they had bottomed ore, and in one place the deepest they had reached, a depth below the outcrop of over 30 feet, and still better ore and apparently wider. It is a large area of chrome iron bearing serpentine, and will produce several tons of both.shipping and con-

(Note - Evidently means 'several thousand tons' - Ed.)

centrating ore.

It is the largest mine seen as to possibilities; there are over 60 openings and all contain ore in place, several situated distances apart with good cropping between; ore seems to be everywhere.

A very large amount of speckled, banded, Buskskin ore occurs, what I believe to be "Dunite" ore. Sample of same was sent to Beryley.

F. B. Caldwell.

State Department of Geology and Mineral Industries

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Portland, Oregon

C O P Y

ANALYSIS OF CHROME FROM MINE

No.		Cr_2O_3	Fe O	SiO_2
1.	Little Buck	40.9	15.8	4.8%
2.	Big Buck NW Open Cut	30.0	13.5	10.0%
3.	Big Buck At location	42.0	18.5	3.6%
4.	Blue Doe NW Open Cut	45.8	17.9	4.4%
5.	Blue Doe At location	36.8	16.4	4.8%
6.	500'S of Blue Doe Loc	31.5	14.6	8.4%
7.	Yellow Jack 300'S of Yellow Pine	41.6	16.2	7.6%
8.	Fines at No. 7	38.3	20.4	10.4%
9.	Yellow Pine	48.5	20.7	4.4%
10.	S Hillside of Violet W cut, S' ple A	39.3	15.4	9.2%
11.	E of $10 S'ple B	36.6	15.0	16.0%
12.	E of #11 S'ple C	41.6	16.4	6.4%
13.	E of 12 Sample D	33.0	14.0	14.4%
15.	Violet S side of ridge	39.4	14.5	8.8%
16.	Violet at Location	39.6	14.1	8.4%
17.	Violet N center out	40.3	14.6	8.8%

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No.		Cr_2O_3	Fe O	SiO_2
18.	Violet N of Tunnel	29.5	13.2	11.6%
19.	Una V	49.7	15.1	3.6%
20.	Spotted Faun #2	45.1	14.6	6.8%
21.	P. D. Q.	41.5	14.3	4.16%
22.	Float from Chrome Flat	43.1	15.4	3.6%
23.	Checks on 9	52.0	19.6	2.8%
24.	Checks on 14	42.4		8.8%

CG-674

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

ASSAY REPORT

Grants Pass, Oregon
Baker, Oregon

September 30, 1942

Sample submitted by Ray C. Treasher, c.c. to Harry Sordy

Sample description: Representative pieces from stockpile at workings alongside new chrome access road.

The assay results recorded below are made without charge as provided by Chapter 176, Section 10, Oregon Laws 1937, the sender having complied with the provisions thereof.

NOTICE: The assay results recorded below are from a sample furnished by the above named person. This Department had no part in the taking of the sample and assumes no responsibility, other than the accuracy of the assay of the material as furnished it by the sender.

	GOLD		SILVER		Chrome (Cr_2O_3)		Iron (Fe)		
Sample Number	Ounces per ton	Value	Ounces per ton	Value	Percent	Value	Percent	Value	Total Value
42-T-27					41.6		15.0		

Market Quotations:
Gold $ per oz.
Silver $ per oz.
$ per lb.
$ per lb.

STATE ASSAY LABORATORY

P. J. Bassett
Assayer

Taken fr. Beneficiation of Chromite Ores from Western U.S.
By
A. V. Batty, T. F. Mitchell, R. Havens & R. R. Wells.

R.I 4079
June 1947

U.S. DEPT OF THE INT.
Bureau of Mines

SORDY CHROME DEPOSITS

Location and Ownership

The Sordy property is situated in the Briggs Creek area, Josephine County, Oregon, and is accessible by 19 miles of road extending southwest from Galice, Oregon. Several deposits occur over an area about 1¼ miles long by about ½ mile wide. Most of them are small, but three were considered large enough to warrant a comprehensive exploration program by the Bureau of Mines in 1942.

All of the principal deposits are covered by 26 unpatented claims held by Harry Sordy of Galice, Oregon. Howard Bielenberg of Galice owns three unpatented claims covering a few of the smaller and less important deposits. The Sordy claims are under lease to the Pacific Co., of which John S. Day, 32 North Central Avenue, Medford, Oregon is president.

