



**BRITISH  
COLUMBIA**


**BC Geological Survey  
Assessment Report  
38030**

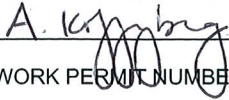


**Ministry of Energy & Mines**  
Energy & Minerals Division  
Geological Survey Branch

**ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY**

<b>TITLE OF REPORT [type of survey(s)]</b>	<b>TOTAL COST</b>
2018 Gold Grain Morphology and Trace Analysis Study	\$ 21,465.82

AUTHOR(S) W. R. Gilmour and A. Koffyberg SIGNATURE(S) 



NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) \_\_\_\_\_ YEAR OF WORK 2018

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) Event 5721664 (Dec 3, 2018); and  
Event 5737027 (April 5, 2019)

PROPERTY NAME Spanish Mountain Gold Placer Property

CLAIM NAME(S) (on which work was done) 514562, 837888, 837889, 837890, 837891

COMMODITIES SOUGHT Placer Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN 093A 192 (Spanish Mountain Placer)

MINING DIVISION Cariboo NTS 093A/11W

LATITUDE 52 ° 35 ' 19 " LONGITUDE 121 ° 27 ' 18 " (at centre of work)

OWNER(S)

1) Spanish Mountain Gold Ltd 2) \_\_\_\_\_

MAILING ADDRESS

1120 - 1095 West Pender Street

Vancouver BC, V1T 5A6

OPERATOR(S) [who paid for the work]

1) same as above 2) \_\_\_\_\_

MAILING ADDRESS

same as above

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

Pleistocene gravels, finely disseminated placer gold, heavy mineral samples

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS 37546, 36708, 27901, 26477, 26473

(OVER)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping _____			
Photo interpretation _____			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic _____			
Electromagnetic _____			
Induced Polarization _____			
Radiometric _____			
Seismic _____			
Other _____			
Airborne _____			
GEOCHEMICAL			
(number of samples analysed for ...)			
Soil _____			
Silt _____			
Rock _____			
Other _____			
DRILLING			
(total metres; number of holes, size)			
Core _____			
Non-core _____			
RELATED TECHNICAL			
Sampling/assaying _____			
Petrographic _____			
Mineralographic _____			
Metallurgic _____			
PROSPECTING (scale, area) _____			
PREPARATORY/PHYSICAL			
Line/grid (kilometres) _____			
Topographic/Photogrammetric (scale, area) _____			
Legal surveys (scale, area) _____			
Road, local access (kilometres)/trail _____			
Trench (metres) _____			
Underground dev. (metres) _____			
Other _____			
		TOTAL COST	

ASSESSMENT REPORT  
on the  
2018 Gold Grain Morphology and Geochemical Analysis  
on the

**SPANISH MOUNTAIN GOLD  
PLACER TITLES**

Cariboo Mining Division, BC  
BCGS 093A.053, 063

**For  
Owner/Operator**

**SPANISH MOUNTAIN GOLD LTD.**

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By

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**Exploration on Placer titles:** 514562, 837888, 837889, 837890, 837891

**Work filed on Placer titles:** 514562, 837888, 837889, 837890, 837891, 839884, 1056835

NTS: 093A/11W  
BCGS MAP SHEETS: 93A.053, 063  
LATITUDE: 52° 35' N  
LONGITUDE: 121° 26' W  
AUTHORS: W.R. Gilmour, PGeo; A. Koffyberg, PGeo  
CONSULTANT: Discovery Consultants  
DATE: April 4, 2019

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## 1.0 SUMMARY

Discovery Consultants, at the request of Judy Stoeterau, Vice-president, Geology, of Spanish Mountain Gold Ltd ("SMG"), continued a study of heavy mineral fractions from the 2017 stream sediment survey. The -150HN fraction was further processed at CF Mineral Research in Kelowna. The lab picked the new fraction (-150HNN) for gold grains, which were photographed and then mounted and analysed for gold, silver and a few other elements.

SMG's Placer Property is located in the Cariboo region of central British Columbia, approximately 10 km southeast of Likely and 68 km northeast of Williams Lake. Access from Williams Lake is via a paved secondary road that leaves Highway 97 at 150 Mile House, approximately 16 km east-southeast of Williams Lake, and continues for 87 km to Likely. From Likely, access is to the east and southeast via the Spanish Lake Road and the Cedar Creek / Winkley Creek Road.

Physiographically, the area is situated within the Quesnel Highland, which is transitional between the gently undulating topography of the Cariboo Plateau to the west, and the steeper, sub-alpine to alpine terrain of the Cariboo Mountains to the east. The terrain is moderately mountainous with rounded ridge tops and U-shaped valleys. Elevations range from 916 m at Spanish Lake to 1,600 m along the northern edge of the Placer Property to 1,480 m along a ridge south of Spanish Lake.

The Placer Property consists of seven MTO placer titles that form a contiguous block covering an area of approximately 1,964 ha. The titles lie on BCGS Map Sheets 093A.053 and 063. All titles are 100% owned by SMG.

The vast majority of the recent mineral exploration in the area has been for lode gold mineralization on mineral titles. A Preliminary Economic Assessment has been completed on the SMG deposit. Although there has been historical placer gold mining west of Likely and on Cedar Creek, there are few published records of placer gold mining in the area of the Placer Property. However, placer titles, including placer leases, existed previous to the SMG placer titles.

In the area, historic placer mining was centred on Cedar Creek, south of Likely, where in 1921 placer gold was discovered, a distance of 4 km from the SMG deposit. Total production from the Cedar Creek Camp in all years up to 1945 was 37,784 ounces. Spanish Creek had sporadic placer production, with a total production up to 1945 of 3,706 ounces; with most of the work appearing to have been at the mouth of the creek where it drains into the Cariboo River.

Locally, McKeown Mines has an active placer operation, within placer leases located to the northwest of the SMG deposit and adjacent to SMG's current Placer Property. This placer deposit has had intermittent production since the 1920s. Gold at this mine is found in both poorly sorted and crudely stratified, compact, silty, coarse gravel, interpreted as debris-flow

deposits; and in interbedded lenses of better sorted gravel, sand and silt, interpreted as intermittent fluvial deposits. The sedimentology of the gold-bearing sequence is suggestive of an alluvial fan depositional environment. It occurs to a depth of 27 metres and is overlain by poorly exposed diamicton, interpreted as till and glacially derived debris-flow deposits, suggesting that the placer deposits predate the last glaciation in the area.

The SGM deposit, or similar mineralization surrounding the deposit, seems a reasonable source for these placer gold deposits. These deposits indicate that any significant placer gold deposits on the Placer Property are most likely in areas where pre-Pleistocene gravels have been preserved.

SMG's Placer Property has been well explored as mineral tenures, which underlie the placer tenures. Placer work was done in 1993, when it was reported that Renoble Holdings mined auriferous soil and colluvium (and till?) in the Madre Zone (now part of the SMG deposit). About 7,000 m<sup>3</sup>, estimated to grade 1.0 g/m<sup>3</sup> gold (or 0.6 g/t gold), was stockpiled. Renoble set up a pilot plant and processed about 150 to 200 t, producing 106 g of gold. In 2000, Imperial Metals collected a small sample from the stockpile. After processing, an average grade of 0.43 g/t was calculated, with 81% of the gold values being in the -10 mesh fraction.

The Placer Property lies within the Quesnel Terrane of the Intermontane Belt, predominantly sedimentary and volcanic rocks of the middle to upper Triassic Nicola Group, representing an island arc and marginal basin assemblage. East of the Placer Property, the regional, southwesterly dipping Eureka Thrust marks the western extent of pre-Quesnel Terrane rocks. Recent work reassigns the Nicola Group rocks north of Spanish Lake to the middle to upper Triassic Slocan Group, with rocks to the south remaining as Nicola Group.

The SMG lode gold deposit is a bulk-tonnage, gold system of finely disseminated gold within interbedded slaty to phyllitic argillite, dark grey to black siltstone, carbonaceous mudstone, greywacke, tuff and minor conglomerate. The main host of the gold mineralization is black graphitic phyllitic argillite. Gold grain size is typically less than 30 µm, and is often associated with pyrite. As well, local high-grade, gold-bearing quartz veins occur within siltstones, greywackes and tuff.

A stream sediment geochemical survey was initiated on the Placer Property in October 2016, in which 31 geochemical stream sediment sites were sampled. From this work, 16 heavy mineral samples, 29 sieved silt samples and 2 moss mat samples were collected, and preliminary studies on gold grain morphologies and trace analysis were carried out.

The focus on the 2017 program was to complete the heavy mineral sampling program on the Placer Property, resulting in the collection of 35 heavy mineral samples. In addition, an orientation biogeochemical (tree bark) survey and an orientation soil survey were conducted, resulting in the collection of 30 soil and 37 bark samples.

This report follows up on the 2016 and 2017 work with a morphology study and an electron microprobe analysis of the gold grains collected in the 2017 heavy mineral samples. The aim is to characterize gold grains found in stream sediment samples and from local placer sources, to determine a likely source(s).

Sixty percent of the probed grains have values between 70% and 85% gold. Gold values range from 41% to 91%. The grain gold values and morphology can vary significantly between gold grains collected from one stream sediment sample. For example, 886HM020 has four grains, with values of 91%, 84%, 74% and 58% gold. Their morphology also varies. These results indicate that the gold may have different sources and/or history. It is not known if some of the gold has had significant till transport, or if it is more local from bedrock and then creek transport.

Some samples contain highly anomalous values in the -150HN, but do not contain gold grains. This is not totally unexpected as the main host of the gold mineralization is <30 µm auriferous pyrite within black graphitic phyllitic argillite. Less common gold-bearing quartz veins occur within more competent siltstones, greywackes and tuffs.

The area north and east of the SMG deposit was covered in the geochemical surveys, while the areas to the west and south were not. Figure 8.1 notes drainage areas N1, N2, S1, S2 and S3 (17 samples), which have strongly anomalous gold in the -150HN fraction. Eleven of the samples contain gold grains, and 16 samples contain strongly anomalous gold (>20 µg gold) in the -150HN fraction.

All these samples are within about one km of the SMG resource. The Phoenix Zone, which contains a similar style of mineralization as the SMG deposits, is about two km west of the deposit. It may be that the above mentioned gold in creeks to the north and south reflects a low grade halo around the deposit or perhaps hidden and more significant mineralization. Perhaps the gold reflects hidden placer gold shed from the deposit. The recent glacial direction was generally to the northwest, so the source cannot be glacially dispersed.

It is not likely that the source of the anomalous values east of the SMG deposit is placer gold as most of this steep, north facing slope comprises a thin organic soil on top of broken argillaceous sediments weathering from bedrock.

## **2.0 INTRODUCTION**

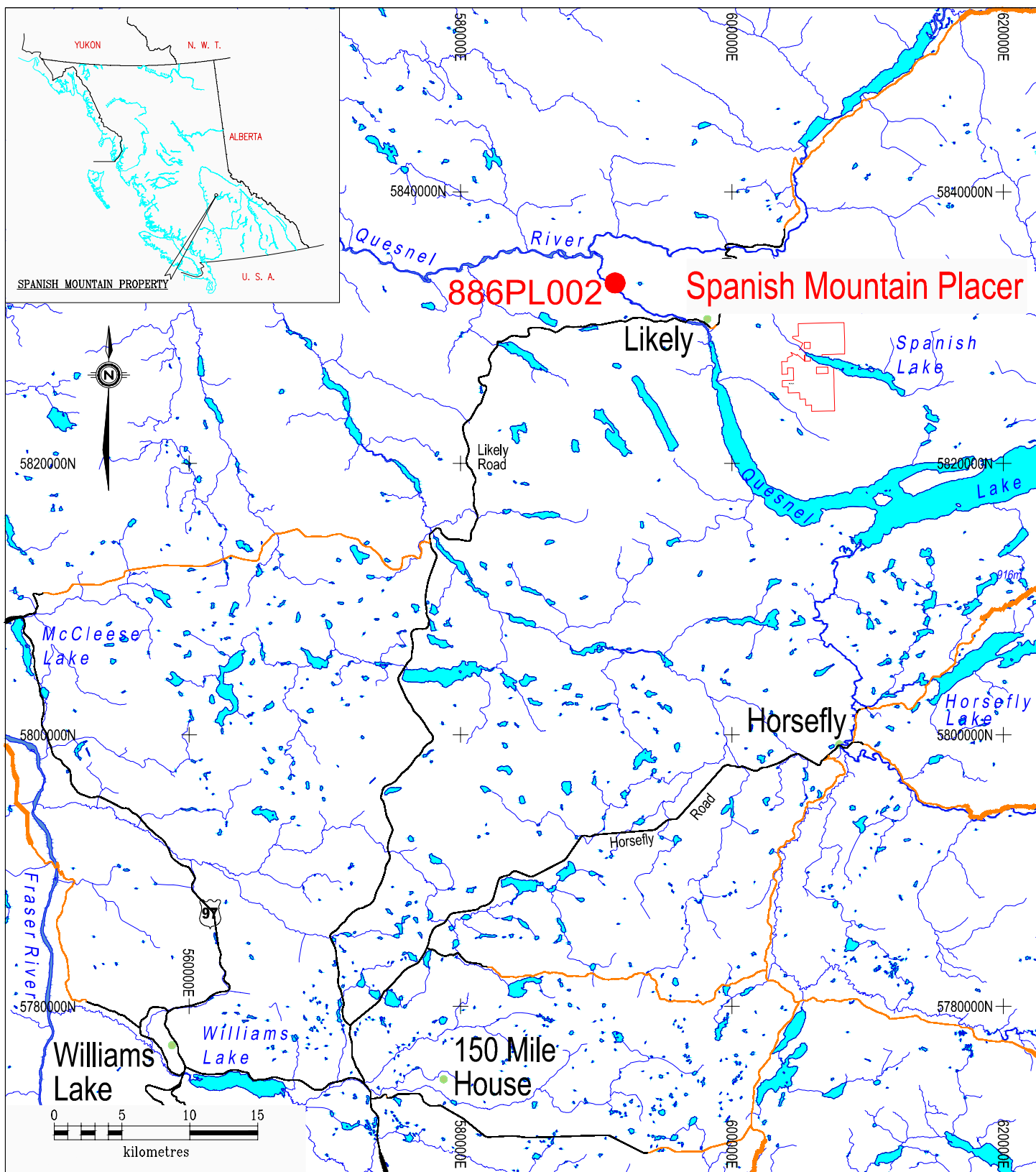
Discovery Consultants, at the request of Judy Stoeterau, Vice-president, Geology, of Spanish Mountain Gold Ltd ("SMG"), carried out studies on gold grains derived from heavy mineral fractions derived from stream sediment samples collected in 2017 over portions of placer titles (the "Placer Property") owned by SMG. The Placer Property overlies portions of the mineral titles ("Property") held by SMG over its Spanish Mountain gold deposit. This program is a continuation of a field program that was carried out in 2016 and 2017. This assessment report describes the gold grain morphology and electron microprobe analysis, which was done to determine the potential source of possible placer mineralization.

No permitting was required for this exploration program.

## **3.0 LOCATION AND ACCESS**

The Placer Property is located in the Cariboo region of central British Columbia, approximately 10 km southeast of the village of Likely and 66 km northeast of the City of Williams Lake (Figure 3.1). The Placer Property covers an area of approximately 10 km north to south by 10 km east to west, situated west, south and north of the western portion of Spanish Lake, with the property centre at approximate latitude 52° 35' north and longitude 121° 26' west.

The Placer Property can be reached from the town of Williams Lake via a paved secondary road that leaves Highway 97 at 150 Mile House, approximately 16 km east-southeast of Williams Lake, and continues for 87 km to Likely (Figure 3.1). From Likely, the central and northern part of the Placer Property is accessed via the Spanish Lake Forest Service Road (FSR 1300), which begins east of Likely and continues through the centre of the Placer Property. The southern portion of the Placer Property is accessed from Likely along the Cedar Creek / Winkley Creek Forest Service Road (FSR 3900), for a distance of about 10 km. Numerous logging roads offer fair access to areas south of Spanish Lake. North of the lake access is poor.



DISCOVERY

Consultants

Spanish Mountain Gold Ltd.

Spanish Mountain Property

2018 Stream Sediment Sampling

Location and Access

Date: Jan.31, 2019	Project: 886	Scale: 1:400,000	N.T.S.: 93A/11	Mining Div: Cariboo	Figure: 3.1
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## 4.0 TOPOGRAPHY, VEGETATION & CLIMATE

Physiographically, the area is situated within the Quesnel Highland, which is transitional between the gently undulating topography of the Cariboo Plateau to the west, and the steeper, sub-alpine to alpine terrain of the Cariboo Mountains to the east. The terrain is moderately mountainous with rounded ridge tops and U-shaped valleys. Within the Placer Property, elevations range from 910 m above sea level ("asl") at Spanish Lake to 1470 m asl near the summit of Spanish Mountain. Drainage is via Spanish Creek, which drains northwesterly into Cariboo Creek, and via Cedar Creek, which drains westerly into Quesnel Lake. Quesnel Lake flows into Quesnel River, and, joined by Cariboo Creek, flows westerly to eventually join the Fraser River near the town of Quesnel.

Overburden depths are quite variable, ranging from one to ten metres in most of the Main Zone, to over 50 m further west in the Phoenix area. During the last glacial period, the ice advanced in a northwesterly direction (Tipper, 1971; Eyles and Kocsis, 1988). Rock outcroppings are scarce and are typically found along the crest of ridges, in incised river and creek gullies, and along shorelines.

Vegetation in the area consists of hemlock, balsam, cedar, fir and cottonwood in valley bottoms, and spruce, fir and pine at higher elevations. Alder, willow and devil's club grow as part of the underbrush, which can be locally thick. Parts of the Placer Property have been logged at various times, resulting in areas having open hillsides with younger forest growth. In addition, large sections of the pine forest have been recently affected by mountain pine beetle infestation.

The climate of the Likely area is modified continental with cold snowy winters and warm summers. Likely has an annual average precipitation of approximately 70 cm. Snowfall on the Placer Property averages approximately 200 cm between the months of October and April. Most small drainages tend to dry up in the late summer.

## 5.0 PROPERTY DESCRIPTION

The Placer Property consists of seven MTO placer titles that form a contiguous block covering an area of approximately 1,984 ha (Figure 5.1). The titles lie on BCGS Map Sheets 093A.053 and 063. All titles are 100% owned by SMG. Table 5.1 lists the title details.

**TABLE 5.1: Placer Title Descriptions**

Placer Title Number	Issue Date	Good To Date*	Area** (ha)
514562	2005/JUN/15	2023/AUG/18	176.77
837888	2010/NOV/09	2021/JAN/08	490.86
837889	2010/NOV/09	2021/JAN/08	333.87
837890	2010/NOV/09	2021/JAN/08	432.26
837891	2010/NOV/09	2021/JAN/08	432.29
839884	2010/DEC/05	2021/JAN/08	98.23
1056835	2017/DEC/06	2021/JAN/08	19.64
		Total hectares	<b>1,983.92</b>

\* Pending acceptance of this Report

\*\* Note that in places some of the placer titles overlie pre-existing, third-party placer titles, totalling 91.5 ha, which reduces the effective area of the Placer Property to 1892.42 ha (Figure 5.1).

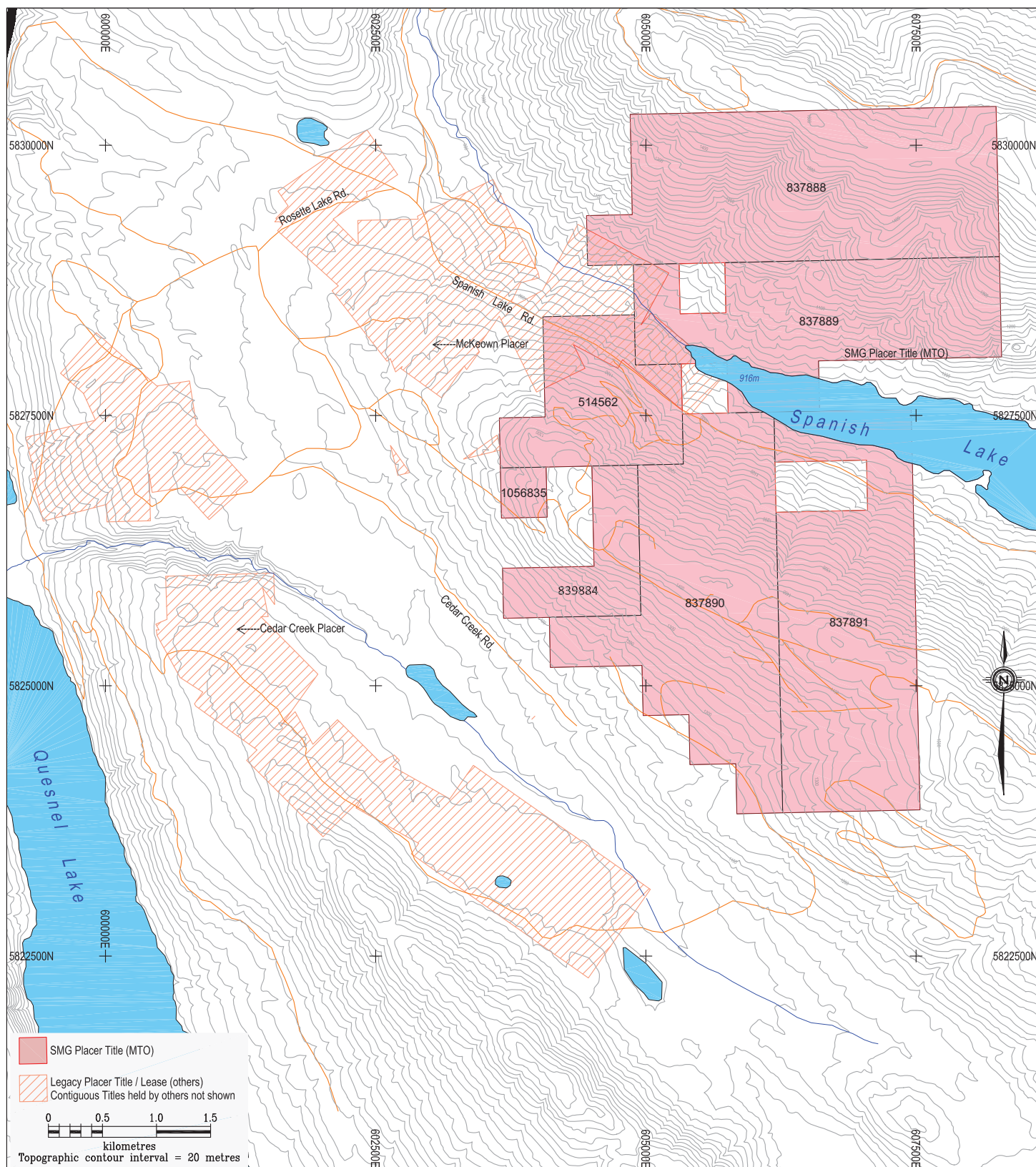
The placer titles overlie in whole or in part mineral titles held by SMG as follows:

**TABLE 5.2: Underlying SMG Mineral Titles**

204021	204667	399415	512544
201224	205151	399417	512547
204225	373355	399419	512549
204227	399410	403303	517446
204274	399412	512541	521302
204334	399413	512542	822682

A multi-year Mines Act Permit for the mineral titles is held by SMG on the Property. However, no permits regarding the placer titles have been needed to date.





<div>DISCOVERY Consultants</div>			Spanish Mountain Gold Ltd.								
Spanish Mountain Placer Property			Placer Title Locations								
Date:	Jan.31, 2019	Project:	886	Scale:	1:50,000	N.T.S.:	93A/11	Mining Div:	Cariboo	Figure:	5.1

## 6.0 EXPLORATION HISTORY

The vast majority of the recent mineral exploration activity in the area has been for lode gold mineralization. A Preliminary Economic Assessment has been completed on the Spanish Mountain Gold deposit (Schulte et al., 2017, amended February 2019). The 2010 proposed pit outline, based on a previous resource estimate, is shown on Figure 8.1.

Historic placer mining was centred on Cedar Creek (see Figure 5.1), south of Likely, where in 1921 placer gold was discovered by J. Lyne and A.E. Platt on a small flat draw about 800 m south of Cedar Creek. This placer occurrence is 4 km from the SMG deposit. The placer gold at Cedar Creek was described in the BC Minister of Mines Annual Report of 1922 as follows:

At the discovery workings, a layer of 2 feet of black muck and organic matter overlies the surface; below this was a blueish grey clayey gravel and broken bedrock from 2 to 8 feet thick. The gold occurred in the lower 2 feet of this zone. On the Platt ground, overlying glacial drift is 1 to 6 feet thick, barren of gold and from 2 to 4 feet of brownish gravel below which is gold-bearing. A characteristic of the pay-gravel is the presence of small cubic crystals of iron which occur in considerable quantity and consist of pseudomorphic crystal of limonite after pyrite. The gold was described as coarse and typically well worn. The author's opinion was that the rich gravels are of Tertiary age and probably in the place where it was formed. The pay gravels of the discovery draw and Platt draw represent various degrees of intermixing of the original Tertiary gravels with glacial clays and broken bedrock gravels.

Gold-bearing gravels were also found in the Sheridan lease to the south the following year. The gold-bearing gravels were in about 3 feet of gravel lying on bedrock and overlain by 12 to 15 feet of barren or low grade gravels. In 1926, a rich gold-bearing zone was found and in 9 months, 4,700 oz of gold was recovered, including one nugget weighing 17 oz. At that location, the thickness of the overlying glacial material was not over 20 feet, and the coarse, nuggety gold occurred in the 2 to 3 feet immediately above bedrock (BC Ministry of Mines Annual Report of 1926).