Metallurgical testing was conducted on a composite sample of ore taken from the three chief Sordy claims by Bureau of Mines engineers during the exploration program.

NATURE OF ORE

Physical

Chromium in the Sordy ore occurs as impure chromite disseminated through an altered olivine gangue. The gangue minerals, in order of abundance, are olivine, serpentine, chlorite, calcite, pyrite, and chalcopyrite.

The chromite grain size ranges from 35- to 150 mesh, with an average size of about 48-mesh. Many of the grains contained minute inclusions of serpentine and chlorite about 560-mesh (theoretical) in size. The amount of gangue thus represented does not warrant extremely fine grinding for its rejection.

Chemical

The chemical analysis of the Sordy ore sample is given in table 22.

TABLE 22. - Analysis of ore

	Assay, Percent								
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Sordy Chromite ore	11.85	8.95	61.4	17.95	9.0	3.3	0.05	0.05	Tr.

Concentration

Preliminary testing indicated that optimum results could be obtained by table concentration, with flotation of sulfides from final concentrate to aid in rejection of iron and sulfur.

A sample of ore was stage-crushed to minus 20-mesh, hydraulically classified, and tabled to produce a concentrate and a tailing. The tailing

roduct was reground through 48-mesh and retabled to produce a concentrate, iddling, and tailing. The middling thus made was retabled after being round to minus 100-mesh to make a concentrate, middling, and tailing. The ombined concentrates were ground through 100-mesh, and the small amount of ulfides was floated with 1.0 pound sulfuric acid, 0.3 pound potassium thyl xanthate, and 0.16 pound pine oil per ton of flotation feed. Results re given in table 23.

TABLE 23. - Table concentration of Sordy ore

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ddling.....	8.8	9.3	13.2	-	-	-	-	-	-	6.7
iling.....	72.4	2.2	7.1	-	-	-	-	-	-	13.1
lfide conc.	0.3	19.3	29.0	-	-	-	-	-	9.5	0.5
lculated...										
head.....	100.0	12.1	9.6	-	-	-	-	-	-	100.0

By tabling minus 20-mesh hydraulically sized ore, with retreatment of lings ground through 48-mesh, a concentrate was made which, after removal a small pyrite product, assayed 52.3 percent Cr_2O_3, had a Cr to Fe ratio 2.03, and represented a chromite recovery of 79.7 percent.

Magnetic separation treatment of the concentrate increased the Cr to e ratio to 2.26 but entailed a loss of 13.6 percent of the chromite in the oncentrate.

In an attempt to lower grinding requirements, a tabling test was made n minus 20-mesh ore with regrinding and retreatment of the middling ractions only. Over 76 percent of the chromite was recovered at a grade f 51.8 percent Cr_2O_3, but the Cr to Fe ratio dropped to 1.93.

SUMMARY

The Sordy chromite ore was found to be amenable to the production f plus 50 percent Cr_2O_3 concentrates with about 2.0 Cr to Fe ratio and us 75 percent chromite recovery. Procedure involved tabling of 20-mesh e with retreatment of tailings and middlings at finer sizes. Combined ncentrate was ground to minus 100-mesh, and the sulfides were floated to aid in rejection of iron and sulfur.

# # # # # # # # # #

LOWER VIOLET CHROME MINE BANDED ORE-ZONE IN N. FACE OF 30'-DEEP GLORY HOLE

Measurements Across Ore-Zone W. to E.