Production in the Cedar Creek Camp was greatest from 1921 to 1925, with a recorded total of 20,749 ounces of gold. Total production from the creek in all years up to 1945 was 37,784 ounces (Holland, 1950), which is the fifth largest recorded placer gold production in the Cariboo. By comparison, the Keithley Creek gold placers in the Barkerville area have a recorded gold production of 35,395 ounces for the same time period. In general, the gold placer deposits of the Cedar Creek Camp were thought be fairly locally derived (Johnston, 1922).

The Cedar Creek placer has been privately owned and operated since the 1920s, and although very little public information is available, the placer tenures currently owned by J.H and G.E. Rasmussen have likely been worked until recently. A similar active placer operation exists to

the north of Cedar Creek, called the Hampton Placer, which has been worked intermittently for the past 65 years (Dawson, 2006).

Spanish Creek had sporadic placer production, with a total production up to 1945 of 3,706 ounces (Holland, 1950); most of the work appears to have been at the mouth of the creek where it drains into the Cariboo River. Locally, the former McKeown Mines had an active placer operation, within placer leases located to the northwest of the SMG deposit and adjacent to SMG's current Placer Property (Fig 5.1). Levson and Giles (1993) classified this deposit as a Pre-Late Wisconsinian, large paleochannel type deposit. They write:

The deposit appears to fill the upper part of an elevated channel cut in bedrock. The channel is approximately 1 km long, 300 m wide and, as indicated by drilling results, at least 74 metres deep. The lower 50 metres is filled with clean pebble and boulder gravel.... The orientation of the channel is not well defined but appears to be oblique to the regional northwesterly strike of bedrock, topography and glacial ice-flow. This orientation could provide an ideal situation for minimal glacial erosion and may account for the preservation of the placer deposits in the paleochannel. Currently mined deposits, filling the upper part of the channel, are interpreted as alluvial fan sediments.

This area was first staked by J. Lyne in 1927 and production occurred from 1927 to 1938 by sluicing in Lyne, Oliver and Hurley gulches. Some tunneling was also undertaken. Mechanized mining began in 1981 and the owners have operated the mine every season since then [that is, to 1993].

Gold content is generally consistent throughout the mined sequence, averaging about 1 g/m<sup>3</sup>, not including gold finer than 100 mesh. In the lower gravel zone, gold concentrations are higher closer to the bedrock which is approximately 60 to 80 m below surface. The gold is both fine and coarse; nuggets up to 185 g (6 oz) have been recovered. They are often associated with quartz and tend to be rough surfaced and chunky; flattened or flaky gold is rare.

Gold at this mine is found in both poorly sorted and crudely stratified, compact, silty, coarse gravel, interpreted as debris-flow deposits; and in interbedded lenses of better sorted gravel, sand and silt, interpreted as intermittent fluvial deposits. The sedimentology of the gold-bearing sequence is suggestive of an alluvial fan depositional environment. It occurs to a depth of 27 m and is overlain by poorly exposed diamicton, interpreted as till and glacially derived debris-flow deposits, suggesting that the placer deposits predate the last glaciation in the area.

The area of SMG's Placer Property has been well explored for hard-rock minerals as SMG's mineral titles underlie the placer titles. Placer work was done in 1993, when it was reported by Renoble Holdings ("Renoble") "that at that time, all drainages on Spanish Mountain were being

worked by placer miners” (Robertson, 2001b). In 1993, Renoble mined auriferous soil and colluvium (and till?) in the Madre Zone (now part of the SMG deposit area), an area overlying known auriferous veins on former placer claims 373356 and 373357 (currently placer title 514562). The material was stockpiled about 200 m to the north and totalled about 7,000 m<sup>3</sup> (Figure 8.1). Renoble reported the grade to be 1.0 g/m<sup>3</sup>. In 2001, Imperial Metals, assuming a specific gravity of 1.72 and Renoble’s grade estimate, calculated a grade of 0.60 g/t gold.

Renoble set up a pilot plant just north of the stockpile. A 1.7 km long, 10 cm steel water line was installed from Spanish Lake, with a 250 m vertical lift, to a 5,000 m<sup>3</sup> reservoir, located about 200 m north of the plant. Water was then pumped 80 m higher to the processing area as needed. The plant comprised a grizzly; trammel; primary and secondary jigs; a Knelson concentrator and a washing plant.

Approximately 150 to 200 t of the stockpile was run through the plant, with 106 g of gold recovered. The process was reported to have had many inefficiencies and no further work was done.

In 2000, Imperial Metals collected a small sample from the stockpile to determine if a screening process would “concentrate the gold enough that it would warrant studying the possibility of including placer soil with the [Mount Polley] hard rock feed” (Robertson, 2001b).

Sampling comprised a shovelful, from about 50 cm depth, at six locations around the base of the stockpile. The sample was placed in 20-litre plastic buckets, sealed, and transported to the Mount Polley metallurgical lab. After processing, an average grade of 0.43 g/t was calculated; this is lower than the 0.60 g/t estimate by Renoble. The discrepancy is likely due to inhomogeneous gold distribution and small sample size. The gold values and corresponding grain sizes are shown in Table 6.1 (Robertson, 20001b).

**Table 6.1: Imperial Metals 2000 Sampling and Metallurgical Testing**

Screen Fractions microns	Screen Fractions Tyler Mesh	Sample Weight g	Gold Grade g/t	Gold Distribution %	Cumulative Gold Grade g/t
37500		523	0.09	1.6	0.43
25000		104	0.04	0.1	0.46
19000		158	0.01	0.1	0.47
12500		318	0.02	0.2	0.48
9500		231	0.03	0.2	0.51
4750	4 mesh	725	0.38	9.5	0.53
2360	8 mesh	837	0.07	2.0	0.55
1700	10 mesh	512	0.28	4.9	0.65
<1700	-10 mesh	3324	0.71	81.3	0.71



The 1993 and 2000 testing programs demonstrated that an anomalous concentration of gold is present in surficial sediments overlying the SMG deposit.

In 1994 and 1995, Skygold Ventures Ltd carried out reverse-circulation drill holes to assess the placer potential of gold in the same area as the 1993 work. The top intersections of overburden within drill holes 04-SPRC201, 208, 209, 224 and 05-SPRC-236 were analysed for gold, for a total of 20 samples of 1.5 m in length (Morton, 2005). Gold values ranged from 0.03 g/t Au to 1.18 g/t Au.

A stream sediment geochemical survey was initiated on the Placer Property in October 2016, in which 31 geochemical stream sediment sites were sampled. From this work, 16 heavy mineral samples, 29 sieved silt samples and 2 moss mat samples were collected, and preliminary studies on gold grain morphologies and analysis were carried out. This work was described in an assessment report by Gilmour (2017).

The focus on the 2017 program was to complete the heavy mineral sampling program on the Placer Property, resulting in the collection of 35 heavy mineral samples. In addition, an orientation biogeochemical (tree bark) survey and an orientation soil survey were conducted, resulting in the collection of 30 soil and 37 bark samples. The results of this work are described in an assessment report by Gilmour and Koffyberg (2018).

## **7.0 GEOLOGY**

### **7.1 Regional Geology**

The Placer Property lies within the Quesnel Terrane of the Intermontane Belt. The rocks of the Quesnel Terrane are predominantly sedimentary and volcanic rocks of the middle to upper Triassic Nicola Group, representing an island arc and marginal basin assemblage. East of the Placer Property, the regional, southwesterly dipping Eureka Thrust marks the western extent of pre-Quesnel Terrane rocks; notably the intensely deformed, variably metamorphosed Proterozoic and Paleozoic pericratonic rocks of the Barkerville Subterrane of the Omineca Terrane.

Schiarizza (2019) subdivided the Nicola Group rocks in the Spanish Mountain area into three assemblages, two of which occur on the Placer Property. Assemblage One, of Middle Triassic age, consists of siltstone and argillite with lesser pillowed basalt and volcanic sandstone. These rocks form a northwest trending belt that dips steeply to the southwest and is stratigraphically overlain by Late Triassic Nicola Group Assemblage Two, which comprises volcanic sandstone, conglomerate and siltstone.

In addition, Schiarizza (2016, 2018, 2019) re-assigned the Nicola Group rocks north of Spanish Lake to the middle to upper Triassic Slovan Group, with rocks to the south remaining as Nicola

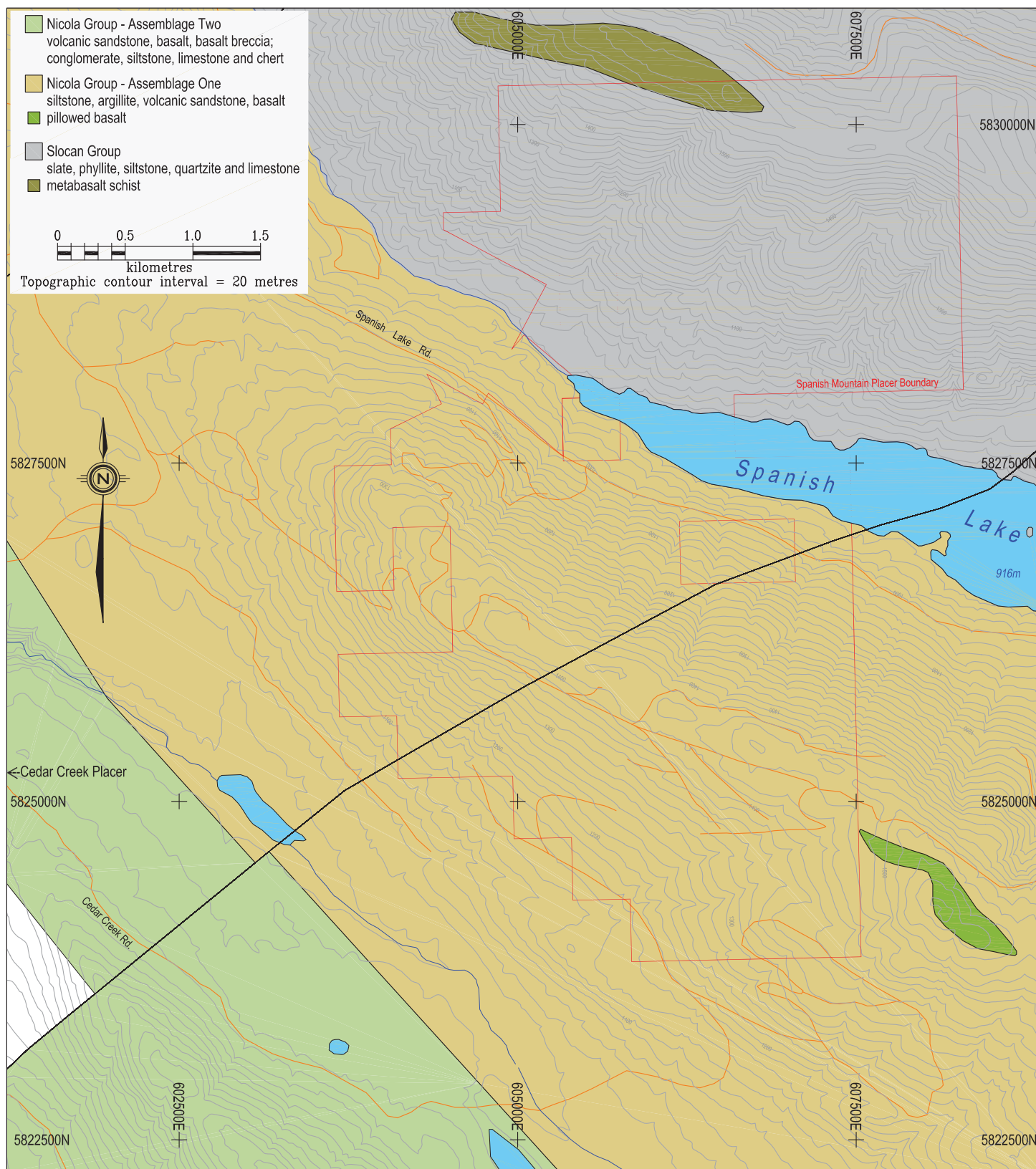
Group (Figure 7.1). The stratigraphic/structural relationship between the Nicola and Slocan Group sedimentary rocks is mapped as being in fault contact. West of Spanish Lake the contact trends northwesterly and east of the lake trends southeasterly. The rock types within these two units are very similar, except that volcanoclastic sediments are restricted to the Nicola Group rocks.

## 7.2 Property Geology

This section is after Giroux and Koffyberg (2014). Although it mainly pertains to the SMG deposit area, it is believed that the geology is similar to that underlying much of the Placer Property.

The SMG deposit is within Nicola Group metasediments of the Quesnel Terrane. The deposit is a bulk-tonnage, gold system of finely disseminated gold within interbedded slaty to phyllitic argillite, dark grey to black siltstone, carbonaceous mudstone, greywacke, tuff and minor conglomerate. The main host of the gold mineralization is black, graphitic phyllitic argillite. As well, local high-grade, gold-bearing quartz veins occur within siltstones, greywackes and tuff. The largest zone carrying significant gold mineralization is called the Main Zone, which has been traced by drilling over a length of approximately 900 m north-south and a width of 800 m. The stratigraphy of the smaller North Zone is less well understood, but consists of argillites, siltstones and lesser mafic volcanic dykes and sills, covering an area of about 400 m north-south, with similar width as the Main Zone (Figure 7.1).

The sedimentary units have been intruded by plagioclase-quartz-hornblende sills and dykes, which range in thickness from tens of centimetres to as much as 100 m. These intrusions have also been affected by phases of folding, alteration and quartz veining.



DISCOVERY

Consultants

Spanish Mountain Gold

Spanish Mountain Placer Property

Property Geology

Date: Jan.31, 2019	Project: 886	Scale: 1:40,000	N.T.S.: 93A/11	Mining Div: Cariboo	Figure: 7.1
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### 7.3 Mineralization

Although the following description (after Giroux and Koffyberg, 2014) relates to lode mineralization at the SMG deposit, it indicates the types of gold mineralization that may have been the source gold in local placer gold occurrences. Also, the historical information may be useful in interpreting the results of the 2016 through 2018 exploration.

Gold mineralization occurs as two main types:

1. Disseminated within the black, graphitic argillite. This is the most economically significant form. Gold grain size is typically less than 30  $\mu\text{m}$ , and is often, but not always, associated with pyrite. Disseminated gold has also been associated with quartz veins within fault zones in the argillite.
2. Within quartz veins in the siltstone/tuff/greywacke sequences. It occurs as free, fine to coarse (visible) gold and can also be associated with sulphides including galena, chalcopyrite and sphalerite. Highest grades have come from coarse gold within quartz veins.

Disseminated gold within the argillite units is by far the most potentially economically important type of mineralization, and has been traced for over 2 km, occurring in multiple stratigraphic horizons. From drill core, elevated gold content has been noted within fault zones as well as within quartz veins in fault zones. However, the influence of fault zones in relation to the gold content of the deposit is not certain.

Examination of 15 representative core samples of disseminated gold in thin section work by Ross (2006) has concluded the following:

Native gold (electrum) was identified in four samples, and it occurred as inclusions and fracture fill in pyrite, on crystal boundaries between pyrite crystals and in the gangue adjacent to pyrite. It is very fine grained, <20  $\mu\text{m}$ , and generally <5  $\mu\text{m}$ . It is associated with equally fine-grained chalcopyrite-galena-sphalerite, which occur in all the same habits. All of the mineralized samples occurred in variably carbonaceous mudstones/siltstones to fine-grained greywackes, with quartz-carbonate-pyrite veinlets and disseminations. There is no clear indication from this study that the gold is preferentially associated with any particular habit of pyrite (i.e., disseminated or veinlet, euhedral or subhedral). The deformation state (i.e., degree of cataclastic deformation) of the host rock does not appear to be significant, at least not on the thin section scale; however a larger scale relationship to position on fold limbs should not be ruled out.

Although a lesser component, quartz veins carrying free gold have yielded the highest grade individual samples on the Property. These veins tend to occur in the more competent facies such as siltstone and tuff/greywacke. The veins are discontinuous on surface and exhibit a strong nugget effect. Gold is often associated with base metals in these veins. In particular, sphalerite, galena and chalcopyrite are commonly associated with free gold. Economically, the



base metals are insignificant, but mineralogically they are a good indicator of gold mineralization. It is thought that gold and base metals may have been re-mobilized into these veins.

These veins typically crosscut all foliation fabrics and thus appear to have been emplaced late in the tectonic history. From work done by geological mapping and on oriented core data, it is known that the veins generally strike between 010° and 050°, and dip at various angles to the southeast and northwest.

Tertiary gravels in the Horsefly area have been mapped and dated as Miocene (Levson and Giles, 1993), although there are no firm dates on the Cedar Creek gold-bearing gravels. The BC Ministry of Mines report from 1922 makes a good case for the gold-bearing gravels at Cedar Creek being pre-glacial (pre-Pleistocene); the bedrock exhibits no glacial striations and gravels are reddish (due to small pseudomorphic crystals of limonite after pyrite) with much clay (“undoubtedly this clay represents a weathering of some of the gravel in-place and is therefore a good indication that the gravels are not of recent origin”).

The elevation of the Cedar Creek gold-bearing gravels is about 1,000 m. In the area of the Phoenix zone, glacial deposits are thick, with drill indicated bedrock at about 950 m elevation. The present surface elevation of the SMG deposit ranges from 950 to 1300 m elevation. The elevation of the McKeown placer is about 1000 m. If the source of the Cedar Creek placer was the SMG deposit and Phoenix mineralization, with a southerly Tertiary drainage, it appears that any Tertiary gravels in the Phoenix area may have been eroded.

The Cedar Creek and McKeown placers are both pre-glacial although it is not known how else they may be related. The SGM deposit, or similar mineralization surrounding the deposit, seems a reasonable source for these placer gold deposits. These deposits indicate that any significant placer gold deposits on the Placer Property are most likely in areas where pre-Pleistocene gravels have been preserved.

## **8.0 2018 GOLD MORPHOLOGY STUDY AND TRACE ANALYSIS**

### **8.1 Sampling Method and Approach**

The 2018 gold grain morphology study and analysis is a continuation of the 2016 and 2017 exploration programs carried out by Discovery Consultants on the Placer Property.

In review, a stream sediment geochemical survey was initiated on the Placer Property in October 2016, in which 31 geochemical stream sediment sites were sampled. From this work, 16 heavy mineral samples, 29 sieved silt samples and 2 moss mat samples were collected, and preliminary studies on gold grain morphologies and trace analysis were carried out. This work was described in an assessment report by Gilmour (2017).

The focus on the 2017 program was to complete the heavy mineral sampling program on the Placer Property, resulting in the collection of 35 heavy mineral samples. In addition, an orientation biogeochemical (tree bark) survey and an orientation soil survey were conducted, resulting in the collection of 30 soil and 37 bark samples. The results of this work are described in an assessment report by Gilmour and Koffyberg (2018).

This report follows up on the 2016 and 2017 work with a morphology study and an electron microprobe analysis of the gold grains collected in the 2017 heavy mineral samples. The aim is to characterize gold grains found in stream sediment samples and from local placer sources, to determine a likely source(s). In this study, gold grains were also collected from: a placer property situated along the Cariboo River (886PL002 – see Figure 3.1); a local placer deposit (formerly known as the McKeown placer) situated on SMG's mineral titles (886PL001); and from a vein gold occurrence on the Property (886HR001). Locations of these last two samples are shown on Figure 8.1.

## 8.2 Sample Preparation and Analysis

The 2017 heavy mineral samples were sent for additional processing at CFM Mineral Research Ltd ("CFM") in Kelowna, BC. Previous analytical work at CFM had separated each sample into various fractions, based on particle size, specific gravity and magnetic susceptibility. Details of these procedures are given in Gilmour and Koffyberg (2018).

The -60+150H mesh fractions for 35 samples were further processed (to reduce the time needed for microscopic picking) to create a -60+150HNN fraction, in which the grains contain effectively no magnetic susceptibilities; that is, removing pyrite and other sulphides and leaving, for example, native gold/electrum and zircon. Table 8.1 lists the heavy mineral fraction weights for this processing. Note that the -60+150HN fraction has been split by magnetic susceptibility into a -60+150HNP and a -60+150HNN fraction. Table 8.2 lists the sample numbers and the number of gold grains picked in each sample. Within these 35 samples, 30 gold grains were recovered from 15 samples; 20 samples contained no gold grains in the -60+150HNN fraction.

In 2017, of the 16 samples collected in 2016, the eight samples with >10 µg gold were further processed and two fractions (different from the fraction produced in 2018) were picked for gold grains. Five gold grains were recovered from four samples. These results are also shown on Figure 8.1.

Sample 886PL001 is a placer gold sample collected from a vertical section of overburden on the McKeown Placer. About 5 large pails of material were panned using a gold pan. Sample 886PL002 is from a placer property located on Rose Gulch, a tributary of the Cariboo River, north of Likely. Sample 886HR001 is a lode gold sample collected from a quartz vein on SMG's Property. A grab sample of mineralized quartz vein material was crushed and the liberated gold grains were isolated by panning. To determine gold grain morphology, the individual gold grains

were placed on carbon tape on a stub and examined in a scanning electron microscope (SEM) using a back scattered electron (BSE) detector. The nature of each grain is illustrated by the micrographs in Appendix IV, showing size, shape and morphology. Table 8.3 also reports the size, shape, morphology and estimated distance from source. To carry out the geochemical analysis, the gold grains were removed from the stubs and mounted in resin blocks according to their three characteristic sizes prior to polishing. The grains were polished perpendicular to their long (or medium) axis of the grain, thus exposing their medium (or long) and short axes. The exposed surfaces were polished to 0.25 µm whilst ensuring great cleanliness. This was followed by coating each mount to ~200 Å of carbon. Photos of the polished sections are in Appendix V.

The gold grains were analysed for Au, Ag, Cu, Fe, Hg, S and As using a Cameca SX5 X-ray electron probe microanalyser (EPMA). Analytical conditions were 20 keV accelerating voltage, 100 nA beam current and 10 µm spot size. With trace analysis (for Cu, Fe, Hg, S and As) a higher beam current would be useful, but due consideration was made for any heating of the smaller gold grains. The X-ray lines used were AuMα and AgLα for the major and CuKα, FeKα, HgMβ, SKα and AsLα for the trace analytes. For all trace analytes larger (x3) crystals were used to optimise collection signal-to-noise. Careful assessment was made for background positioning to avoid interferences. Typical detection limits (as derived from the Cameca algorithm) are:

- Cu 115 ppm
- Fe 250 ppm
- Hg 400 ppm
- S 50 ppm
- As 80 ppm
- Au 850 ppm
- Ag 500 ppm.

The standards used were pure Cu, pure Fe, HgS (cinnabar), CAsS (cobaltite), pure Au and ~20% Ag(Au) alloy. During runs the Au and Au-Au standards were monitored, together with secondary trace standards, for analytical consistency.

Analyses were made on at least three defect free regions of each grain away from the 'rim'. After rejecting anomalous analyses, the averaged analysis for each grain run are presented in Table 8.3. It was found that the analysis represent good gross homogeneity with the cores (inner regions) of all the grains.

### 8.3 Results

The McKeown placer west of the SMG deposit also appears to be pre-glacial in age. The results show that gold grains from this placer have a high gold content (96% and 97%), with only very minor silver.

The gold grains from the Cariboo River placer contain 79% and 84% gold, with one grain containing 0.05% copper. The grains from these two placers show much more abrasion, with

about one km of travel distance estimated – significantly more than grains from the creek sediments.

In contrast, the gold grains from a quartz vein within the SMG mineral resource are fresh and non-abraded. These grains contain 80% and 81% gold, the rest being predominately silver.

Table 8.3 shows the analytical values for probed gold grains from heavy mineral samples from stream sediments. Sixty percent of these grains have values between 70% and 85% gold. Gold values range from 41% to 91%. Figure 8.1 also shows gold grain values for four previously reported samples. The grain gold values and morphology can vary significantly between gold grains collected from one stream sediment sample. For example, 886HM020 has four grains, with values of 91%, 84%, 74% and 58% gold. Their morphology also varies.

Much of the trace element analysis shows values commonly were below or near detection limits. The three highest mercury values (0.38% to 0.43%) occur on two creeks north of Spanish Lake.

## **9.0 DISCUSSION AND CONCLUSIONS**

Although the majority of gold grains range from 70% to 85%, there are significant number outside of this range. Morphology can also vary. This indicates that the gold may have different sources and/or history. It is not known if some of the gold has had significant till transport, or if it is more local from bedrock and then creek transport.

Figure 8.3 also shows gold values (reported as  $\mu\text{g}$  gold) from the -150HN fraction from stream sediments that were previously reported; for example, 40, 50 and 73  $\mu\text{g}$  gold.

Some samples contain highly anomalous values in the -150HN, but do not contain gold grains. This is not totally unexpected as the main host of the gold mineralization is  $<30\ \mu\text{m}$  auriferous pyrite within black graphitic phyllitic argillite. Less common gold-bearing quartz veins occur within more competent siltstones, greywackes and tuffs.

The area north and east of the SMG deposit was covered in the geochemical surveys, while the areas to the west and south were not. Figure 8.1 notes drainage areas N1, N2, S1, S2 and S3 (17 samples), which have strongly anomalous gold in the -150HN fraction. Eleven of the samples contain gold grains, and 16 samples contain strongly anomalous gold ( $>20\ \mu\text{g}$  gold) in the -150HN fraction.

The trace element analysis did not prove very useful in interpreting the gold geochemistry.


All these samples are within about one km of the SMG resource. The Phoenix Zone, which contains a similar style of mineralization as the SMG deposit, is about two km west of the

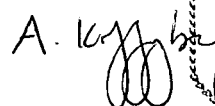
deposit. It may be that the above mentioned gold in creeks to the north and east reflects a low grade halo around the deposit or perhaps hidden and more significant mineralization. Perhaps the gold reflects hidden placer gold shed from the deposit. The recent glacial direction was generally to the northwest, so the source cannot be glacially dispersed from the deposit.

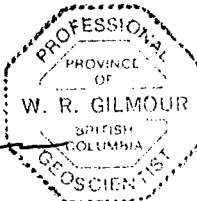
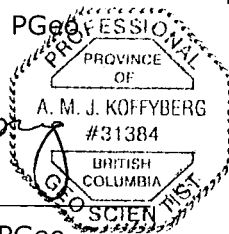
It is not likely that the source of the anomalous values east of the SMG deposit is placer gold as most of this steep, north facing slope comprises a thin organic soil on top of broken argillaceous sediments weathering from bedrock. Also, the gold grain morphology is not as well worn, as is the morphology from the two known placer deposits.

There are also anomalous gold drainages sourced from Slocan Group rocks to the north of Spanish Lake. This can indicate that both Nicola and Slocan Group sedimentary rocks are enriched in gold in this region.

Respectfully submitted,

  
W.R. Gilmour, PGeo

  
A. Koffyberg, PGeo

**Discovery Consultants**

April 4, 2019

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## 11.0 STATEMENT OF COSTS

### 1. Professional Services

W.R. Gilmour, PGeo	(Sept 2018-March 2019)		
- program planning, report writing			
21.50 hrs @	\$100 /hr	\$2,150.00	
A. Koffyberg, PGeo	(Nov 2018-March 2019)		
- report writing			
29.00 hrs @	\$100 /hr	2,900.00	
		-----	\$5,050.00

### 2. Personnel

Office			
Drafting	\$430.00		
Secretarial	345.00		
	-----	775.00	
		-----	775.00

### 3. Expenses

*Note: HM samples were collected on July 6-16; Aug 28-Sept 2, 2017; see AR 37546)*

Analysis - **CF Mineral Research Ltd**

*Analysis took place from October 2018 to March 2019)*

-picking gold grains from heavy mineral sample fractions

36 samples @\$255.04 /sample 9,181.38

-microprobe - trace element analysis

- micrographs of gold grains

36 samples @\$123.83 /sample 4,457.88

Freight 15.00

----- 13,654.26

Office 17.12

Maps & Publications 18.00

----- 13,689.38

**Exploration Expenditure:** \$19,514.38

1,951.44

### 4. Corporate Management Fee (10%)

**Total Expenditure:** \$21,465.82




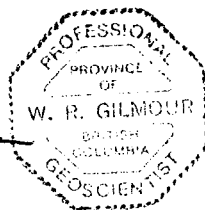
## **12.0 STATEMENTS OF QUALIFICATIONS**

**I, William Gilmour, of Coldstream, British Columbia, do hereby certify that:**

- 1) I am a Geologist with Discovery Consultants, with a business address of 2916, 29<sup>th</sup> Street, Vernon, BC, V1T 5A6.
- 2) I graduated with a Bachelor of Science in Geology from the University of British Columbia in 1970.
- 3) I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (membership #19743).
- 4) I have been practicing my profession since graduation from university. I have over 45 years of experience in mineral exploration for a variety of base and precious metals. My working experience includes grassroots and reconnaissance exploration, project evaluation, geological mapping, planning and execution of drill programs, and project reporting.
- 5) On the Spanish Mountain Gold Project, I have monitored the analytical results, including quality control and quality assurance analyses, for the 2012, 2013, 2014 and 2018 drill programs, and I have designed, monitored and interpreted the geochemical program on the placer titles that is the subject of this Report.
- 6) I authored/co-authored 2017 and 2018 assessment reports on the Placer Property.
- 7) I am independent of Spanish Mountain Gold Ltd.

Dated this 4th day of April, 2019

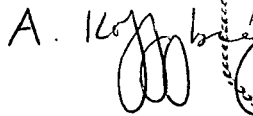
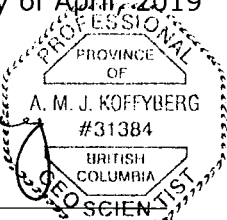
  
\_\_\_\_\_  
William Gilmour, PGeo  
Discovery Consultants



**I, Agnes Koffyberg, a geologist of Discovery Consultants of Vernon, British Columbia, do hereby certify that:**

- 1) I am a Geologist with Discovery Consultants, with a business address of 2916, 29<sup>th</sup> Street, Vernon, BC, V1T 5A6.
- 2) I am a graduate of Brock University of Ontario with a 1987 Bachelor of Science degree in combined Geological Sciences / Chemistry. In addition, I have obtained a M.Sc. degree in Geology at the University of Alberta in 1994.
- 3) I am a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia (membership #30384)
- 4) I have been practicing my profession for 20 years since graduation, with experience in mineral exploration in a variety of base and precious metals.
- 5) On the Spanish Mountain Gold Project, I have worked on the 2012, 2013, 2014 and 2018 drill programs, and have authored several assessment reports on the Property.
- 6) I am independent of Spanish Mountain Gold Ltd.

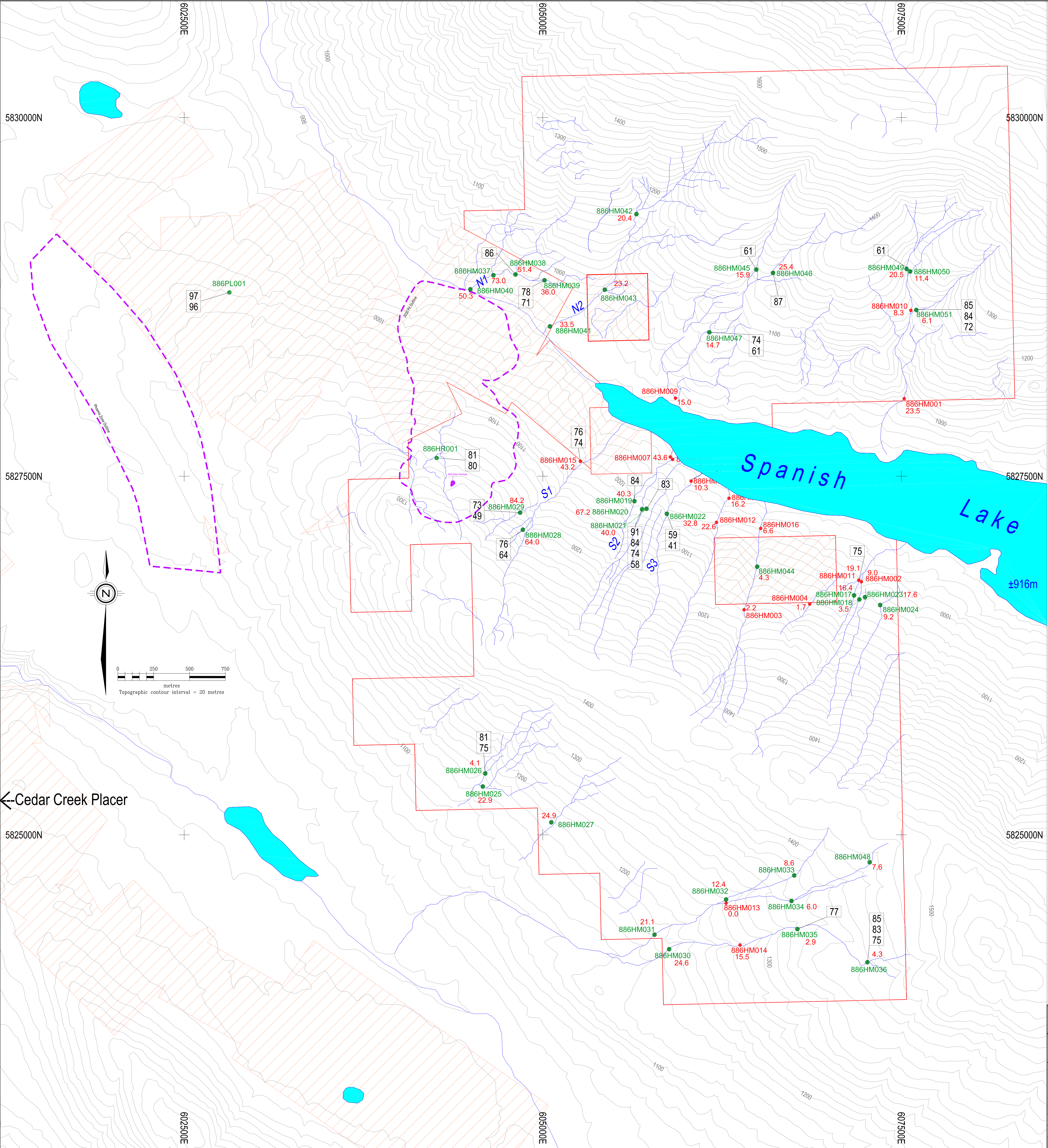
Dated this 4th day of April, 2019

A. Koffyberg  
  


Agnes Koffyberg, PGeo

Discovery Consultants





SMG Placer Title (MTO)

Placer Title / Lease (others)

2016 Heavy mineral sample sites (16)  
Values shown in micrograms gold found in -150 HN fraction, converted from Au ppm value  
Indicates Au grain found in the -60+150HNN or -16+60HNN fractions and shown as % Au within actual grain

2017 Heavy mineral sample sites (35)  
2018 Hard rock or Pan concentrate sites  
Values shown in micrograms gold found in -150 HN fraction, converted from Au ppm value  
Indicates Au grain found in the -60+150HNN fraction and shown as % Au within actual grain

DISCOVERY Consultants

Spanish Mountain Gold Ltd.

Placer Target  
2018 Geochemical Survey  
Gold Geochemistry

Location:	Spanish Lake	Mining Jurisdiction:	Cariboo
Datum:	NAD83	Map Ref.:	093A/11
Scale:	1:10,000	UTM:	10
Project:	886	Date:	Jan.31, 2019
Drawn By:	RM	Figure:	8.1



# **APPENDIX I**

**TABLE 8.1**

**Heavy Mineral Fraction Weights**

**Table 8.1: Heavy Mineral Fraction Weights**  
**C.F. Mineral Research Ltd**

									Magnetic Separation -->			
Sample	Datum	Zone	East	North	Elevation	CFM		-60+150H	-60+150HM	-60+150HP	-60+150HNP	-60+150HNN
Number			m	m	m	Batch	#	Submitted	Weight (g)	Weight (g)	Weight (g)	Weight (g)
								Weight (g)				
886HM017	NAD83	10	607170	5826669	1065	17-8256	1	25.99	0.66	20.47	0.77	4.09
886HM018	NAD83	10	607207	5826641	1066	17-8256	2	18.31	0.40	14.91	0.15	2.83
886HM019	NAD83	10	605639	5827326	1021	17-8256	3	21.83	0.64	17.93	0.08	3.15
886HM020	NAD83	10	605692	5827269	1019	17-8256	4	19.81	1.22	15.14	0.03	3.36
886HM021	NAD83	10	605723	5827273	1016	17-8256	5	15.38	0.35	11.80	0.10	3.08
886HM022	NAD83	10	605865	5827238	1007	17-8256	6	28.29	0.81	23.26	0.42	3.79
886HM023	NAD83	10	607246	5826657	1044	17-8256	7	22.65	0.38	18.39	0.03	3.83
886HM024	NAD83	10	607352	5826602	1057	17-8256	8	27.37	0.65	22.92	0.03	3.81
886HM025	NAD83	10	604582	5825337	1145	17-8256	9	23.40	0.57	14.20	0.02	8.56
886HM026	NAD83	10	604599	5825428	1188	17-8256	10	13.89	0.86	7.56	0.14	5.30
886HM027	NAD83	10	605059	5825087	1182	17-8256	11	22.53	0.44	9.90	0.10	12.01
886HM028	NAD83	10	604861	5827127	1231	17-8256	12	19.30	1.15	10.05	0.06	8.03
886HM029	NAD83	10	604842	5827246	1199	17-8256	13	24.41	0.66	10.48	0.01	13.19
886HM030	NAD83	10	605881	5824203	1165	17-8256	14	22.15	0.34	16.02	0.05	5.66
886HM031B	NAD83	10	605779	5824304	1173	17-8256	15	18.10	0.24	12.33	0.05	5.41
886HM032R1	NAD83	10	606278	5824549	1267	17-8256	16	25.62	0.26	16.16	0.05	9.09
886HM032R2	NAD83	10	606278	5824549	1267	17-8256	21	0.20	0.03	0.13	0.01	0.06
886HM033	NAD83	10	606753	5824717	1378	17-8256	17	13.41	0.64	9.79	0.03	2.86
886HM034	NAD83	10	606734	5824539	1349	17-8256	18	22.12	0.26	15.53	0.07	6.15
886HM035	NAD83	10	606775	5824343	1346	17-8256	19	15.01	0.22	9.91	0.03	4.79
886HM036	NAD83	10	607263	5824112	1405	17-8256	20	8.88	0.12	3.25	0.01	5.38
886HM037	NAD83	10	604656	5828901	941	17-8257	1	26.59	2.00	21.64	0.03	2.88
886HM038	NAD83	10	604810	5828906	957	17-8257	2	43.88	1.50	34.87	0.12	7.40
886HM039	NAD83	10	605012	5828866	964	17-8257	3	130.14	0.61	50.78	2.11	76.46
886HM040	NAD83	10	604495	5828803	916	17-8257	4	41.99	0.78	31.60	0.09	9.48
886HM041	NAD83	10	605050	5828544	926	17-8270	1	44.59	1.28	36.51	0.04	6.71
886HM042	NAD83	10	605653	5829327	1150	17-8270	2	32.39	1.50	26.43	0.09	4.37
886HM043	NAD83	10	605432	5828800	1016	17-8270	3	35.70	1.36	29.16	0.05	5.07
886HM044	NAD83	10	606495	5826869	1076	17-8270	4	12.21	0.31	9.69	0.03	2.16
886HM045	NAD83	10	606489	5828940	1167	17-8270	5	33.41	1.33	27.39	0.10	4.63

									Magnetic Separation -->			
Sample	Datum	Zone	East	North	Elevation	CFM		-60+150H	-60+150HM	-60+150HP	-60+150HNP	-60+150HNN
Number			m	m	m	Batch	#	Submitted	Weight (g)	Weight (g)	Weight (g)	Weight (g)
								Weight (g)				
886HM046	NAD83	10	606605	5828917	1166	17-8270	6	28.29	1.10	22.99	0.07	4.09
886HM047	NAD83	10	606161	5828503	1054	17-8270	7	24.75	0.78	19.46	0.42	4.11
886HM048	NAD83	10	607279	5824809	1436	17-8270	8	25.96	0.40	22.03	0.05	3.48
886HM049	NAD83	10	607536	5828945	1208	17-8270	9	47.98	1.12	39.59	0.01	7.26
886HM050	NAD83	10	607561	5828927	1209	17-8270	10	40.02	1.57	30.26	0.06	8.13
886HM051	NAD83	10	607604	5828659	1159	17-8270	11	23.71	0.51	19.68	0.09	3.44

886PL001	NAD83	10	602815	5828781		NA		Gold grains from the McKeown Placer, north of SMG				
886PL002	NAD83	10	591265	5833217		NA		Gold grains from a placer on Rose Gulch on the Cariboo River				
886HR001	NAD83	10	604260	5827627		NA		Gold from quartz vein on SMG Property				

**Date 2018.11.07**

**Discovery Consultants**

**W.R. Gilmour, PGeo**

**2019.03.21**

## **APPENDIX II**

### **TABLE 8.2**

#### **Gold Picking Results**

**Table 8.2 Gold Picking Results**  
**-60+150 HNN Fraction**  
**C.F. Mineral Research Ltd**

Sample Number	-20 mesh Sample Weight (kg)	CFM Batch	#	CFM BWO	CFM AWO	Fraction Weight (g)	Picked Weight (g)	Gold Grains
886HM017	9.18	17-8256	1	SA35	TA25	4.09	4.09	0
886HM018	12.76	17-8256	2	SA35	TA25	2.83	2.83	0
886HM019	9.26	17-8256	3	SA35	TA25	3.15	3.15	1
886HM020	9.96	17-8256	4	SA35	TA25	3.36	3.36	4
886HM021	11.78	17-8256	5	SA35	TA53	3.08	3.08	2
886HM022	11.88	17-8256	6	SA35	TA25	3.79	3.79	2
886HM023	10.64	17-8256	7	SA35	TA53	3.83	3.83	0
886HM024	12.54	17-8256	8	SA35	TA25	3.81	3.81	0
886HM025	10.62	17-8256	9	SA35	TA25	8.56	8.56	0
886HM026	12.00	17-8256	10	SA35	TA25	5.30	5.30	2
886HM027	11.70	17-8256	11	SA35	TA25	12.01	12.01	0
886HM028	9.44	17-8256	12	SA35	TA25	8.03	8.03	2
886HM029	10.56	17-8256	13	SA35	TA25	13.19	13.19	2
886HM030	9.96	17-8256	14	SA35	TA25	5.66	5.66	0
886HM031B	10.68	17-8256	15	SA35	TA25	5.41	5.41	0
886HM032R1	10.52	17-8256	16	SA35	TA25	9.09	9.09	0
886HM032R2	0	17-8256	21	SA35	TA25	0.06	0.06	0
886HM033	9.92	17-8256	17	SA35	TA25	2.86	2.86	0
886HM034	9.44	17-8256	18	SA35	TA25	6.15	6.15	0



Sample Number	-20 mesh Sample Weight (kg)	CFM Batch	#	CFM BWO	CFM AWO	Fraction Weight (g)	Picked Weight (g)	Gold Grains
886HM035	11.44	17-8256	19	SA35	TA25	4.79	4.79	1
886HM036	7.86	17-8256	20	SA35	TA25	5.38	5.38	3
886HM037	9.46	17-8257	1	SA35	TA25	2.88	2.88	0
886HM038	11.68	17-8257	2	SA35	TA25	7.40	7.40	1
886HM039	9.40	17-8257	3	SA35	TA25	76.46	76.46	2
886HM040	10.74	17-8257	4	SA35	TA25	9.48	9.48	0
886HM041	11.60	17-8270	1	SA41	TA25	6.71	6.71	0
886HM042	9.42	17-8270	2	SA41	TA25	4.37	4.37	0
886HM043	9.66	17-8270	3	SA41	TA25	5.07	5.07	0
886HM044	9.92	17-8270	4	SA41	TA25	2.16	2.16	0
886HM045	10.90	17-8270	5	SA41	TA25	4.63	4.63	1
886HM046	9.84	17-8270	6	SA41	TA25	4.09	4.09	1
886HM047	11.24	17-8270	7	SA41	TA25	4.11	4.11	2
886HM048	9.80	17-8270	8	SA41	TA25	3.48	3.48	0
886HM049	10.78	17-8270	9	SA41	TA25	7.26	7.26	1
886HM050	10.52	17-8270	10	SA41	TA25	8.13	8.13	3
886HM051	9.22	17-8270	11	SA41	TA25	3.44	3.44	0
Date 2018.11.07							Total	30

**Discovery Consultants**  
**W.R. Gilmour, PGeo**  
**2019.03.21**

## **APPENDIX III**

### **TABLE 8.3**

**Gold Grain Morphology and  
Electron Microprobe Analysis**

Table 8.3  
Electron Microprobe Analysis  
C.F. Mineral Research Ltd

Sample Number	CFM Batch	Fraction	Morphology-->		Grain Size um	Grain Morph	Distance Travelled metres	BSE Micrograph #	Electron Probe Microanalyser Analysis-->										Total weight %	Gold Fineness	BSE Micrograph #
			Stub #	Grain #					Mount #	Grain #	Spot	Au weight %	Ag weight %	Cu weight %	Hg weight %	Fe weight %	S weight %	As weight %			
886HM019	17-8256	-60+150HNN	8256A	10-101	403x200	DEL	200	8256A/10-101	7392	10-101		84.22	16.00	0	0.04	0	0.012	0	100.27	840	7392/10-101
886HM020	17-8256	-60+150HNN	8256A	10-102	270x260	IRR	200	8256A/10-102	7392	10-102		91.39	9.37	0.04	0.09	0.02	0.011	0	100.92	907	7392/10-102
886HM020	17-8256	-60+150HNN	8256A	10-103	490x150	ABR	500	8256A/10-103	7392	10-103		84.35	16.04	0	0.03	0	0.013	0	100.42	840	7392/10-103
886HM020	17-8256	-60+150HNN	8256A	10-104	270x100	ABR	500	8256A/10-104	7391	10-101		73.84	26.41	0.01	0.05	0.01	0.019	0	100.32	737	7391/10-101
886HM020	17-8256	-60+150HNN	8256A	10-105	215x140	IRR	200	8256A/10-105	7391	10-102		57.72	41.65	0	0.12	0	0.038	0	99.51	581	7391/10-102
886HM021	17-8256	-60+150HNN	8256A	10-201	320x215	IRR	200	8256A/10-201	7391	10-103		83.29	17.25	0.01	0.04	0	0.012	0	100.59	828	7391/10-103
886HM021	17-8256	-60+150HNN	8256A	10-202	560x190	DEL	100-200	8256A/10-202	n/a												
886HM022	17-8256	-60+150HNN	8256A	10-203	430x215	IRR	200	8256A/10-203	7392	10-104		67.87	32.07	0	0.11	0	0.032	0	100.07	679	7392/10-104
886HM022	17-8256	-60+150HNN	8256A	10-204	280x205	IRR	500	8256A/10-204	7392	10-105	1	59.39	40.39	0	0.05	0.01	0.034	0	99.86	595	7392/10-105
886HM022	17-8256	-60+150HNN							7392	10-105	2	40.61	58.11	0	0.35	0	0.026	0	99.09	411	7392/10-105
886HM026	17-8256	-60+150HNN	8256A	10-205	570x250	DEL/IRR	200	8256A/10-205	7392	10-201		74.87	25.37	0	0.20	0	0.016	0	100.44	747	7392/10-201
886HM026	17-8256	-60+150HNN	8256A	10-206	245x180	IRR	200	8256A/10-206	7391	10-104		80.94	19.91	0	0.16	0.02	0.024	0	101.04	803	7391/10-104
886HM028	17-8256	-60+150HNN	8256A	10-301	275x150	DEL	100-200	8256A/10-301	7391	10-201		64.30	35.58	0	0.04	0.01	0.018	0	99.92	644	7391/10-201
886HM028	17-8256	-60+150HNN	8256A	10-302	215x150	IRR	500	8256A/10-302	7391	10-202		76.33	24.08	0	0.09	0.01	0.017	0	100.52	760	7391/10-202
886HM029	17-8256	-60+150HNN	8256A	10-303	270x120	IRR	500	8256A/10-303	7391	10-203		72.99	27.28	0	0.05	0	0.018	0	100.33	728	7391/10-203
886HM029	17-8256	-60+150HNN	8256A	10-304	175x105	IRR	200-500	8256A/10-304	7391	10-204		48.63	50.82	0	0.04	0	0.036	0	99.52	489	7391/10-204
886HM035	17-8256	-60+150HNN	8256A	10-305	285x135	ABR	200	8256A/10-305	7391	10-301		77.13	23.21	0.01	0.04	0	0.013	0	100.38	769	7391/10-301

Sample Number	CFM Batch	Fraction	Morphology-->			Grain Morph	Distance Travelled metres	BSE Micrograph #	Electron Probe Microanalyser Analysis-->							Cu weight %	Hg weight %	Fe weight %	S weight %	As weight %	Total weight %	Gold Fineness	BSE Micrograph #
			Stub #	Grain #	Grain Size um				Mount #	Grain #	Spot	Au weight %	Ag weight %										
886HM036	17-8256	-60+150HNN	8256A	10-401	215x165	ABR	200-500	8256A/10-401	7392	10-202		84.53	15.92	0.01	0.05	0	0.012	0	100.50	842	7392/10-202		
886HM036	17-8256	-60+150HNN	8256A	10-402	290x255	ABR	200	8256A/10-402	7392	10-203		74.86	24.96	0	0.27	0	0.015	0	100.11	750	7392/10-203		
886HM036	17-8256	-60+150HNN	8256A	10-403	320x270	ABR	200-500	8256A/10-403	7392	10-204		82.86	17.83	0.01	0.17	0	0.014	0	100.87	823	7392/10-204		
886HM038	17-8257	-60+150HNN	8257A	10-101	280x155	DEL	200	8257A/10-101	7391	10-401		85.51	15.41	0	0.01	0	0.011	0	100.95	847	7391/10-401		
886HM039	17-8257	-60+150HNN	8257A	10-102	330x165	IRR	200	8257A/10-102	7392	10-305		78.39	21.80	0	0.07	0	0.014	0	100.26	782	7392/10-305		
886HM039	17-8257	-60+150HNN	8257A	10-103	285x150	IRR	200	8257A/10-103	7391	10-402		70.92	29.24	0	0.03	0	0.014	0	100.20	708	7391/10-402		
886HM045	17-8270	-60+150HNN	8270A	10-101	463x175	IRR	500	8270A/10-101	7392	10-205		60.62	38.93	0	0.37	0.01	0.036	0	99.95	609	7392/10-205		
886HM046	17-8270	-60+150HNN	8270A	10-102	260x245	ABR	500	8270A/10-102	7392	10-301		87.23	13.63	0	0	0.01	0.011	0	100.87	865	7392/10-301		
886HM047	17-8270	-60+150HNN	8270A	10-103	200x160	DEL	200	8270A/10-103	7391	10-302		74.01	26.10	0	0.12	0.02	0.015	0	100.25	739	7391/10-302		
886HM047	17-8270	-60+150HNN	8270A	10-104	415x275	DEL/IRR	200	8270A/10-104	7392	10-302		61.18	38.25	0	0.38	0.01	0.026	0	99.83	615	7392/10-302		
886HM049	17-8270	-60+150HNN	8270A	10-201	200x185	ABR	500	8270A/10-201	7392	10-303		60.70	38.36	0	0.43	0.01	0.017	0	99.51	613	7392/10-303		
886HM050	17-8270	-60+150HNN	8270A	10-202	380x280	DEL	200	8270A/10-202	7392	10-304		84.57	15.77	0	0.08	0	0.011	0	100.43	843	7392/10-304		
886HM050	17-8270	-60+150HNN	8270A	10-203	485x155	DEL	100	8270A/10-203	7391	10-303		84.92	15.72	0.01	0.05	0	0.009	0	100.70	844	7391/10-303		
886HM050	17-8270	-60+150HNN	8270A	10-204	190x145	DEL	200	8270A/10-204	7391	10-304		71.65	28.46	0	0.02	0	0.021	0	100.14	716	7391/10-304		
886HR001	18-8561		8561A	10-301	1840x1340	DEL	0	8561A/10-301	7393	10-301		80.94	19.88	0.01	0.07	0	0.010	0	100.91	803	7393/10-301		
886HR001	18-8561		8561A	10-302	1060x820	IRR	0	8561A/10-302	7393	10-302		79.83	20.99	0.01	0.06	0	0.009	0	100.90	792	7393/10-302		
886PL001	18-8561		8561A	10-201	1630x980	IRR	1000	8561A/10-201	7393	10-201		96.64	4.97	0.05	0	0	0.010	0	101.65	951	7393/10-201		
886PL001	18-8561		8561A	10-202	990x895	IRR	800-1000	8561A/10-202	7393	10-202		96.07	5.40	0.02	0.01	0	0.011	0	101.50	947	7393/10-202		
886PL002	18-8561		8561A	10-101	1660x1690	IRR	1000	8561A/10-101	7393	10-101		84.29	16.79	0.02	0.01	0	0.009	0	101.10	834	7393/10-101		
886PL002	18-8561		8561A	10-102	4100x2500	IRR	1000	8561A/10-102	7393	10-102		79.04	21.69	0.01	0.01	0	0.009	0	100.75	785	7393/10-102		