Thickness in inches	Description	% Chr.	Nature of Contact
24	not well banded dissem. chromite (rest olivine)	60	slightly gradational
4	dunite w/fine ½ mm chromite	1	2" gradational
3	dissem. chromite (1.5 mm -)	60	sharp
3/8	olivine fine-grained chromite	10	
1/8	chromite		
1/4	olivine		sharp
1	dissem. chromite	15	gradational
5/8	olivine (olive colored)	40	sharp
3/8	fine-grained chromite	10	sharp
1/2	chromite	50	sharp
1/2	chromite	15	sharp
1/8	chromite	30	sharp
2½	chromite (diminish to east)	5	sharp
2¼	chromite (thicker on edges)	40	sharp
3¼	chromite Dunite	3	gradational
2	chromite (thicker on edges)	60	sharp
1-3/4	dunite w/very fine-grained chr.	3	gradational
1¼	chromite	60	sharp
1½	dunite	5	gradational
1	chromite (thicker on edges)	50	sharp
1/2	dunite w/thin chromite layer in middle	5	sharp
5/16	chromite	60	gradational
2¼	chromite dunite	5	gradational
1/2	chromite	70	gradational
7/8	chromite	35	sharp
3/16	chromite dunite	10	sharp
1/8	chromite olive serpentine	60	sharp
3/16	chromite dunite	10	sharp
1/8	chromite	60	sharp
1/2	chromite dunite	3	sharp
1/8	chromite	60	
1	chromite	60	sharp
3/4	chromite dunite	5	sharp
1½	chromite	60	sharp
5/8	chromite dunite	5	sharp
3/8	chromite	50	sharp
3/8	chromite	20	gradational
1/8	chromite	60	sharp
1/2	chromite dunite	5	sharp
1	chromite dunite	3	gradational
3/16	chromite	50	sharp
1/8	chromite	20	gradational
1/8	chromite	50	sharp
3/8	chromite dunite	10	gradational
1/8	chromite	50	sharp

Thickness in inches	Description	% Chr.	Nature of Contact
3/16	chromite dunite	10	gradational
3/16	chromite	40	sharp
1/4	chromite dunite	10	gradational
1/2	chromite	50	gradational
6	to edge of banded zone		

Bands run N. 10° E., 85° E. Zone 5' thick

In S. face G. Hole banding N. 10° W., 63° E.

EXHIBIT "D"

REPORT
on
SORDY CHROME MINE

Sept. 1943

Location:
The property is located in Sections 2, 10, 11, 12, 14, 15, 22, 23, 26 and 35, Township 36 South, and Section 36, Township 35 South, Range 9 West, in Josephine County, Oregon. It lies about 18 miles south of Galice, at an elevation of from 3,000 feet to 3,800 feet.

Extent:
The property comprises some 24 claims, all unsurveyed and held by location and assessment work.

Geology:
United States Geological Survey Bulletin 922-P covers this property very fully.

The chromite deposits are all in a mass of peridotite which was intruded into schists and quartzites. Included in the peridotite are large bodies of olivine-pyroxene rock -- classed as saxonite -- and included in this are lenses of dunite, in which chromite is sometimes present as an accessory mineral.

In the south half of the property the chromite occurs in pods, or kidneys, of high grade, but of small size, generally varying from a few pounds to five or ten tons each.

In the north half of the property there has been considerable faulting and shearing, and the chromite occurs in much larger bodies. It is partly disseminated and partly concentrated in high grade kidneys within the disseminated ore.

There are five large bodies of this disseminated chromite which are probably of commercial value; two on the Violet claim, one on the Buster claim, and two on the Black Jack claim. At the present time only those on the Violet and Buster claims will be described.

The chromite ore on these claims varies from a low grade concentrating ore to high grade shipping ore. Sampling shows that a concentrating ore of from 20% to 25% Cr_2O_3 can be mined in commercial quantities.

Transportation:
The Forest Service has completed an 18 mile road to connect this property with the highway at Galice, and has partly graveled it. The graveling should be completed this fall. From Galice it is 14 miles to Merlin, a station on the Southern Pacific Railway, where ore and concentrates may be shipped.

Development:
At the time the property was taken over by the Pacific Company development work consisted of 50 or 60 open cuts, together with one shaft, said to be 30' deep, and two short tunnels. These workings are scattered all over the property, though mostly on the south half, where the high grade shipping ore was more evident.

Present development has been confined almost entirely to the Violet claim, except for some diamond drilling on the Buster and Violet ore body. On the North Violet ore body the surface has been stripped almost entirely for a distance of 170' along the trend of the ore, and two tunnels, one 45' long and one 110' long, driven on the ore body. High grade shipping ore encountered has been extracted and shipped.

On the Lower Violet ore body, the surface has been stripped for nearly 400' along the trend of the ore; one small underground stope has been started and an old tunnel extended into the ore body, a distance of about 20 feet. Accompanying maps show the extent of the development on both bodies. High grade shipping ore has likewise been taken from this ore body.