Sample Number	CFM Batch	Fraction	Morphology-->					Electron Probe Microanalyser Analysis-->												
			Stub #	Grain #	Grain Size um	Grain Morph	Distance Travelled metres	BSE Micrograph #	Mount #	Grain #	Spot	Au weight %	Ag weight %	Cu weight %	Hg weight %	Fe weight %	S weight %	As weight %	Total weight %	Gold Fineness
ABR abraided DEL delicate IRR irregular																				

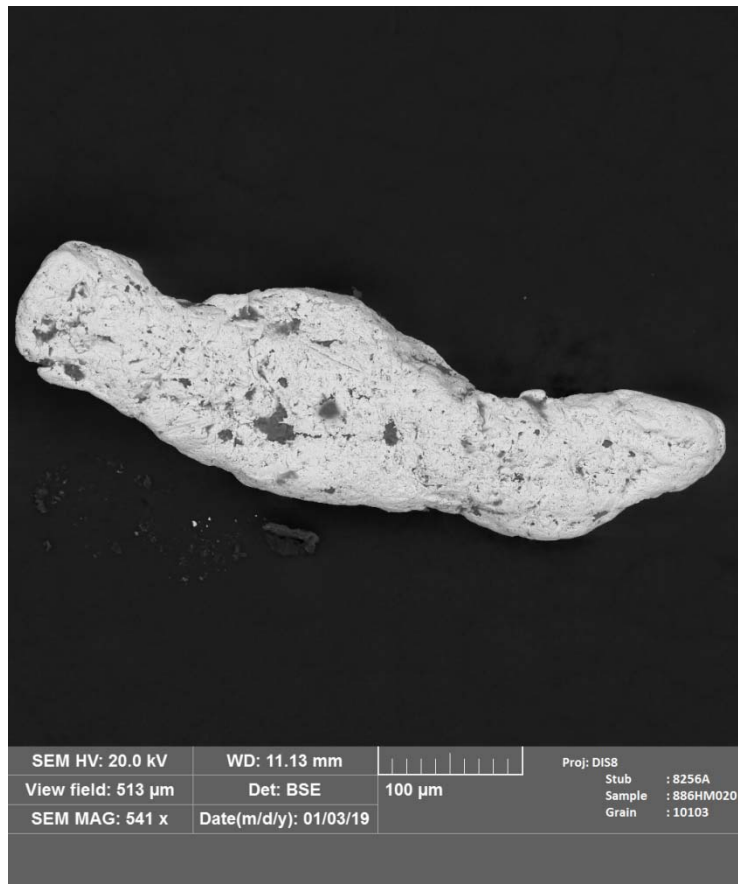
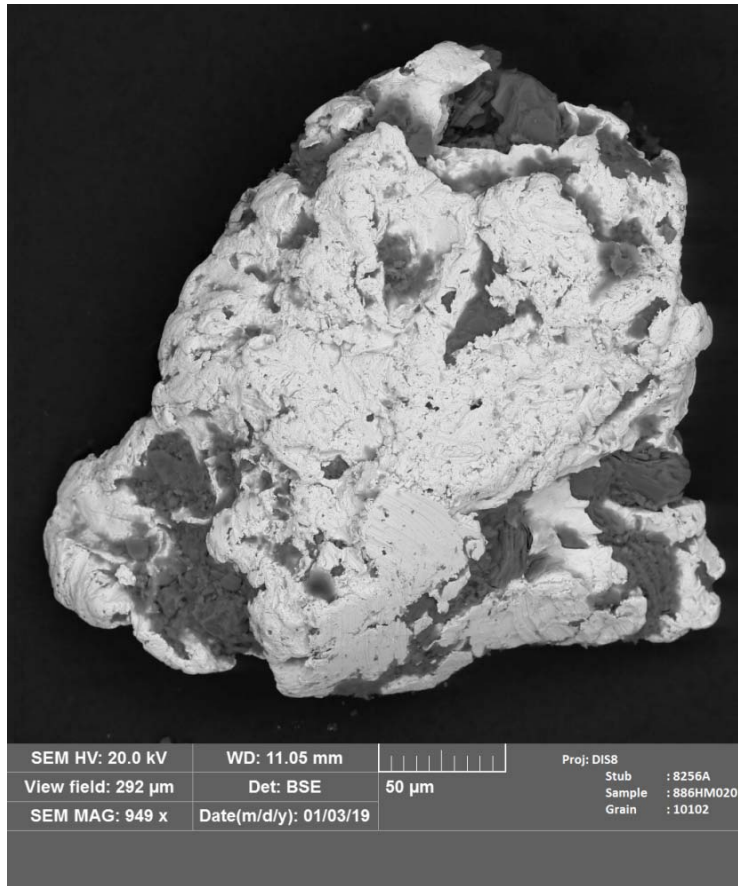
Date 2019.03.14

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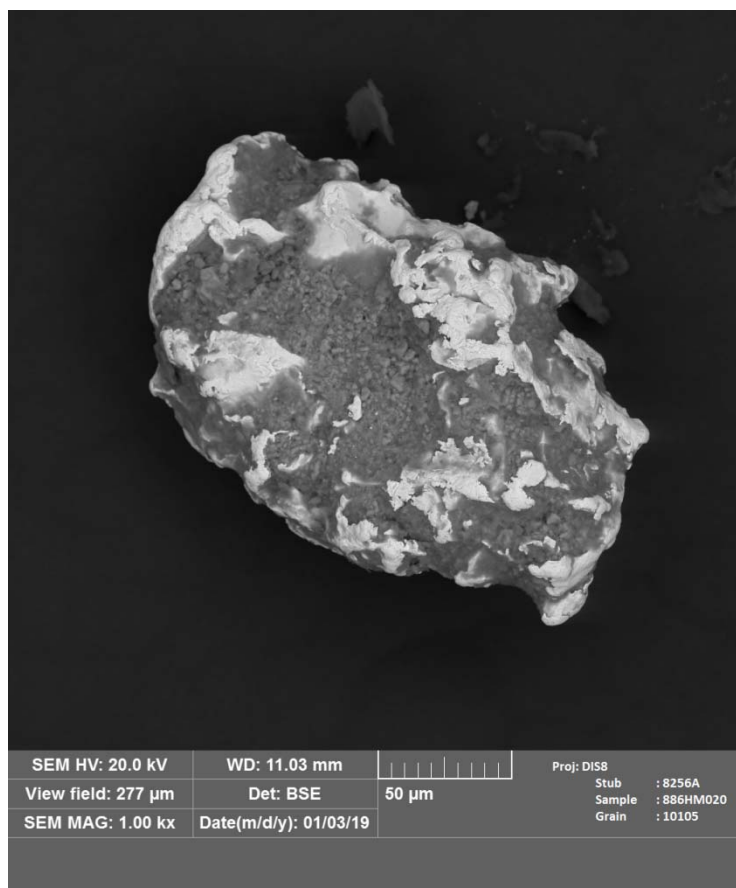
## **APPENDIX IV**

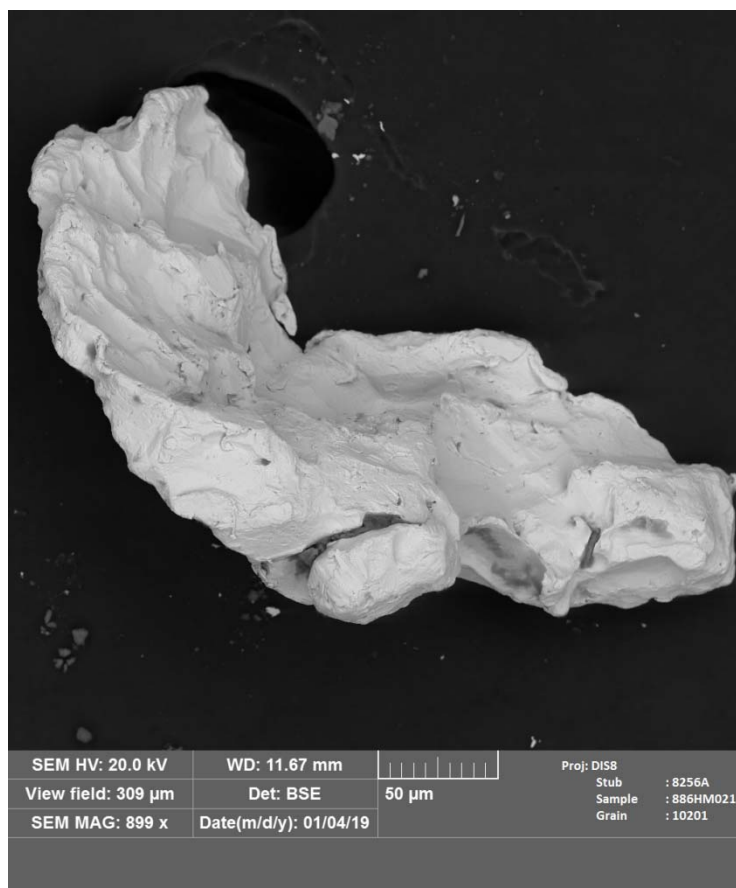
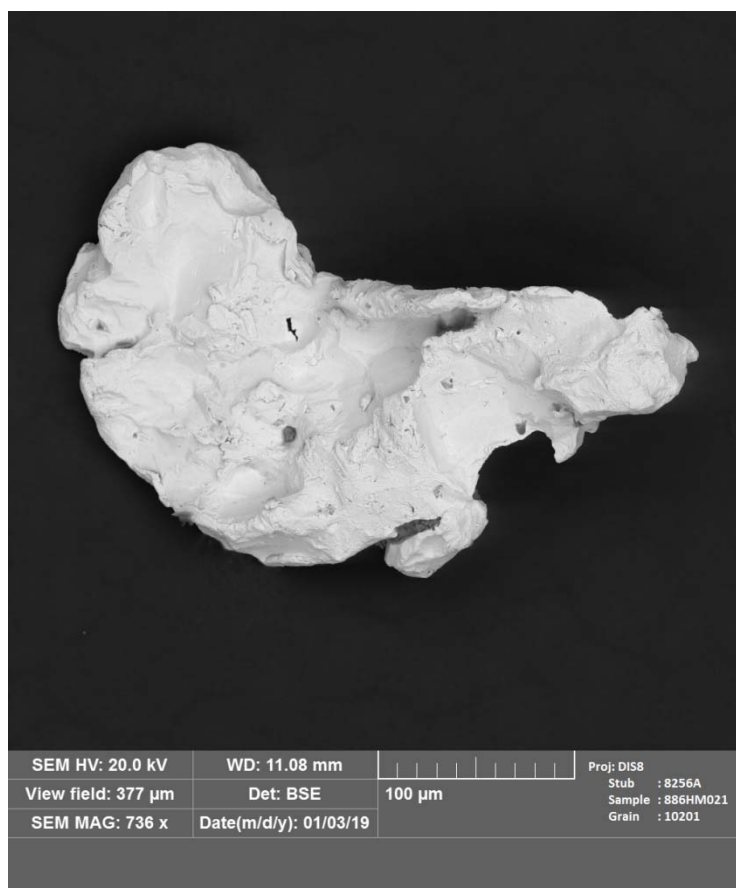
### **Micrographs of Gold Grains**

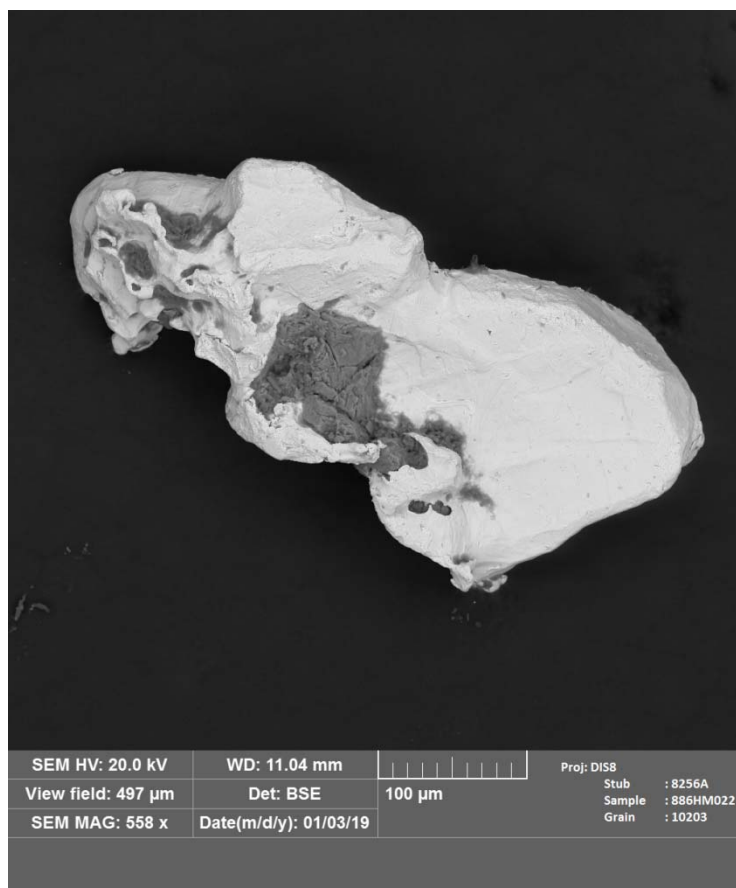
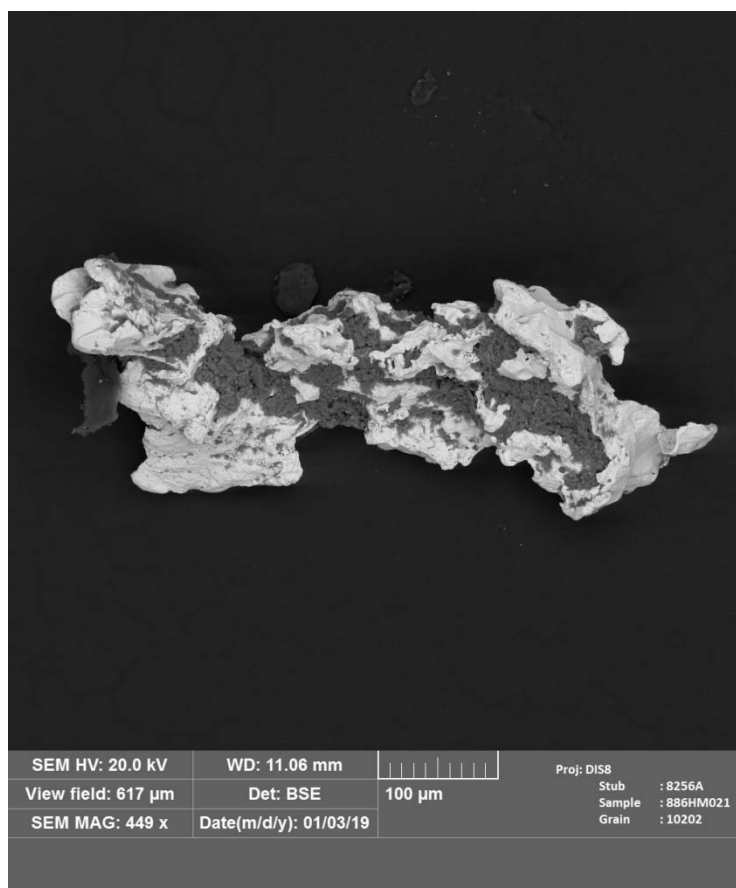




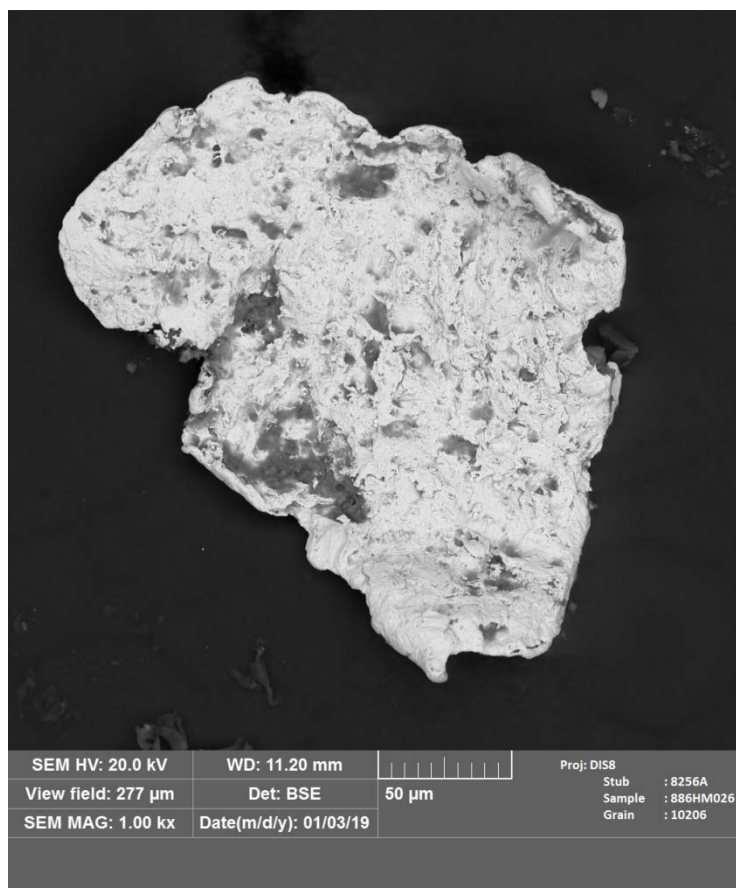
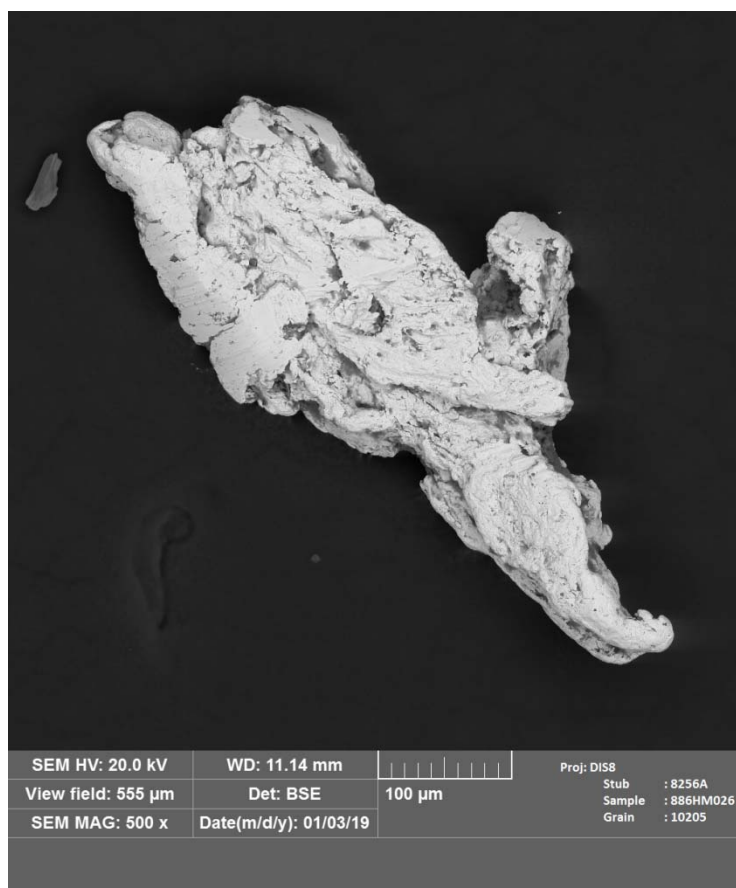


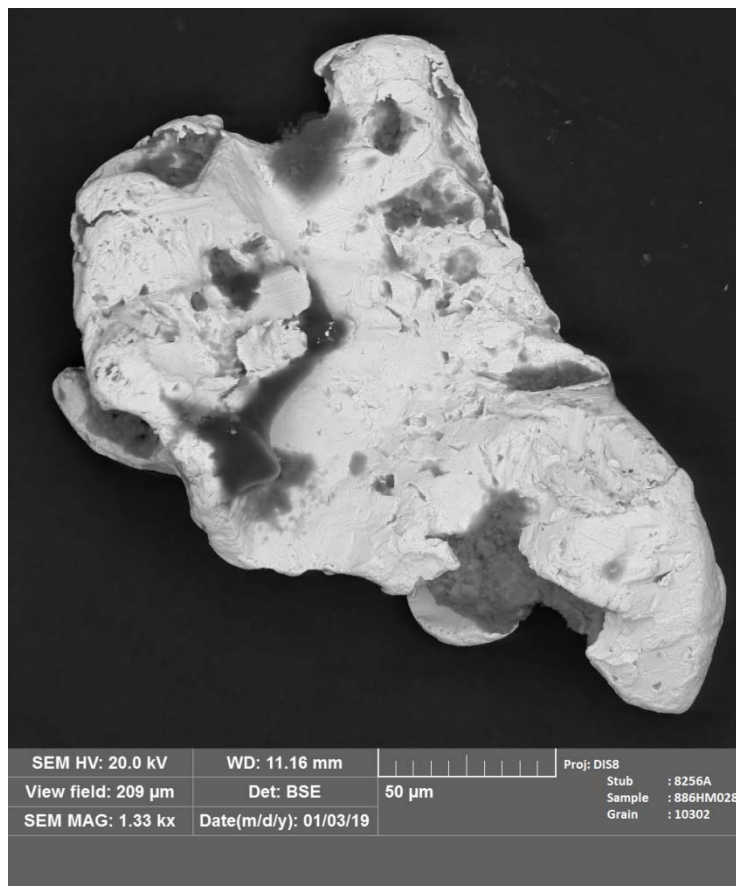
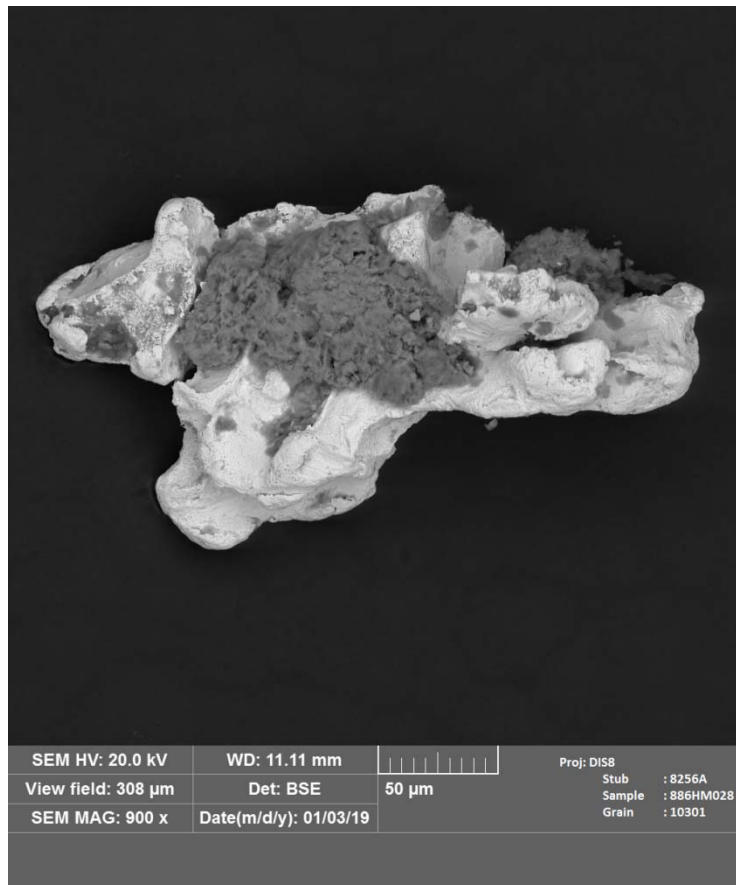




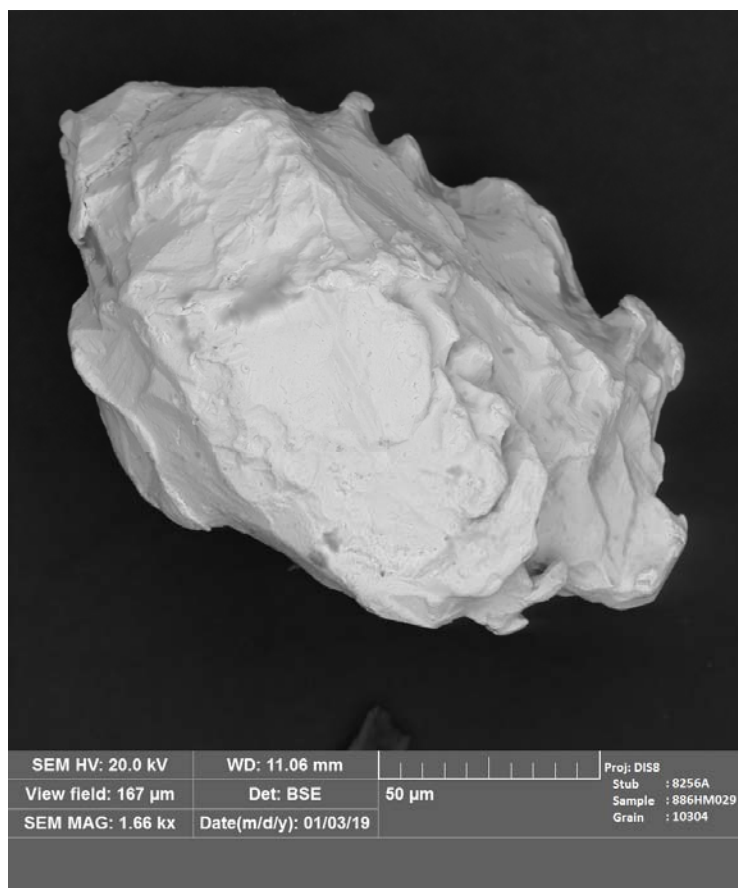
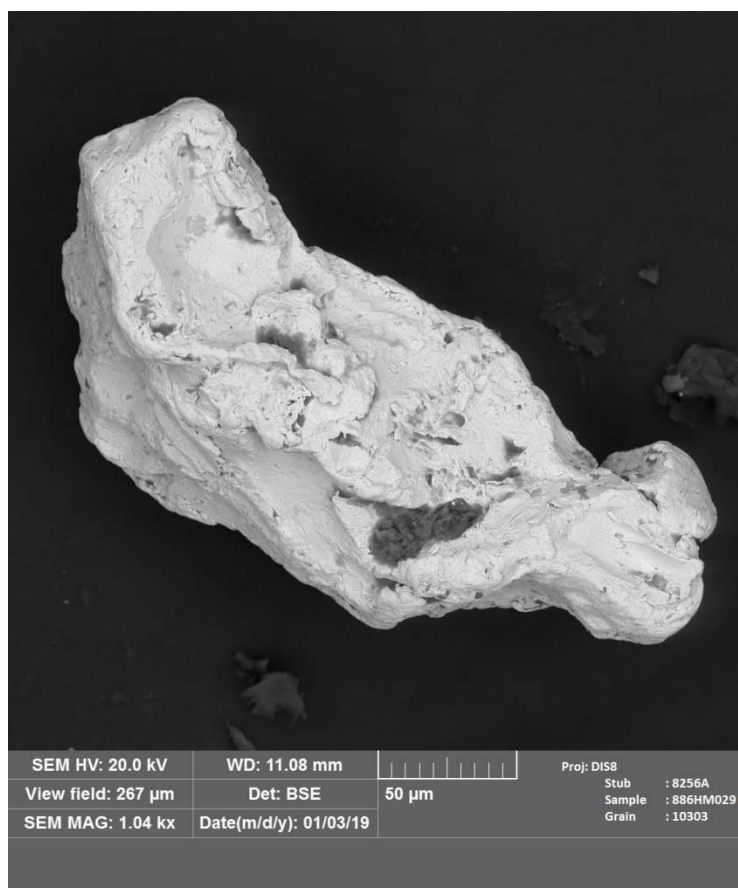


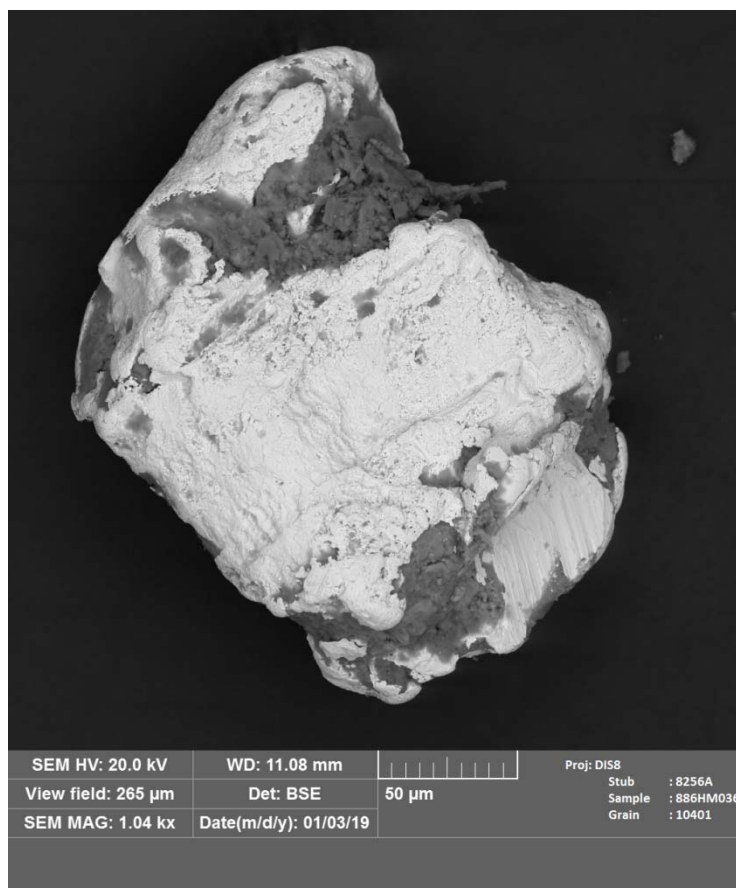


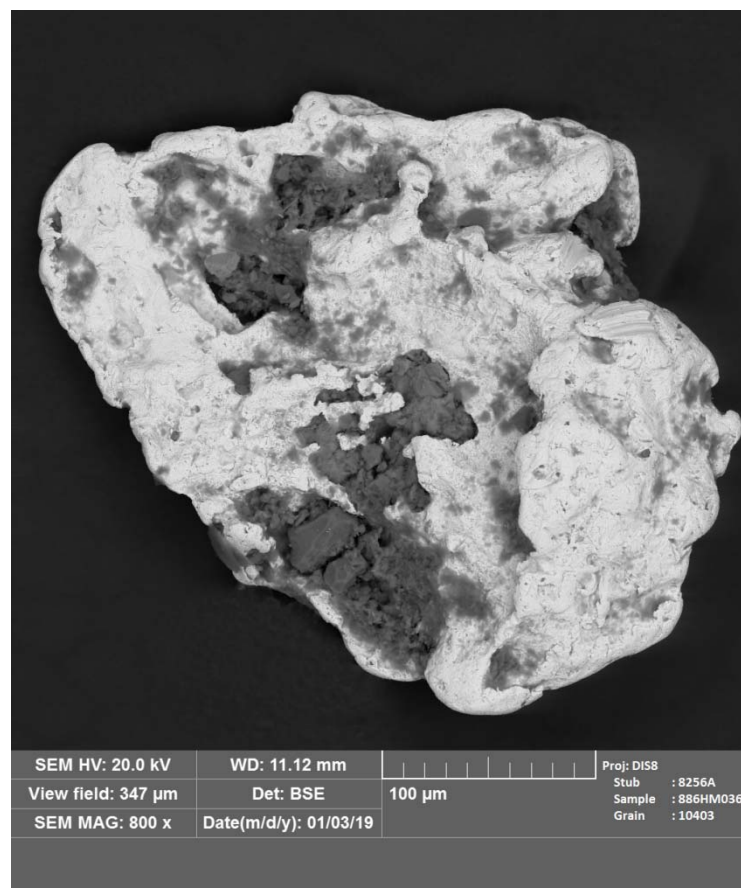
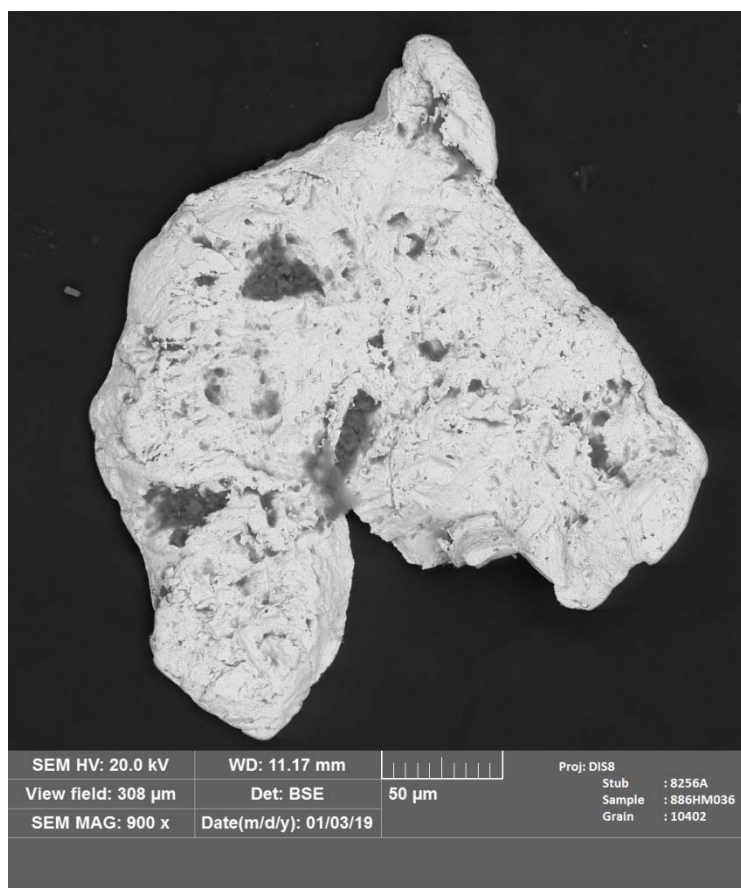


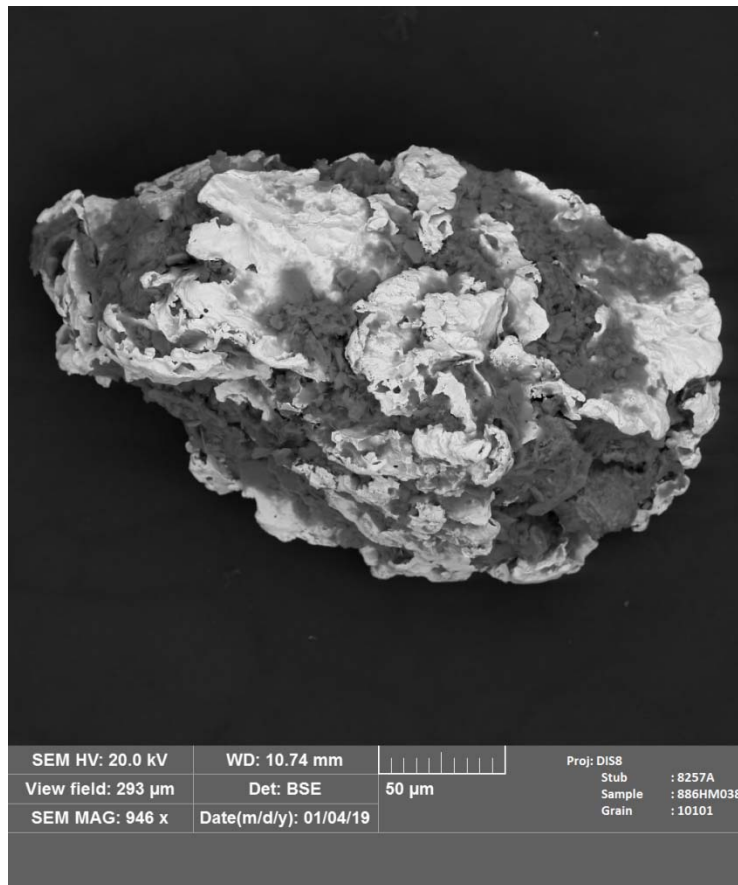


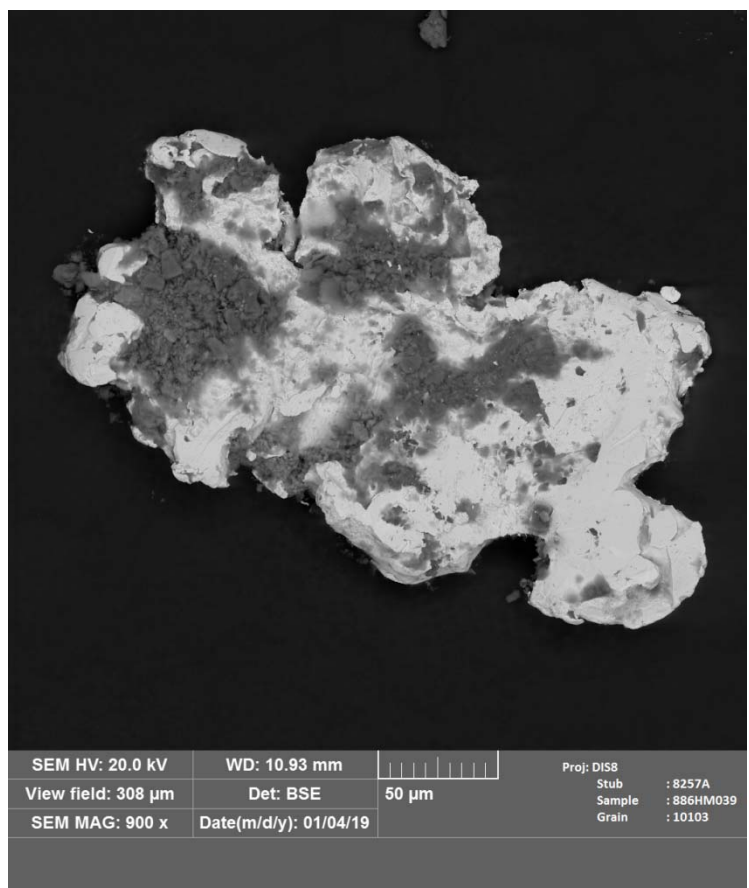
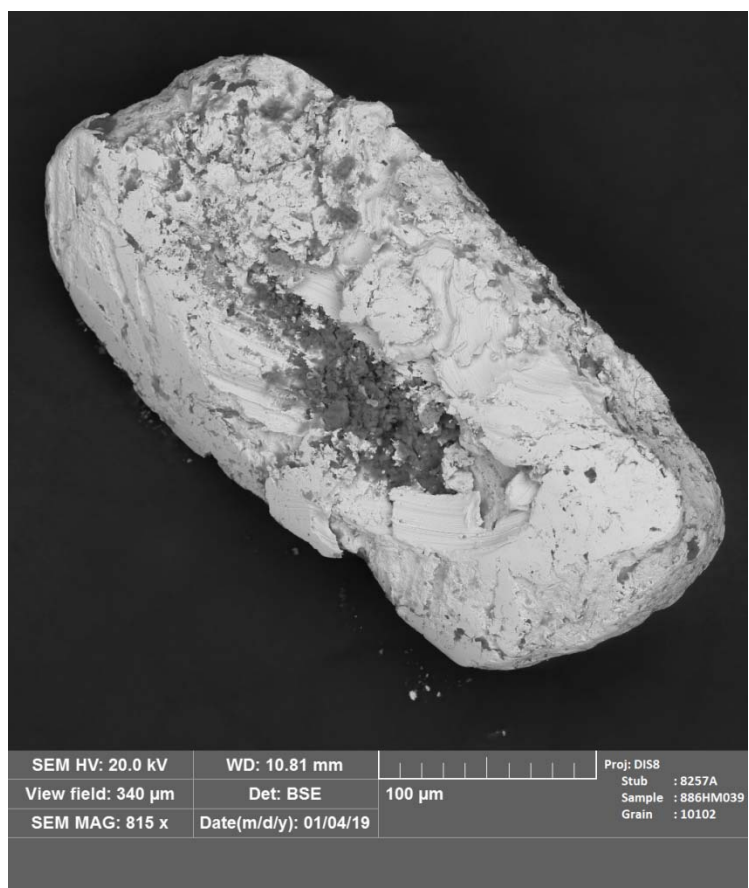




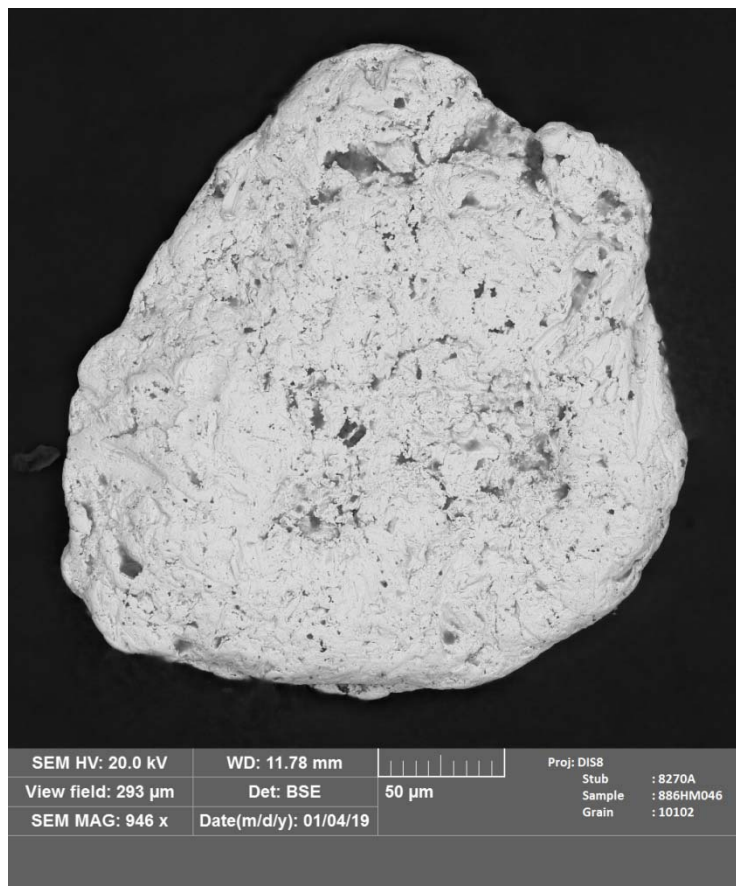
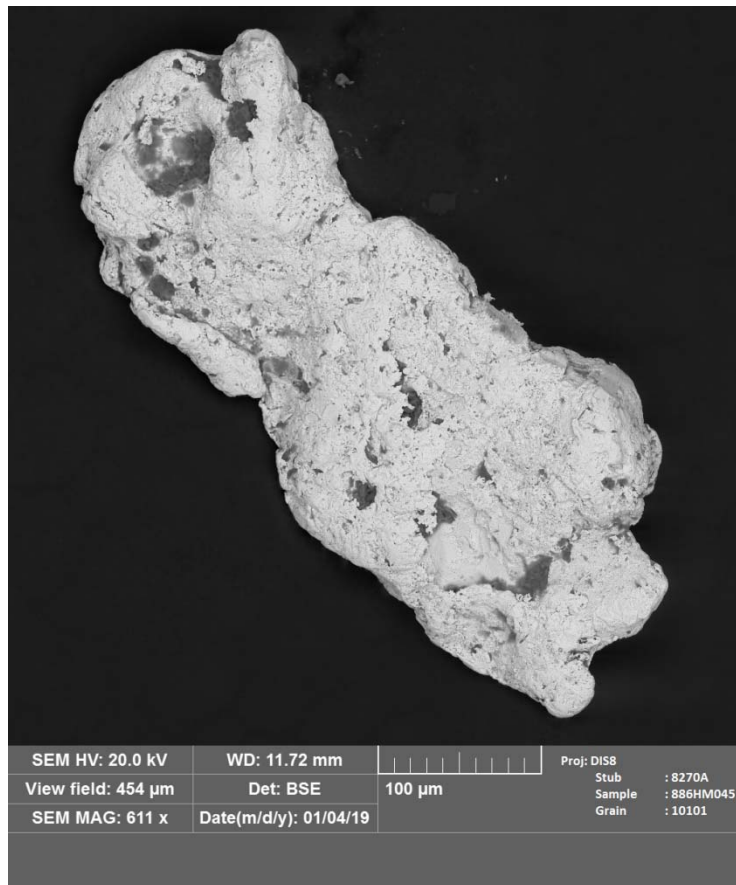


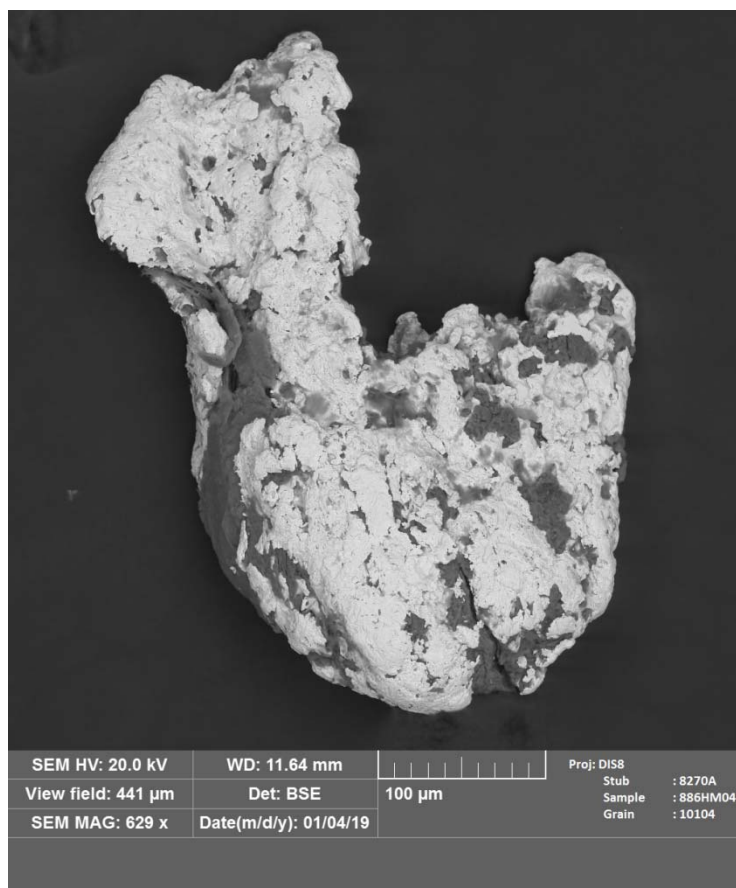
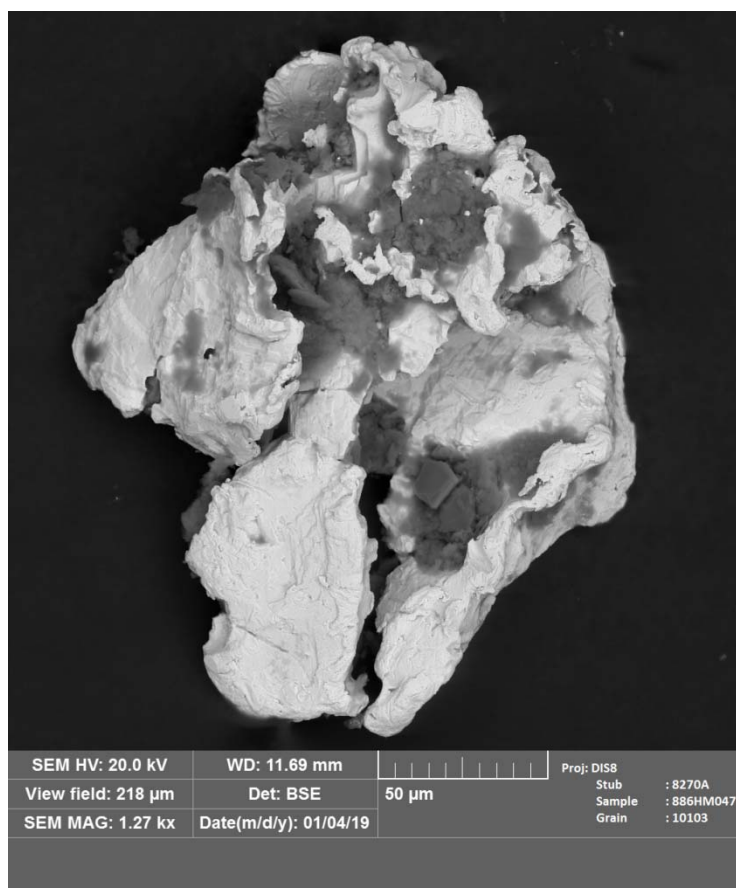