Ore Reserves:

In estimating ore reserves, which average around 25% Cr_2O_3, the cubic feet per ton of ore is calculated at eleven. 75% of the ore is dunite with a specific gravity of 2.6 and 25% of the ore is chromite with a specific gravity of 4.5. With dunite at 13 cu. ft. to the ton, this gives 11 cu. ft. for ore running 25% Cr_2O_3.

All samples, except diamond drill samples, are channel samples, averaging at least five pounds per foot of sample. Diamond drill samples comprise half of the ore, in alternate pieces, from one to two inches long.

Estimations are made in short tons.

North Violet:

Blocked Ore

Main body, from lower tunnel to surface, 100' long and 20' wide.
Cross sections every 10' vertically give 35' depth.
Allowing 5' for surface overburden, there is a body
100' x 30' x 20' or 60,000 cu ft.

South end of same body, cross sectioning shows 34' depth, minus 5' for surface overburden, gives
60' x 29' x 20' or 34,800 cu. ft.

A total of 94,000 cu. ft. divided by 11, gives 8,620 tons.

Samples applying to this body, as shown on accompanying map, are Nos. 17 to 27, and 47 and 48. Width of ore body is the average shown by measurements.

The average content of this ore, as shown by these samples, Cr_2O_3, 25.20%; Fe. 8.33% Ratio Cr-Fe 2.07 to 1.

Equipment:

The property is at present equipped with the following:

1 - 315 cu. ft. Ingersoll Rand portable compressor
3,500' of 1" and 2" pipe for air and water lines
1 - Blacksmith shop, with forge, anvil, vise, etc.
2 - Jackhammers, Ingersoll-Rand and Sullivan
1 - Gardner-Denver automatic rotating stoper
Drill steel and jack-bits for above machines
1 - Ford dump truck, rated at 2½ tons
1 - Chevrolet dump truck, rated at 1½ tons
1 - Ford flatbed truck, rated at 2½ tons
1 - G.M.C. pickup, rated at 3/4 ton
1 - Northwest gas power shovel, 3/8 yard shovel
3 - One ton mine cars
700 ft. of mine track, 12 lb. rails.
1 - Ford gasoline hoist, 200' 3/8" cable
1 - Ingersoll-Rand tugger hoist, 500' 3/8" cable
2 - Water pumps, gas operated, 2000 gal. per hour
1 - Powder magazine
1 - Gas storage building
1 - Cook and bunk house, 40' x 20'
1 - Bunk house, 14' x 20'

All equipment and buildings are in good working condition.

Shipments:

To date 615 long tons of ore have been shipped to the Metals Reserve Co. having an average content of 39.44% Cr_2O_3; 11.03% Fe. Cr-Fe ratio, 2.44 to 1.

Analyses of Ore:

The following samples were taken by F. B. Caldwell, for the U. S. Bureau of Mines, in 1918.

No.	Description	Cr_2O_3%	FeO%	SiO_2
1	Big Buck #2	40.9	15.8	4.8
2	Big Buck NW open cut	30.0	13.5	10.0
3	Big Buck at location	42.0	18.5	3.6
4	Blue Doe NW open cut	45.8	17.9	4.4
5	Blue Doe at location	36.8	16.4	4.8
6	500' S. of Blue Doe location	31.5	14.6	8.4
7	Yellow Jacket, 300' S. of Yellow Pine	41.6	16.2	7.6
8	Fines at #7 sample	38.3	20.4	10.4
9	Yellow Pine	48.5	20.7	4.4
10	S. hillside of Violet, W. cut, Sample "A"	39.3	15.4	6.0
11	E. of #10, sample "B"	36.6	15.0	6.0
12	E. of #11, sample "C"	41.6	15.4	6.4
13	E. of #12, sample "D"	33.0	14.0	14.4
14	Violet, S. side of ridge	39.4	14.5	8.8
15	Violet at location	39.6	14.1	8.4