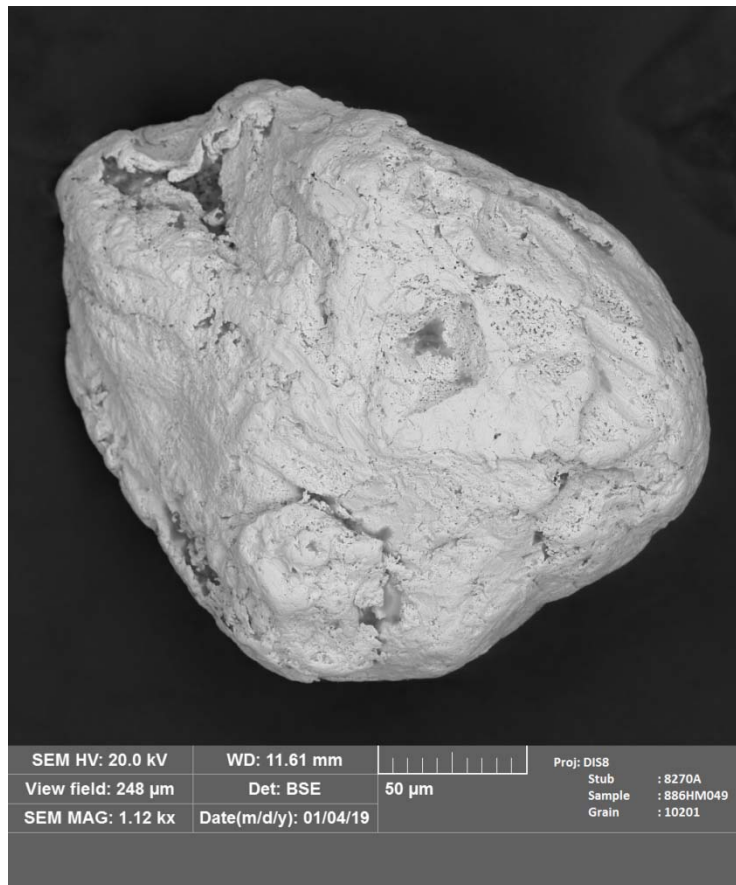




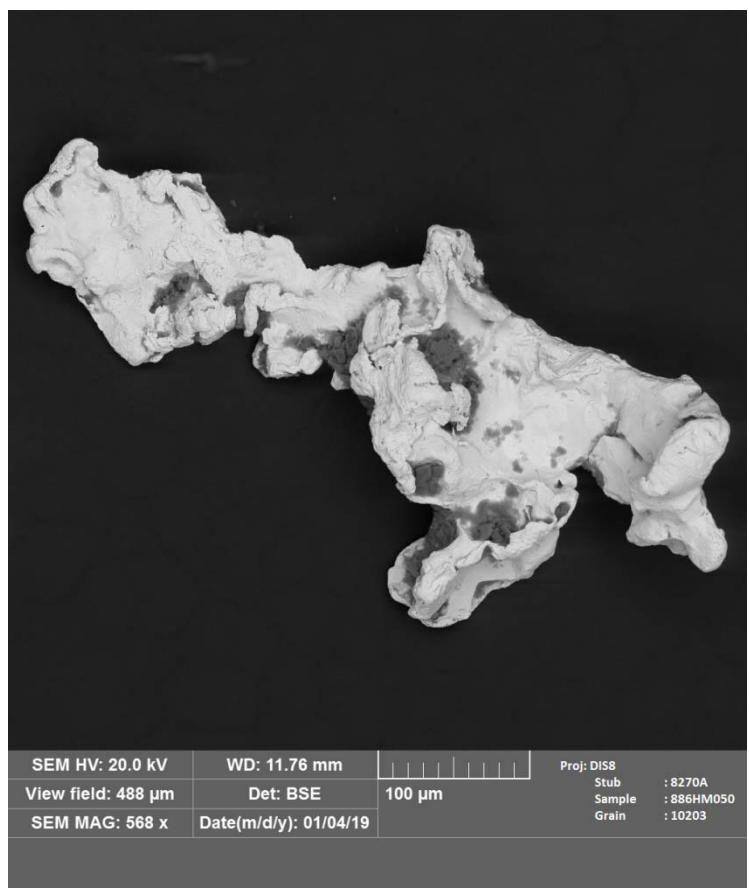
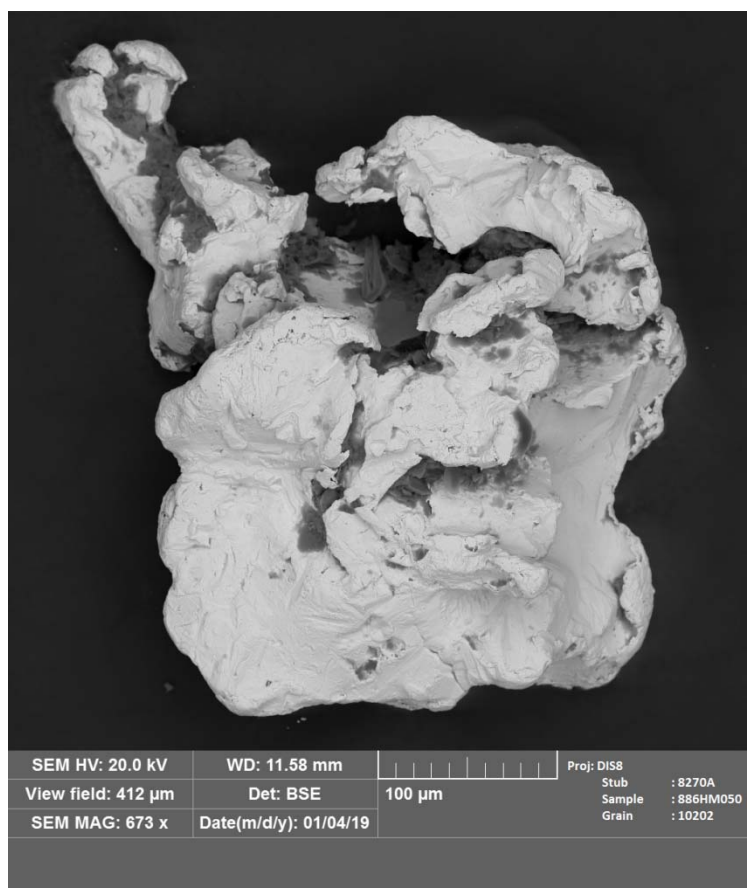


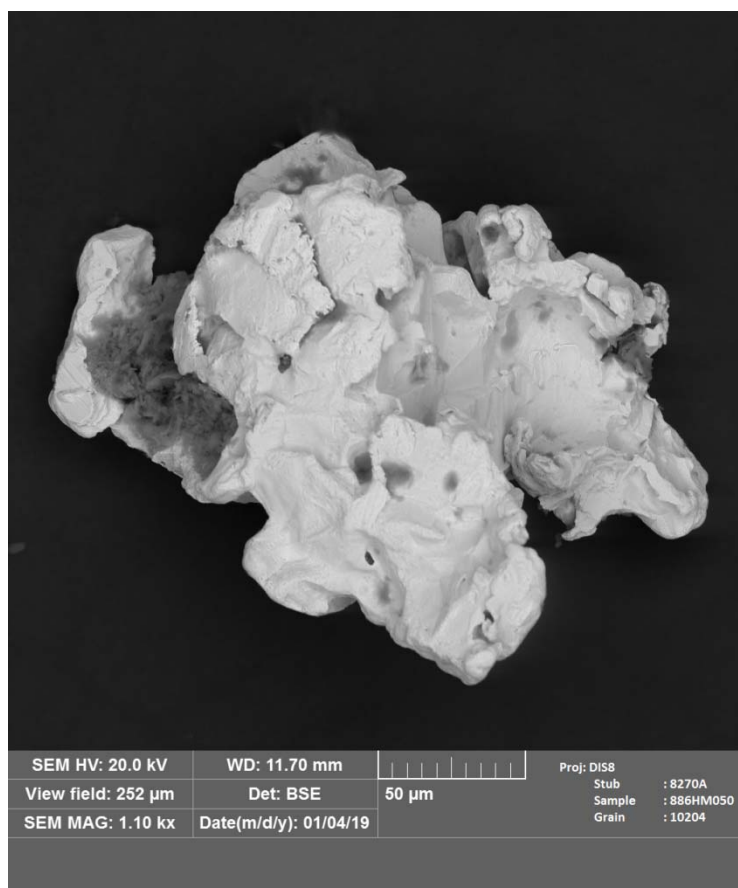


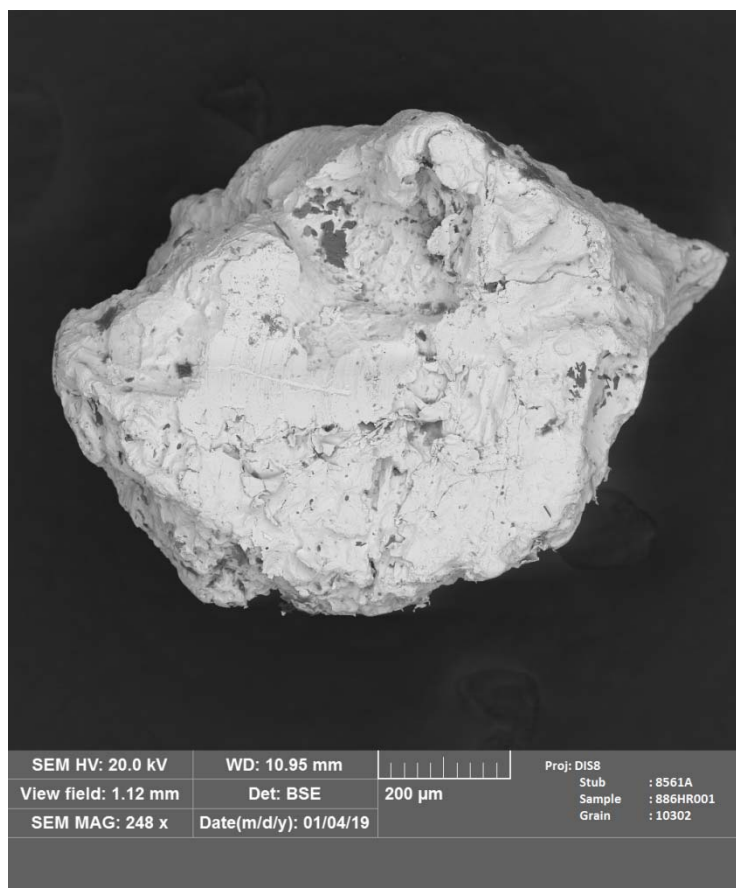
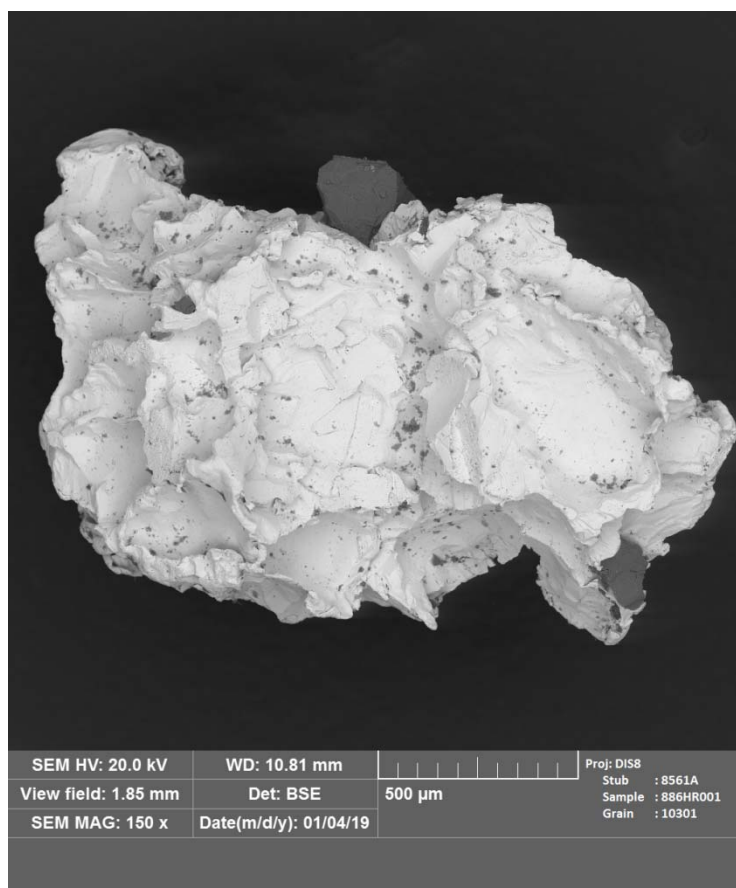


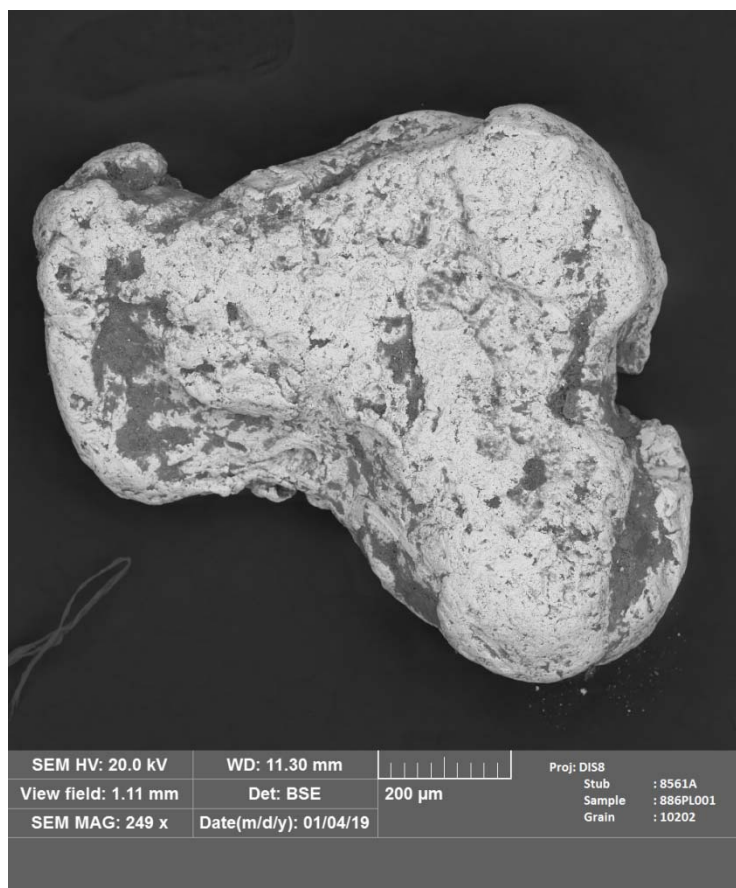
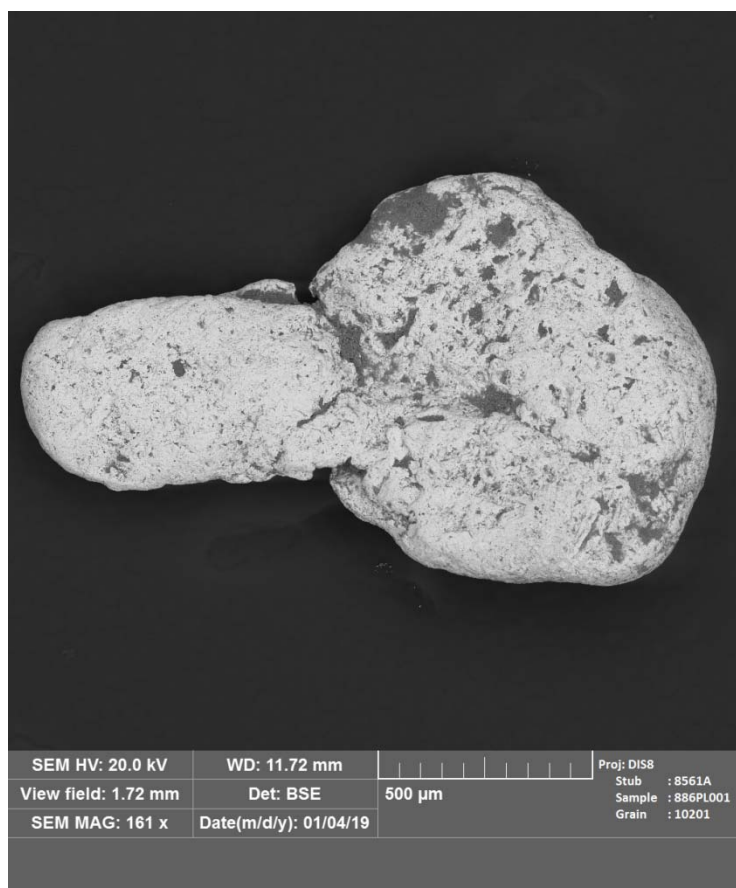


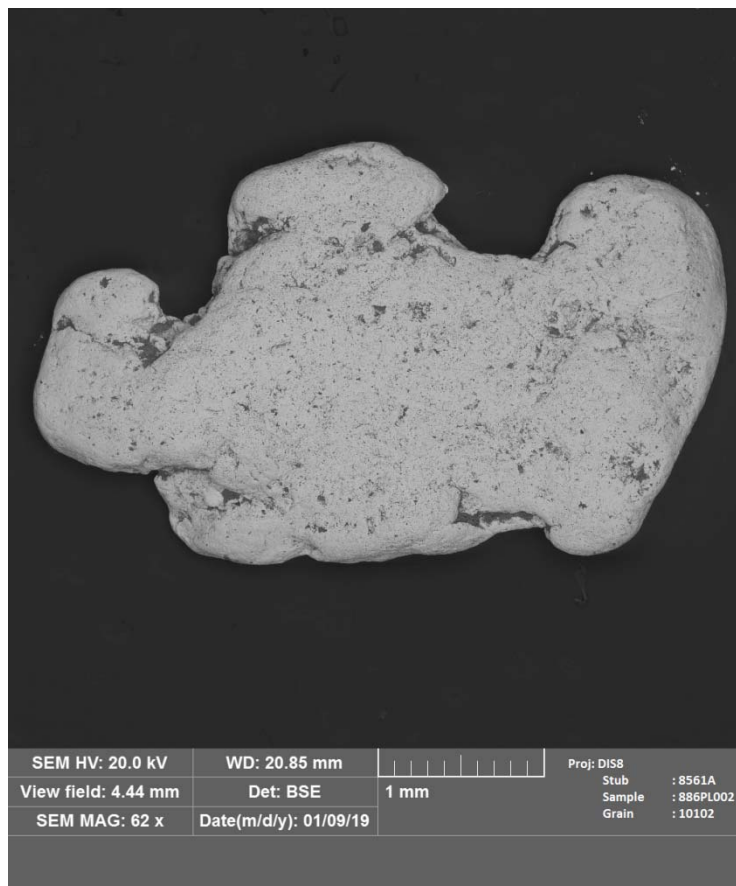
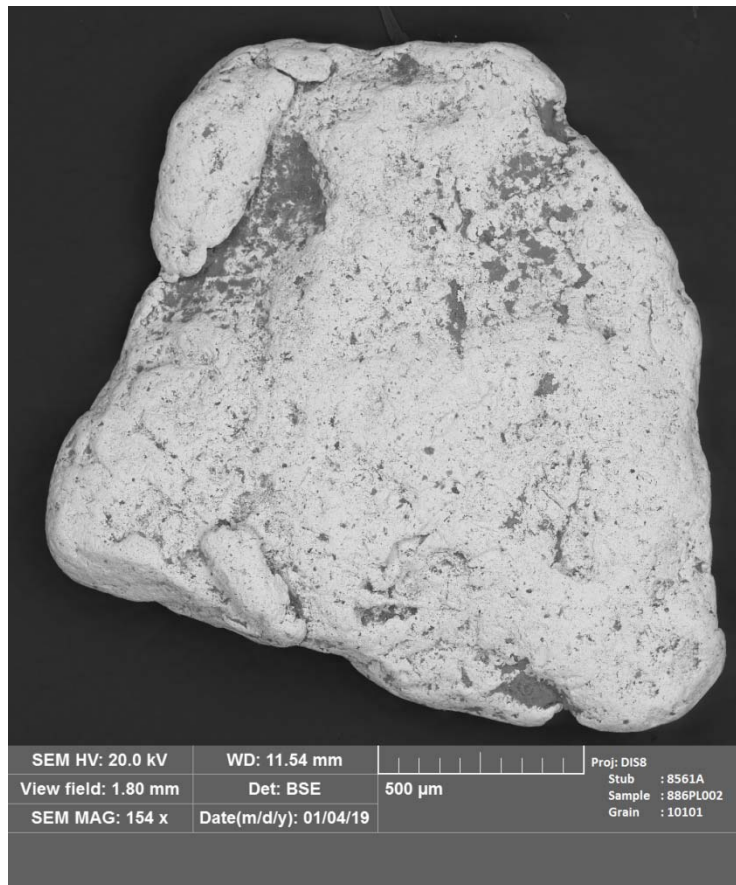


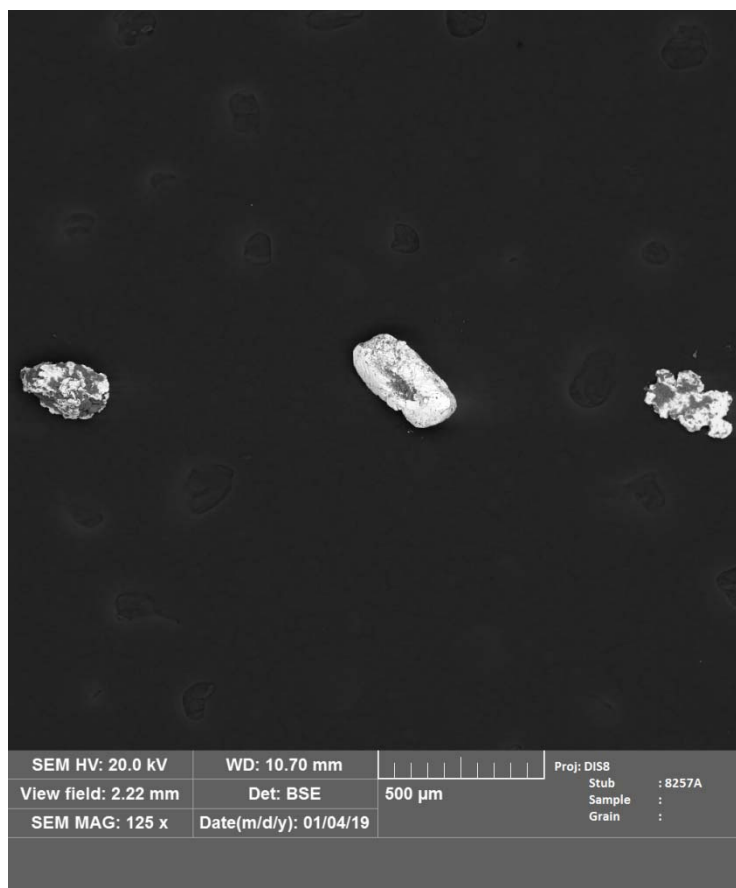
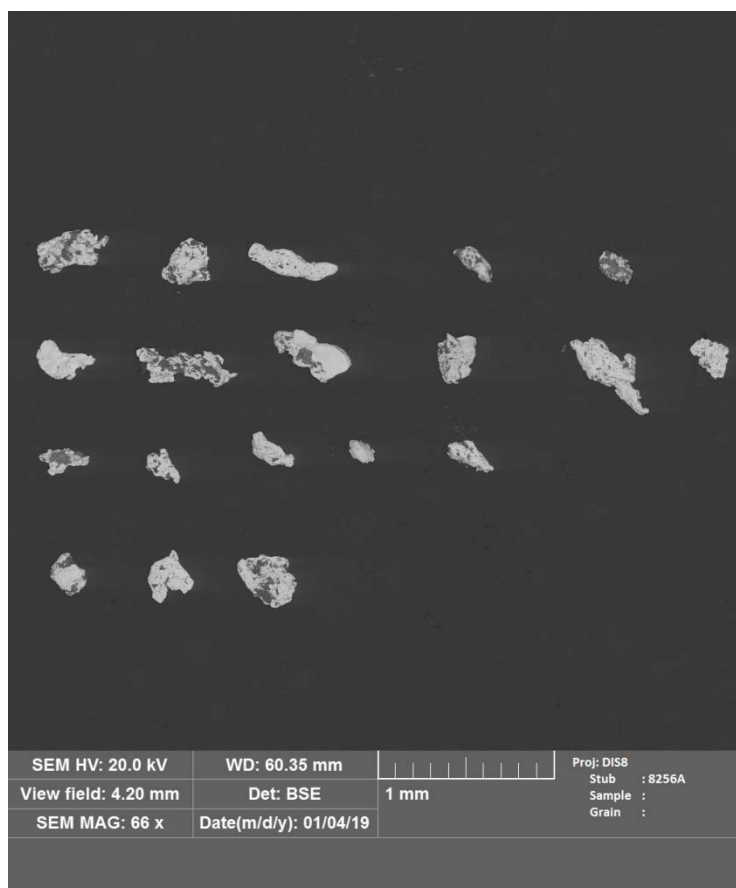