No.	Description	Cr_2O_3%	FeO%	SiO_2%
16	Violet, center cut	40.3	14.6	8.8
17	Violet N. of #16, at tunnel	29.5	13.2	11.6
18	Una V.	49.7	15.1	3.6
19	Spotted Fawn #2	45.1	14.6	6.8
20	P.D.Q. claim	41.5	14.3	4.1
21	Float from Chrome Flat	43.1	15.4	3.6
23	Check on #9, Smith-Emery Co. S.F.	52.0	19.6	2.8
24	Check on #14, " " "	42.4	14.5	8.8

Taken by R. B. McGinnis, October, 1942

1	South workings near 30' shaft, mill ore	26.87
2	South workings, near road, mill ore	42.67
3	Violet cut, disseminated ore	30.91
4	Black Jack, big low grade body	27.14
5	Buster claim, low grade	36.23
6	South end Chrome Flat, shipping ore	53.30
7	North end Chrome Flat " "	46.61
8	Spotted Fawn	44.30
9	Violet shipping ore	53.20

Analysis of last sample

Silica	4.6%
Iron	14.88%
Phosphorus	0.030%
Sulphur	0.021%
Cr-Fe ratio	2.45 to 1

Since work started on the property this spring the following samples have been taken:

No.	Description	Cr_2O_3%	FeO%	Cr-Fe ratio
1	Buster ore body, drill hole #1, 18' ore	16.82	7.7	1.49
2	" " " " " 2, 28' ore	15.09	7.11	1.45
3	" " " " " 3, 28' ore	21.49	8.00	1.84
4	Violet, north ore body, average of mill ore	34.38	10.56	2.23
5	" " " " shipping ore	40.87	11.06	2.53
6	Lower Violet, shipping ore, 4' wide	45.54	12.74	2.44
7	" " average of milling ore, 5' wide	40.69	11.55	2.41
8	Upper Black Jack ore body, average of good ore. Croppings show body 130' x 30'	24.69	10.37	1.63
9	South Violet, average of shipping ore	44.71	13.03	2.35
10	Spotted Fawn #2, north ore body, average of good ore. Croppings show body 50' x 6'	36.85	11.16	2.26
11	Spotted Fawn #2 south ore body. Croppings show body 41' x 20'	39.50	15.01	1.80
12	P.D.Q. claim, average of shipping ore	42.97	15.30	1.92
13	Sample of disseminated ore, North Violet	32.82	8.85	2.54
14	North Violet, south end ore body, on road west part, 11' wide	10.23	6.92	1.01
15	Adjoining #14 on east, 4' wide	11.42	6.81	1.15

No.	Description	Width	Cr_2O_3%	FeO%	Cr-Fe ratio
16	20' N. of #15, N. end of 1st cut, at fault	7½	11.96	6.61	1.24
17	Next cut north, west section	5	29.59	8.65	2.34
18	Adjoining #17 on east, total width here 13'		35.16	9.16	2.63
19	28' N. of #18, partly stripped surface	11'	30.41	9.46	2.20
20	Big open cut, south side, and west section	6'	33.24	9.05	2.51
21	Adjoining #20 to east, center section	11'	19.45	7.32	1.82
22	Adjoining #21 to east, east section	12'	15.07	7.02	1.47
23	20' N. of #21, west part of vein, balance covered with fill	6½	7.58	7.73	.67
24	22' N. of #23, 16' wide, west section ore	16'	21.28	7.83	1.86
25	S. end of tunnel, west side, 18' along drift	10'	32.60	9.16	2.43
26	Adjoining #25 to east, 14' along drift	8'	28.95	8.54	2.32
27	North Violet, drill hole #4, 1st 6'	6'	10.05	7.12	.97
28	Lower Violet, west end, partly stripped	8'	22.19	8.95	1.69
29	12' east of #28, across open cut	14'	20.82	8.24	1.73
30	18' east of #29, south section, low grade	8'	7.95	6.20	.88
31	Adjoining #30 to north, to north wall	12'	42.47	11.60	2.51
32	33' east of #31, 17' west of east end of cut. Slip breaks vein between 31 & 32	4'	18.36	7.93	1.58
33	At east face of old cut	5'	38.81	10.58	2.51
34	5' west of #32, beginning of ore after slip	2'	12.15	6.92	1.20
35	Lower Violet, west end of upper cut, partly stripped	8'	20.91	6.54	1.68
36	14' east of last sample, partly stripped	2'	37.26	9.87	2.58
37	37' east of #36, covered between, partly opened	5'	24.19	10.17	1.63
38	Lower Violet small stope, floor, 5' from west end	8'	43.20	12.01	2.46
39	12' east of #38, floor sample	8'	41.10	10.38	2.71
40	Buster claim sample, south cut, west face	12'	19.73	6.51	2.07
41	Open cut NE of #40	15'	22.56	7.73	1.99
42	Lower cut, east of last, across face	7'	18.17	6.82	1.82
43	Small cut on ore, 30' N30W of last cut, no stripping between	1'	19.09	6.82	1.91
44	Northwest cut, across face	10'	30.87	9.06	2.33
45	Composite from 7 small cuts, from 20' S60W to 19' S50E from last cut, Buster claim	7'	32.51	9.16	2.43
46	Composite of 5 small cuts, from due west 55' to 78' N60W, Buster claim, from last cut	5'	37.63	9.56	2.69
47	North Violet, drill hole #6, 1st 10'	10'	36.08	9.36	2.64
48	" " " " 6, next 11½'	11½	30.86	8.75	2.41
49	Lower Violet, croppings, 60' east of high grade stope	22'	17.00	7.98	1.45
50	At Lower Violet shipping ore		41.12	11.34	2.48
51	" " " surface cut		39.32	11.24	2.39
52	" " " shipping ore		43.75	11.86	2.52

Briggs Creek (Sordy) Chrome Mine

Logs of Diamond Drill Holes on Buster Claim

Log of Drill Hole #1

Located at south edge of Buster ore body, approx. middle between east and west ends. Course S. 50 W. Dip 45 degrees.

Started 12' below surface, all good milling ore above hole.

0'	to 4'	low grade ore.
4'	to 16'	good grade milling ore, with some shipping ore.
16'	to 17'	serpentine, very low grade.
17'	to 20'	fair milling ore.
20'	to 25'	serpentine, no ore.
25'	end of hole	Entire hole assayed 16% Cr_2O_3.

Log of Drill Hole #2

Located 11' N. 30W. of hole #1, in same open cut, Course N 20 E., dip 44 deg.

Started 7' below surface, all good milling ore above hole.

0'	to 3'	medium mill ore.
3'	to 9'	angling through seam of dunite, no ore.
9'	to 12'	fair ore.
12'	to 15½'	good mill ore.
15½'	to 16¼'	medium mill ore.
16¼'	to 18'	good shipping ore.
18'	to 19'	low grade ore.
19'	to 20½'	good mill ore.
20½'	to 23¼'	very low grade ore.
23¼'	to 25½'	good mill ore.
25½'	to 28½'	shipping ore.
28½'	to 30'	good mill ore, some shipping ore.
30'	to 32½'	good mill ore.
32½'	to 33½'	shipping ore.
33½'	to 34½'	good mill ore.
34½'	to 37'	shipping ore.
37'	to 38'	good mill ore.
38'	to 39½'	fair mill ore.
39½'	to 48'	serpentine.
48'		end of hole. Entire hole assayed 15% Cr_2O_3

Log of Drill Hole #3

Located midway between holes #1 and #2, in same open cut. Course N 45 W. Dip 18 degrees. To crosscut body.

Started 5' below surface, all good milling ore above hole.

0'	to 3'	dunite seam, no ore.
3'	to 6'	good milling ore.
6'	to 7'	shipping ore.
7'	to 9½'	good mill ore.
9½'	to 10½'	shipping ore. Entire hole assayed 19% Cr_2O_3.
10½'	to 13¼'	good mill ore.
13¼'	to 14'	serpentine, no ore.
14'	to 17'	good mill ore.
17'	to 19¼'	shipping ore.
19¼'	to 20'	good mill ore.
20'	to 21'	shipping ore.
21'	to 24'	good mill ore.

Hole not completed, still drilling.

Log of Diamond Drill Hole #4

Located at SW face of center cut, North Violet workings.

(23' of good grade mill ore has been exposed by open cut before starting hole)

Course of hole S 55 W. Flat.