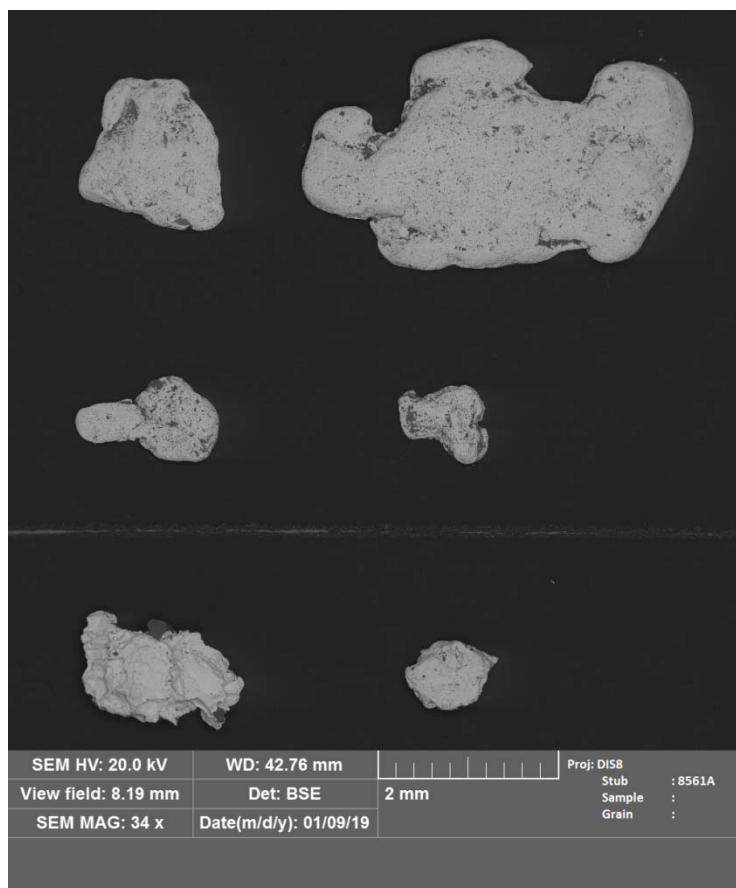
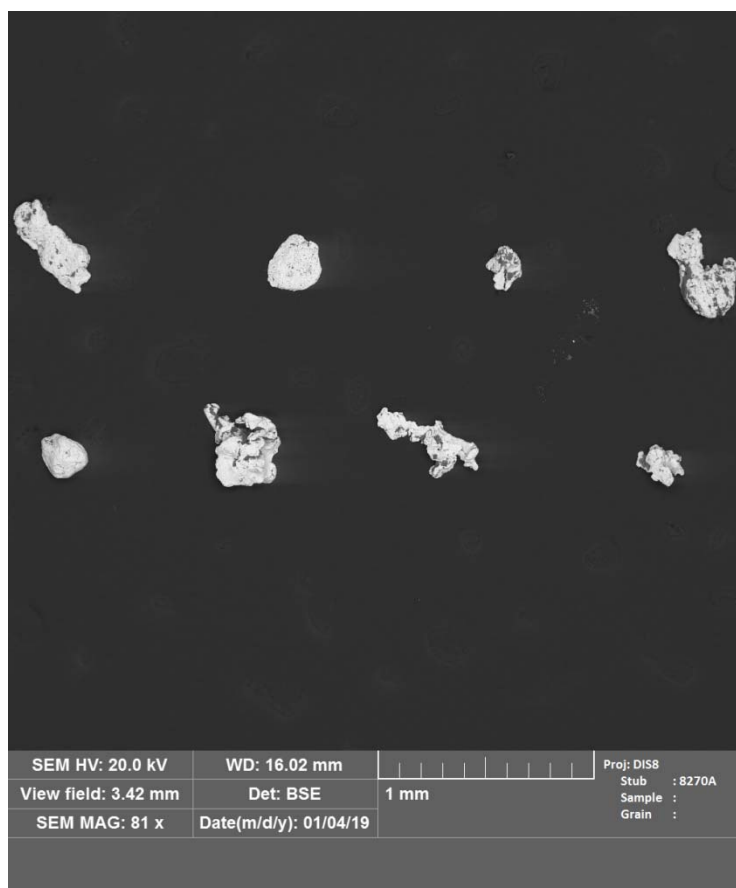














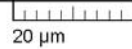
# **APPENDIX V**

## **Polished Sections of Gold Grains**

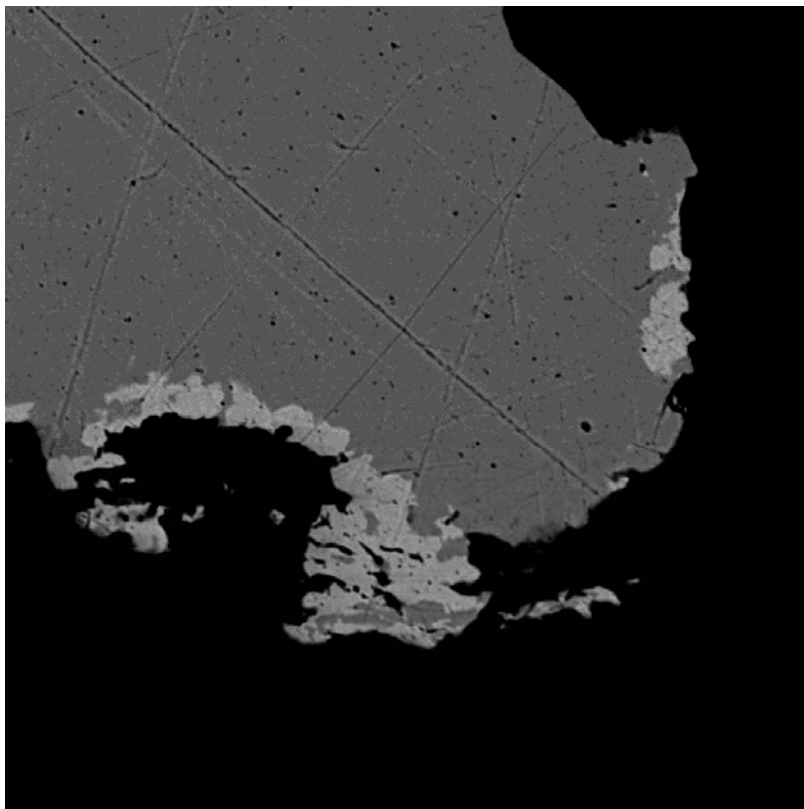


SEM HV: 20.00 kV  
View field: 135.1  $\mu$ m  
SEM MAG: 2.05 kx

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

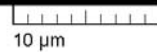


PROJ: DIS8  
Mount : 7391  
Sample : 886HM020  
Grain : 10 101

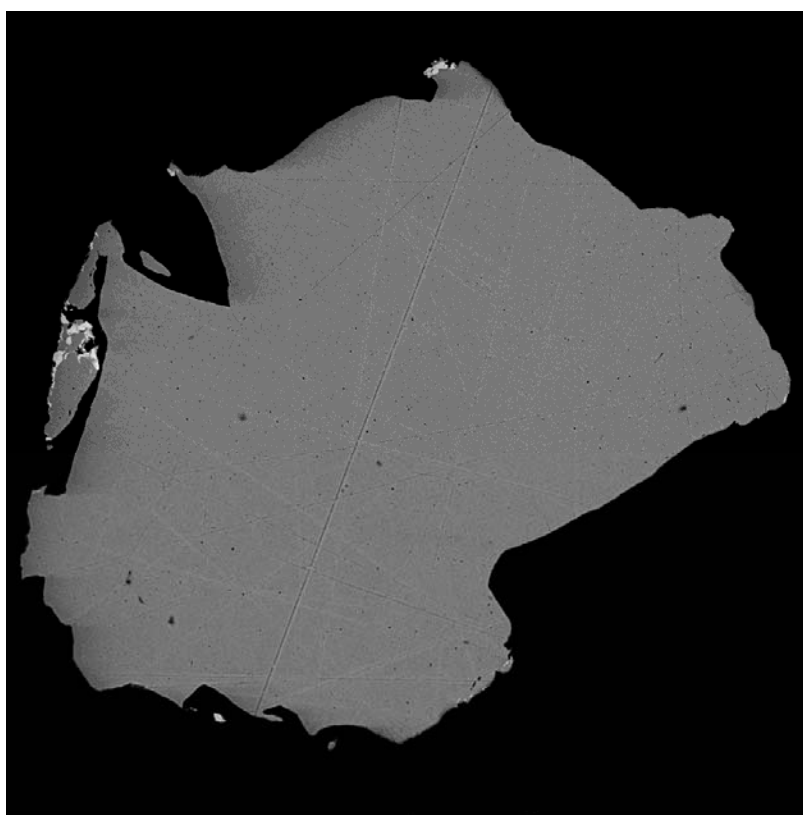


SEM HV: 20.00 kV  
View field: 55.47  $\mu$ m  
SEM MAG: 5.00 kx

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

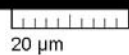


PROJ: DIS8  
Mount : 7391  
Sample : 886HM020  
Grain : 10 101 (A)

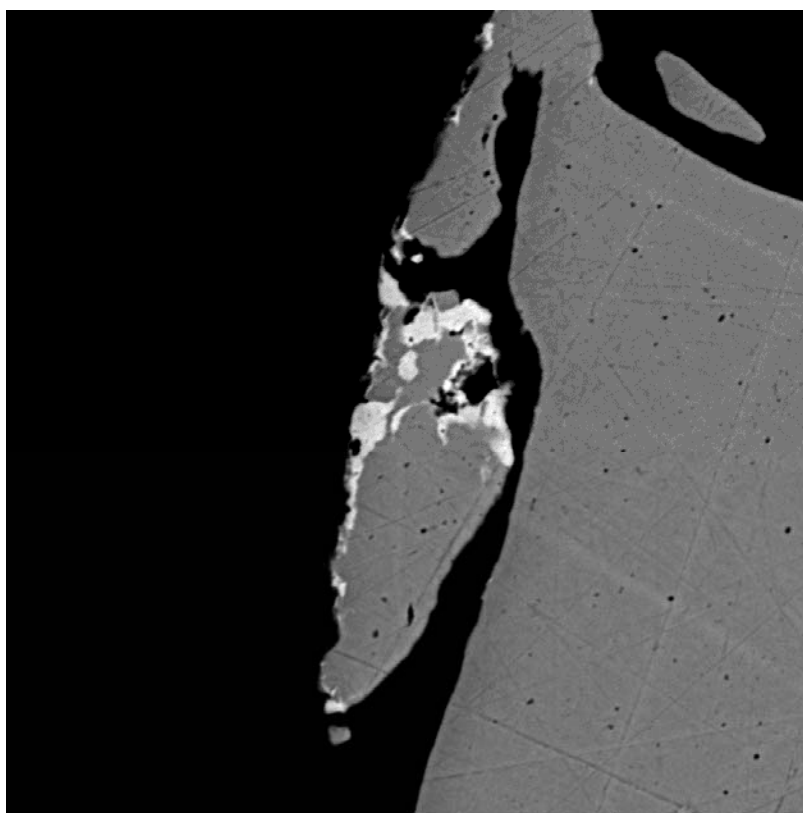


SEM HV: 20.00 kV  
View field: 138.7  $\mu$ m  
SEM MAG: 2.00 kx

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

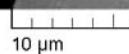


PROJ: DIS8  
Mount : 7391  
Sample : 886HM020  
Grain : 10 102

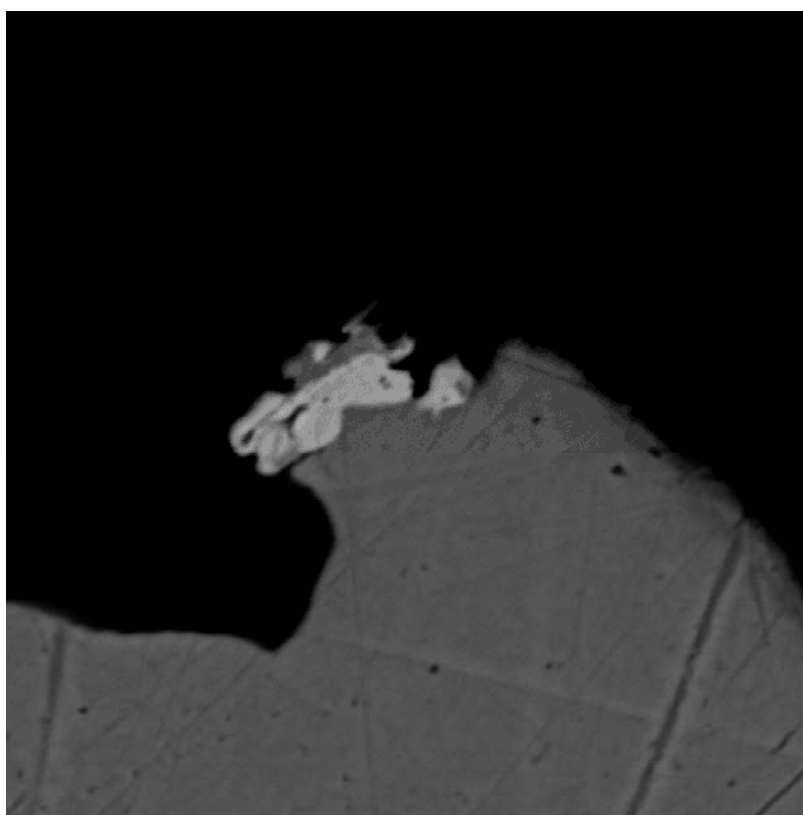


SEM HV: 20.00 kV  
View field: 39.62  $\mu$ m  
SEM MAG: 7.00 kx

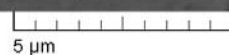
WD: 15.38 mm  
Det: BSE  
Date(m/d/y): 02/15/19



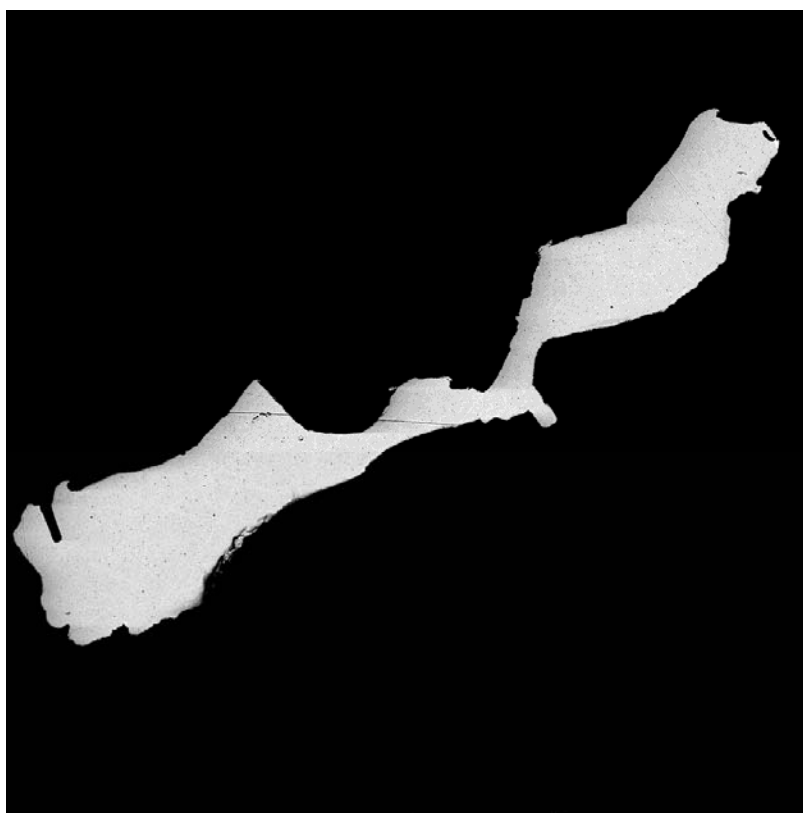
PROJ: DIS8  
Mount : 7391  
Sample : 886HM020  
Grain : 10 102 (A)



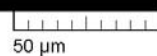
SEM HV: 20.00 kV WD: 15.39 mm  
View field: 18.49 μm Det: BSE  
SEM MAG: 15.00 kx Date(m/d/y): 02/19/19



PROJ: DIS8  
Mount : 7391  
Sample : 886HM020  
Grain : 10 102 (B)



SEM HV: 20.00 kV WD: 15.38 mm  
View field: 277.3 μm Det: BSE  
SEM MAG: 1.00 kx Date(m/d/y): 02/15/19

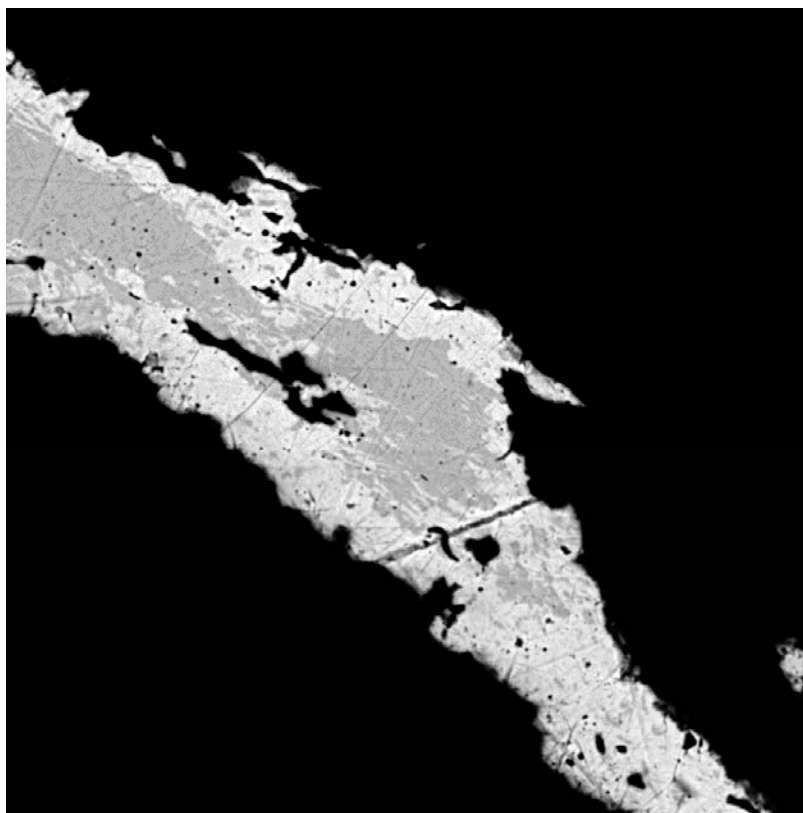


PROJ: DIS8  
Mount : 7391  
Sample : 886HM021  
Grain : 10 103



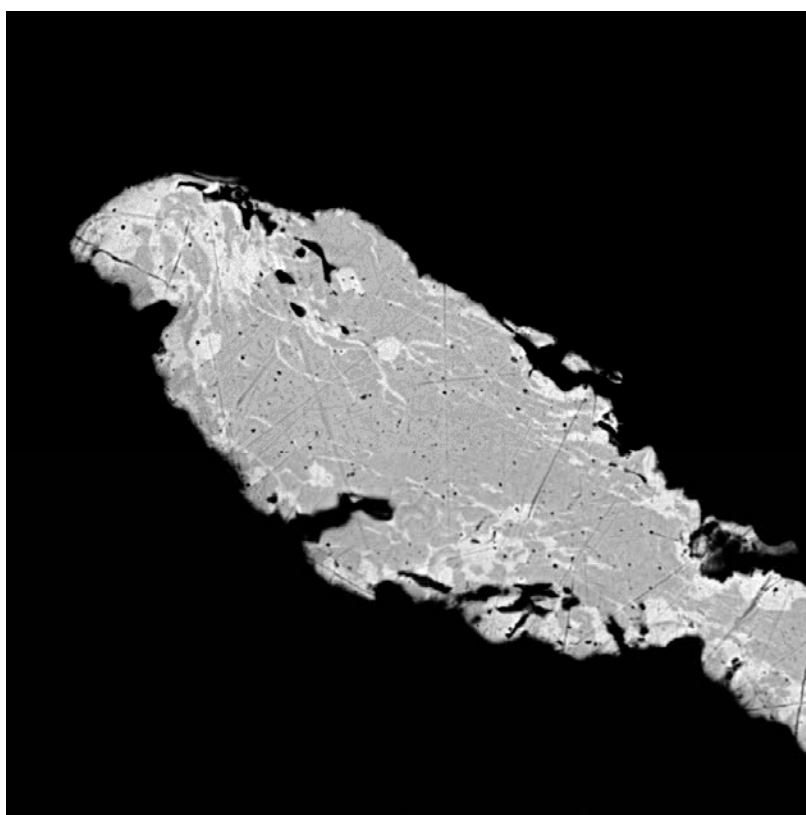
SEM HV: 20.00 kV WD: 15.42 mm  
 View field: 178.5 μm Det: BSE  
 SEM MAG: 1.55 kx Date(m/d/y): 02/15/19

PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM026  
 Grain : 10 104

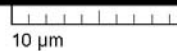


SEM HV: 20.00 kV WD: 15.42 mm  
 View field: 39.62 μm Det: BSE  
 SEM MAG: 7.00 kx Date(m/d/y): 02/15/19

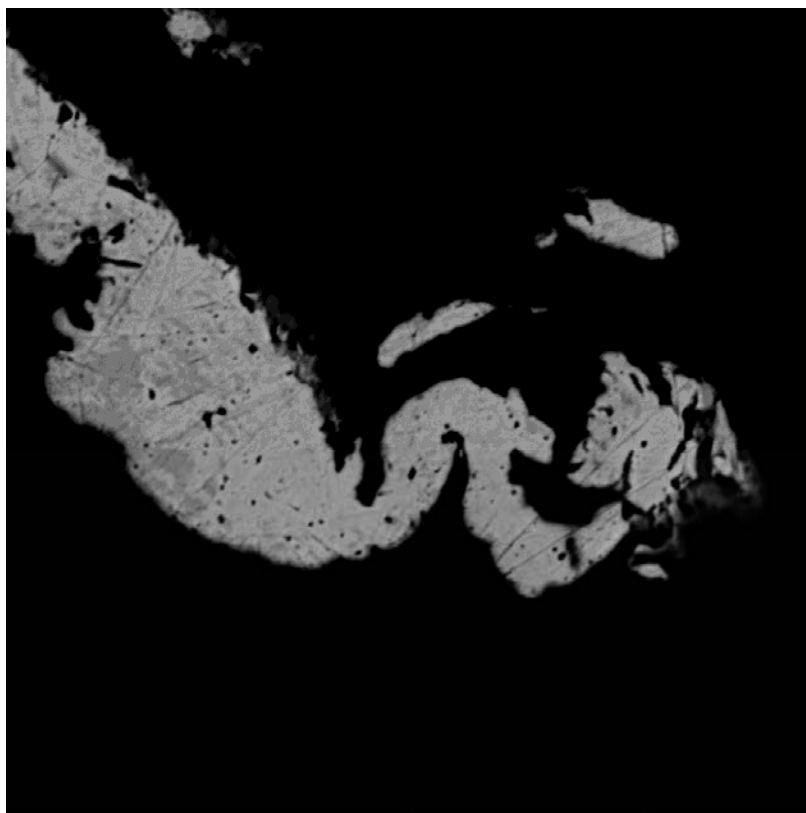
PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM026  
 Grain : 10 104 (A)



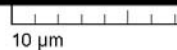
SEM HV: 20.00 kV WD: 15.42 mm  
View field: 46.22  $\mu\text{m}$  Det: BSE  
SEM MAG: 6.00 kx Date(m/d/y): 02/15/19



PROJ: DIS8  
Mount : 7391  
Sample : 886HM026  
Grain : 10 104 (B)



SEM HV: 20.00 kV WD: 15.39 mm  
View field: 34.67  $\mu\text{m}$  Det: BSE  
SEM MAG: 8.00 kx Date(m/d/y): 02/19/19



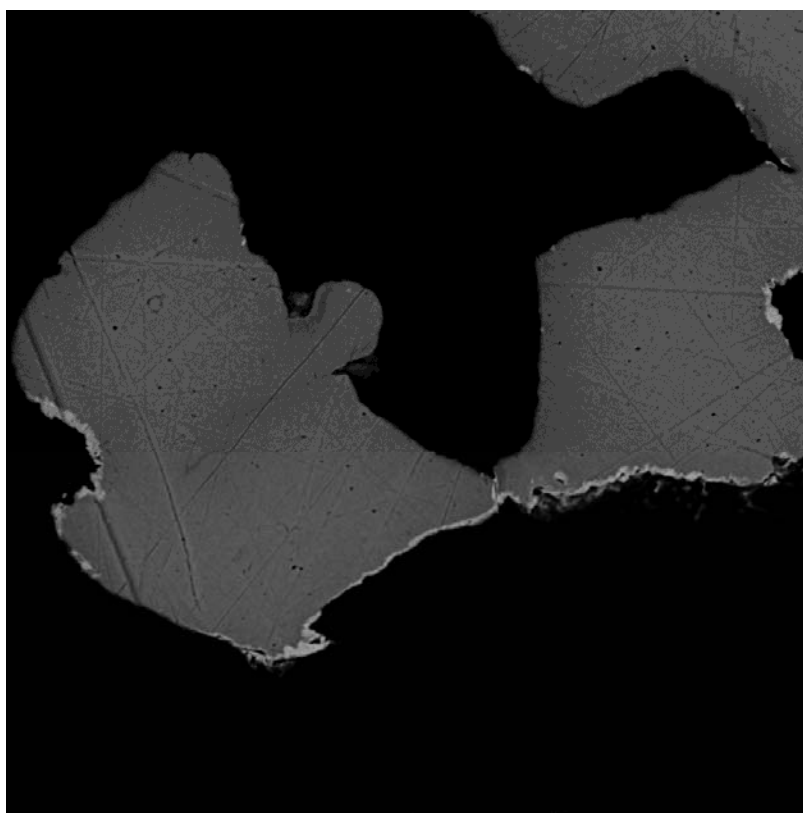
PROJ: DIS8  
Mount : 7391  
Sample : 886HM026  
Grain : 10 104 (C)