0'	to 2'	dunite with small showing of chromic oxide.
2'	to 3'	low grade mill ore.
3'	to 4'	dunite with trace of chrome.
4'	to 5'	dunite with specks of chrome.
5'	to 6½'	low grade mill ore.
6½'	to 9½'	dunite, serpentine, no ore.
9½'	to 11½'	dunite with trace of chrome.
11½'	to 13'	dunite.
13'	to 23'	peridotite, little serpentine end of hole. No good, not assayed.

Log of Drill Hole #5

Same location as #4. Dip, up 5 degrees from horizontal. Course S 30 W.

0'	to 1'	low grade mill ore.
1'	to 6½'	dunite, with trace of chrome.
6½'	to 10'	dunite, no ore.
10'	to 11½'	dunite.
11½'	to 12½'	low grade ore.
12½'	to 14'	chrome ore (10% to 15%)
14'	to 16'	peridotite.
16'	to 16½'	dunite, trace chrome.
16½'	to 18'	saxonite and dunite.
18'	to 23'	peridotite
23'	to 26½'	saxonite and some serpentine.
26½'	to 28'	dunite.
28'	to 38'	peridotite, little serpentine, broken.
38'	to 43'	dunite and saxonite, broken, seamed.
43'	to 45'	dunite and saxonite.
45'	to 70'	peridotite, solid.
70'	to 75'	dunite and saxonite.
75½'	to 85'	peridotite.
85'	to 87'	peridotite and dunite, mixed, trace of chrome.
87'	to 92'	peridotite, with some dunite, hole continuing.

Log of Drill Hole #5

Located at SW face of center cut, North Violet workings.
(23' of good grade mill ore has been exposed by open cut and before starting hole)

Course of hole S 30 W. Dip, up 5 degrees from horizontal.

0' to 1'	low grade mill ore.
1' to 6½'	dunite with trace of chrome.
6½' to 10'	dunite, no ore.
10' to 11½'	dunite trace of chrome.
11½' to 12½'	low grade ore.
12½' to 14'	chrome ore (10% to 15%).
14' to 16'	peridotite.
16' to 16½'	dunite, trace chrome.
16½' to 18'	saxonite and dunite.
18' to 23'	peridotite.
23' to 26½'	saxonite and some serpentine.
26½' to 28'	dunite
28' to 38'	peridotite, little serpentine, broken.
38' to 45'	dunite and saxonite.
75' to 85'	peridotite.
85' to 87'	peridotite, dunite, and trace of chrome.
87' to 92'	peridotite with some dunite.
92' to 121'	broken peridotite, some dunite
	end of hole. First foot assayed 6%, rest went nothing.
45' to 70'	peridotite, solid.
70' to 75'	dunite and saxonite.

Log of Drill Hole #6

Located about 6' south of hole #5. Course S 5 E. Dip 45 degrees to south.

0' to 2'	good mill ore.
2' to 3'	shipping ore.
3' to 7'	good mill ore.
7' to 12½'	shipping ore
12½' to 14'	good mill ore.
14' to 17'	shipping ore.
17' to 21½'	fair mill ore.
21½' to 24½'	serpentinized dunite, trace chrome.
24½' to 28'	dunite, serpentine, little chrome.
28' to 29'	dunite, low grade chrome.
29' to 31'	dunite, serpentine, low grade chrome.
31' to 33½'	dunite, serpentine, trace chrome.
	end of hole
0' to 12½'	assayed 36% Cr_2O_3
12½' to 21½'	assayed 34% Cr_2O_3

Log of Drill Hole #7

Located 210' - S60W from Hole #6. On side hill between compressor and North Violet. Dip 25 degrees, Course N15W.

0' to 3'	dunite.
3' to 11'	peridotite.
11' to 12'	dunite.
12' to 15'	peridotite.
15' to 16'	dunite.
16' to 17½'	peridotite.
17½' to 26½'	dunite, little peridotite.
26½' to 30½'	dunite, peridotite mixed, little serpentine.
30½' to 32'	" " "
32' to 35'	dunite, trace of chrome.
35' to 51'	dunite, peridotite and trace chrome.
51' to 54½'	peridotite, some dunite.

end of hole

Nothing to assay.

Log of Hole #8

Located just above Lower Violet upper stope, to west. Dip, flat, course about south.

0' to 15'	fair milling ore, not assayed.
15' to 30'	dunite, no chrome, not assayed.

end of hole