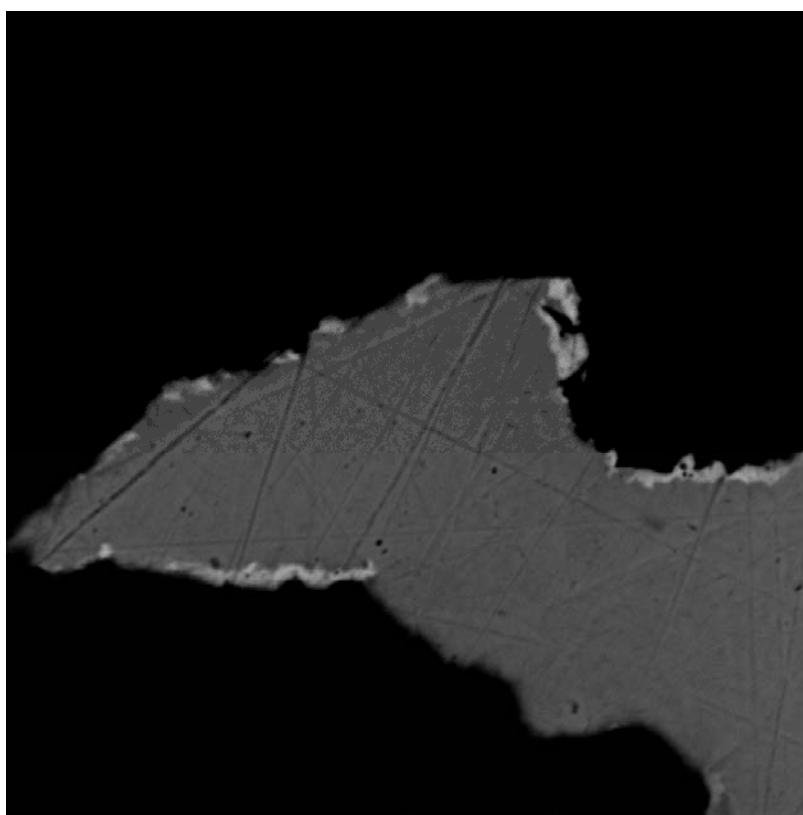
SEM HV: 20.00 kV WD: 15.42 mm  
 View field: 187.0  $\mu$ m Det: BSE  
 SEM MAG: 1.48 kx Date(m/d/y): 02/15/19

PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM028  
 Grain : 10 201



SEM HV: 20.00 kV WD: 15.39 mm  
 View field: 55.47  $\mu$ m Det: BSE  
 SEM MAG: 5.00 kx Date(m/d/y): 02/19/19

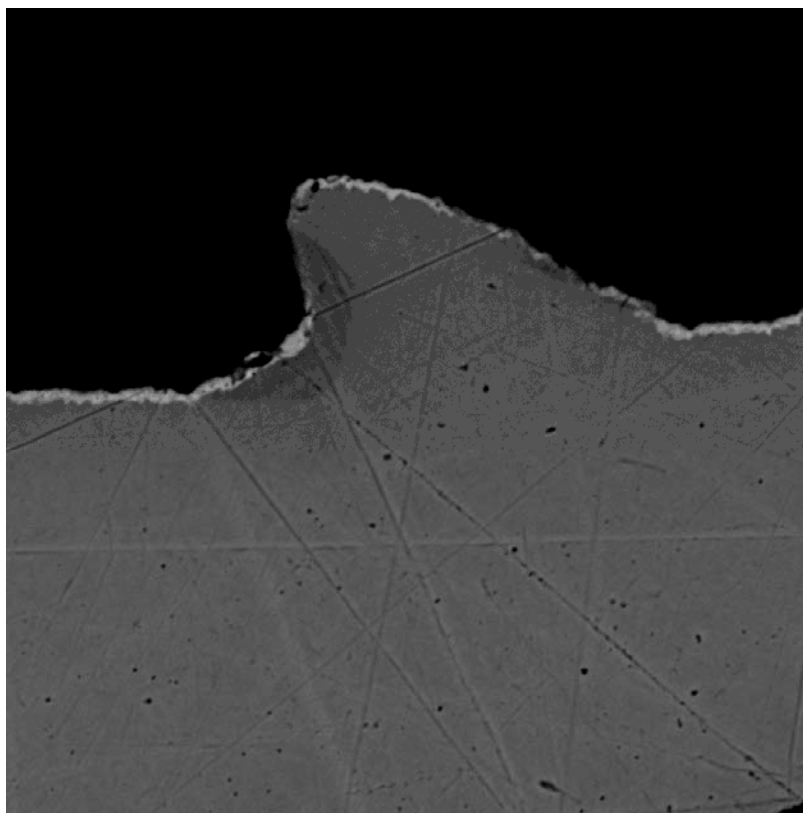
PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM028  
 Grain : 10 201 (A)



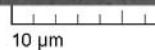
SEM HV: 20.00 kV WD: 15.39 mm  
View field: 27.73  $\mu\text{m}$  Det: BSE  
SEM MAG: 10.00 kx Date(m/d/y): 02/19/19



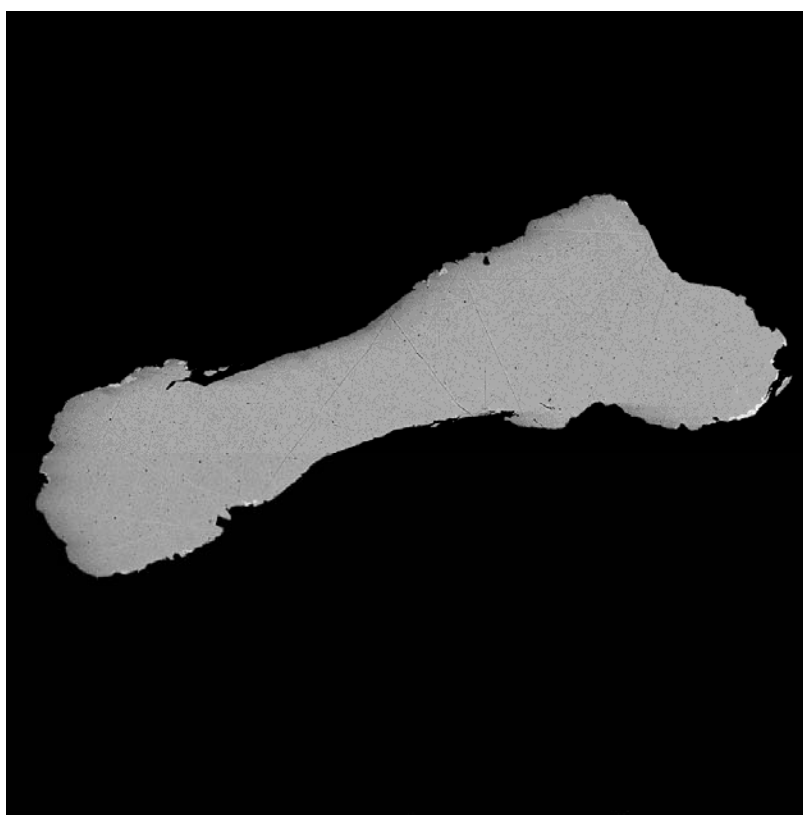
PROJ: DIS8  
Mount : 7391  
Sample : 886HM028  
Grain : 10 201 (B)



SEM HV: 20.00 kV WD: 15.39 mm  
View field: 36.49  $\mu\text{m}$  Det: BSE  
SEM MAG: 7.60 kx Date(m/d/y): 02/19/19



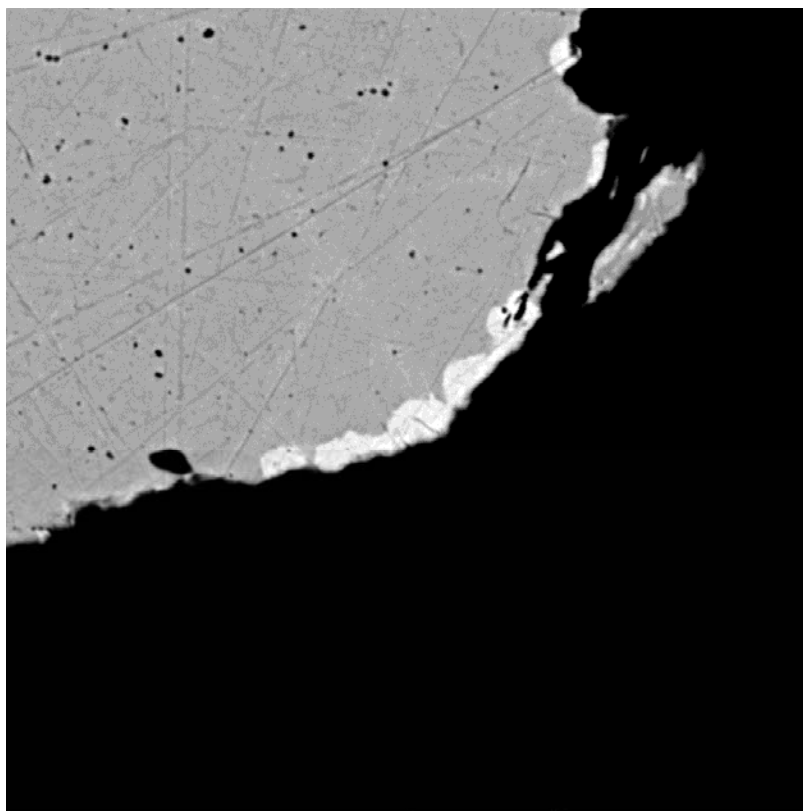
PROJ: DIS8  
Mount : 7391  
Sample : 886HM028  
Grain : 10 201 (C)



SEM HV: 20.00 kV WD: 15.42 mm  
 View field: 194.8 μm Det: BSE  
 SEM MAG: 1.42 kx Date(m/d/y): 02/15/19

50 μm

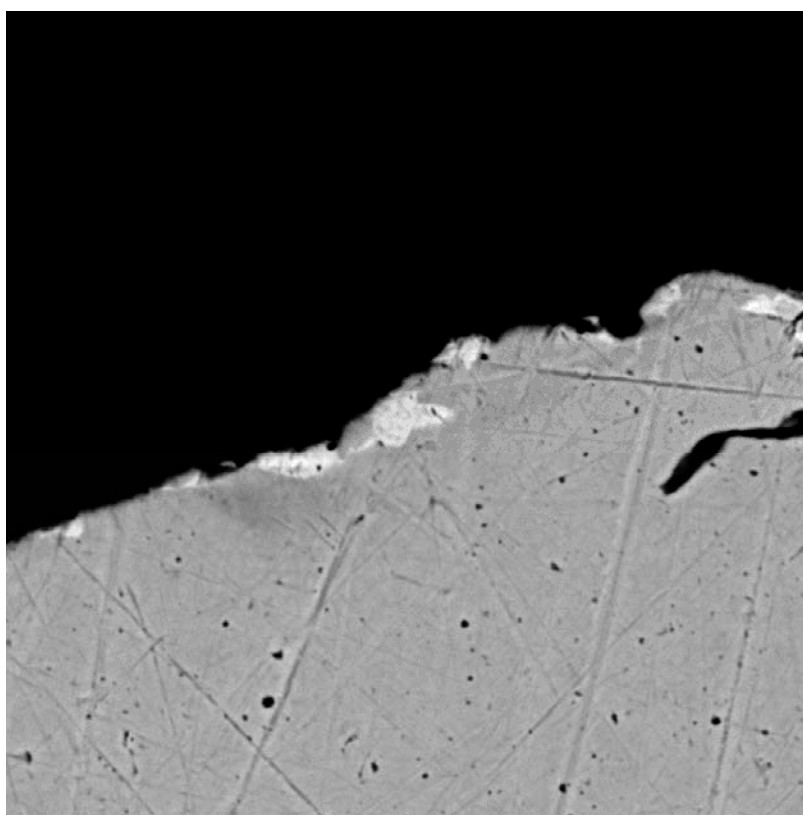
PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM028  
 Grain : 10 202



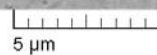
SEM HV: 20.00 kV WD: 15.42 mm  
 View field: 27.73 μm Det: BSE  
 SEM MAG: 10.00 kx Date(m/d/y): 02/15/19

5 μm

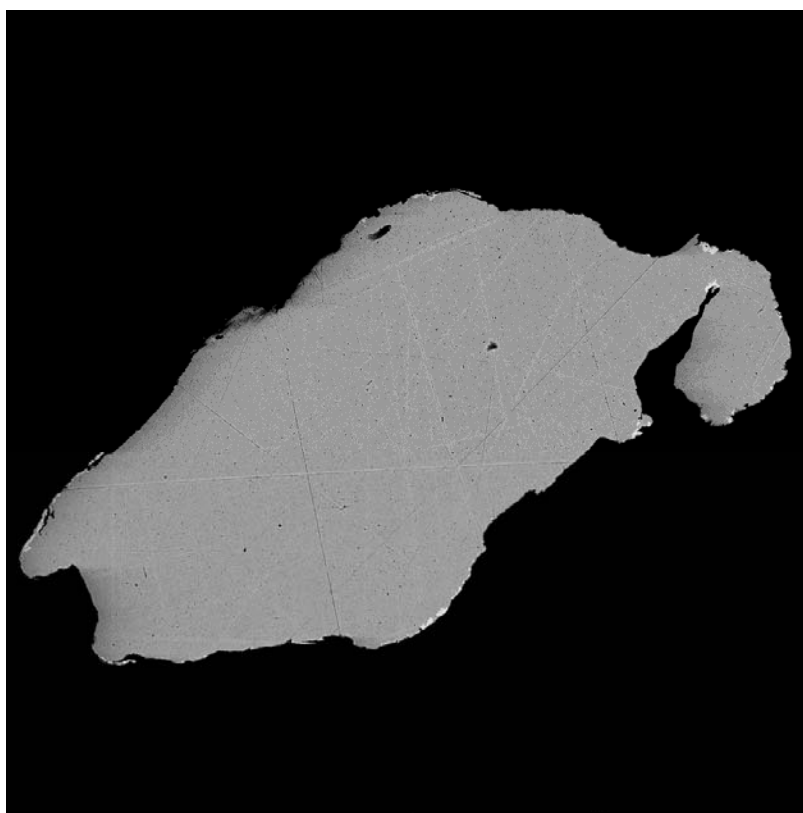
PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM028  
 Grain : 10 202 (A)



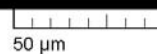
SEM HV: 20.00 kV WD: 15.42 mm  
View field: 27.73 μm Det: BSE  
SEM MAG: 10.00 kx Date(m/d/y): 02/15/19



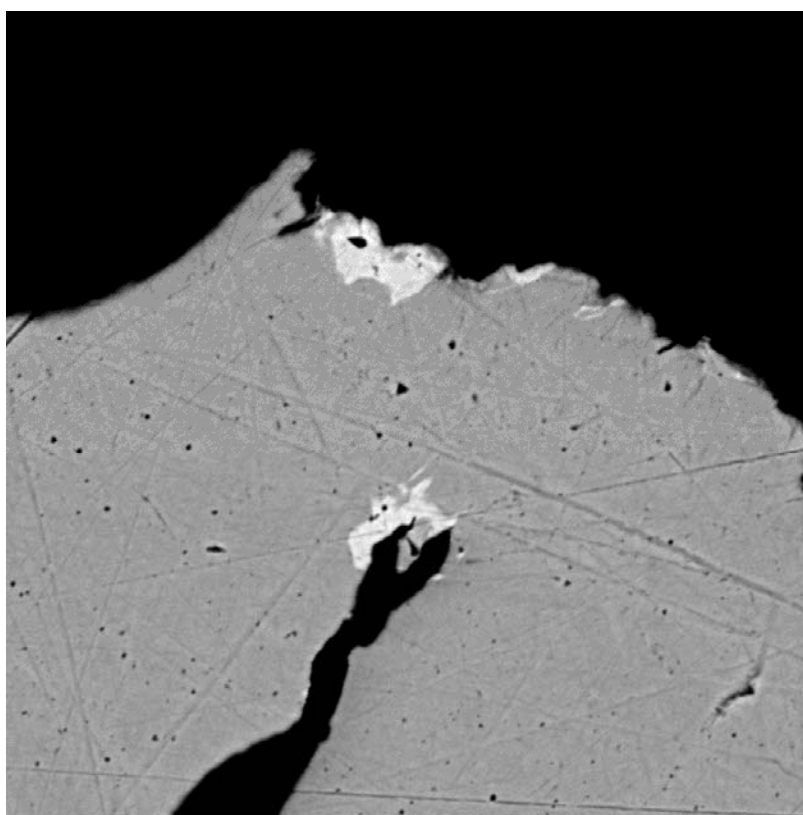
PROJ: DIS8  
Mount : 7391  
Sample : 886HM028  
Grain : 10 202 (B)



SEM HV: 20.00 kV WD: 15.42 mm  
View field: 216.0 μm Det: BSE  
SEM MAG: 1.28 kx Date(m/d/y): 02/15/19

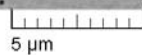


PROJ: DIS8  
Mount : 7391  
Sample : 886HM029  
Grain : 10 203

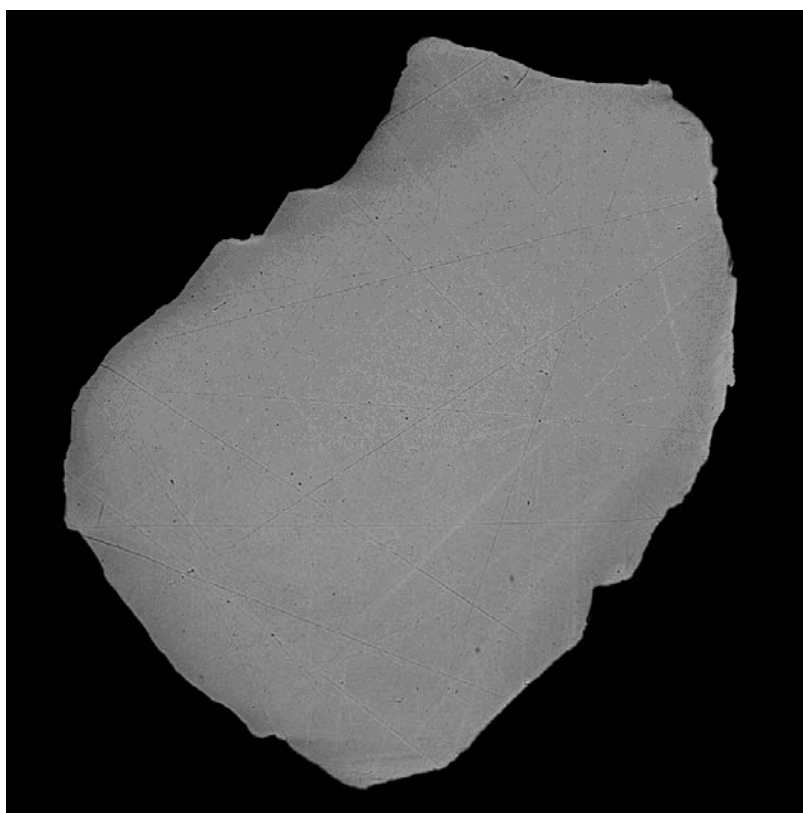


SEM HV: 20.00 kV  
View field: 30.82  $\mu\text{m}$   
SEM MAG: 9.00 kx

WD: 15.40 mm  
Det: BSE  
Date(m/d/y): 02/15/19

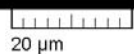


PROJ: DIS8  
Mount : 7391  
Sample : 886HM029  
Grain : 10 203 (A)



SEM HV: 20.00 kV  
View field: 134.6  $\mu\text{m}$   
SEM MAG: 2.06 kx

WD: 15.40 mm  
Det: BSE  
Date(m/d/y): 02/15/19

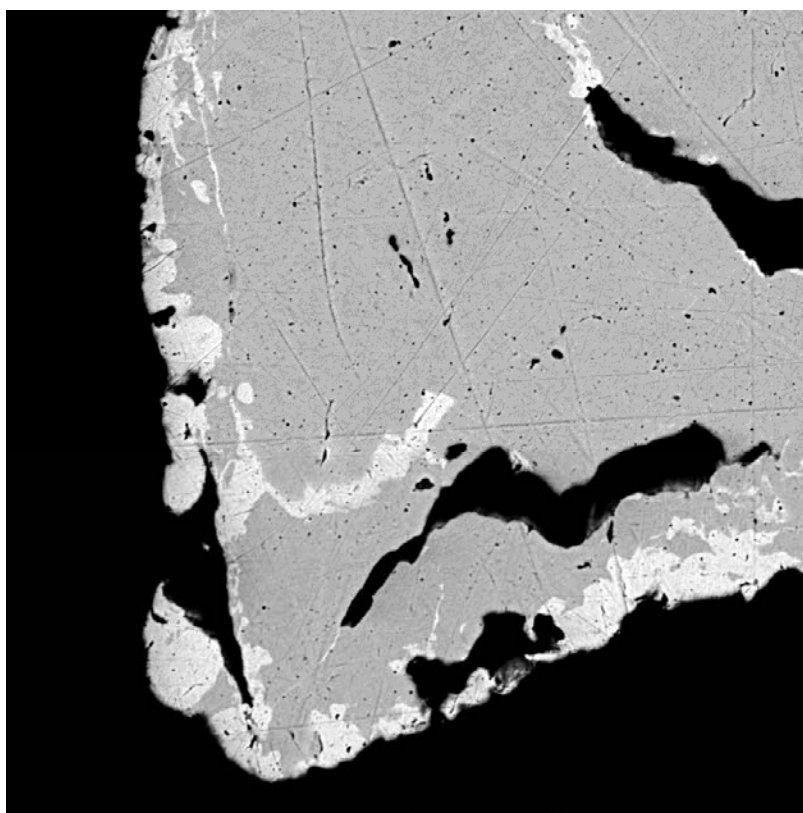


PROJ: DIS8  
Mount : 7391  
Sample : 886HM029  
Grain : 10 204



SEM HV: 20.00 kV WD: 15.40 mm  
 View field: 210.0 μm Det: BSE  
 SEM MAG: 1.32 kx Date(m/d/y): 02/15/19

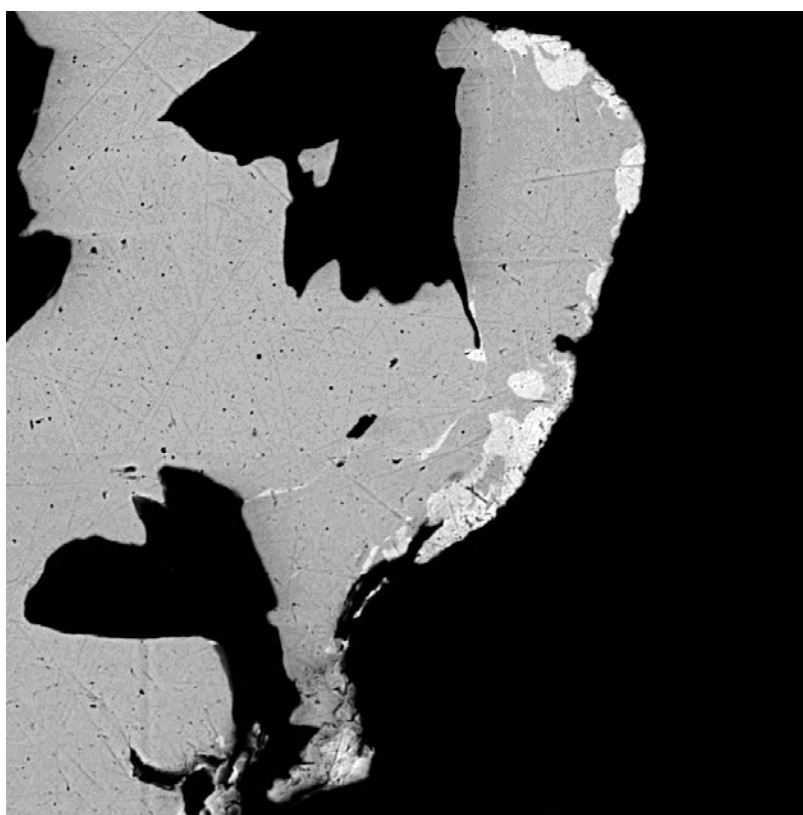
PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM035  
 Grain : 10 301



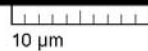
SEM HV: 20.00 kV WD: 15.40 mm  
 View field: 55.47 μm Det: BSE  
 SEM MAG: 5.00 kx Date(m/d/y): 02/15/19

PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM035  
 Grain : 10 301 (A)

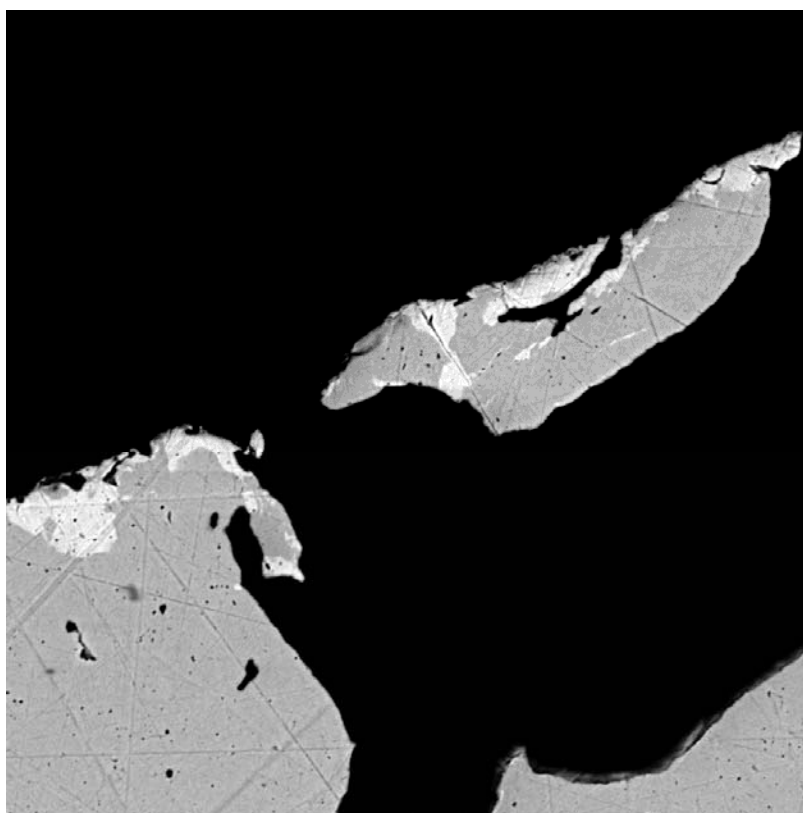




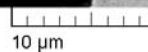
SEM HV: 20.00 kV WD: 15.40 mm  
View field: 58.84  $\mu$ m Det: BSE  
SEM MAG: 4.71 kx Date(m/d/y): 02/15/19



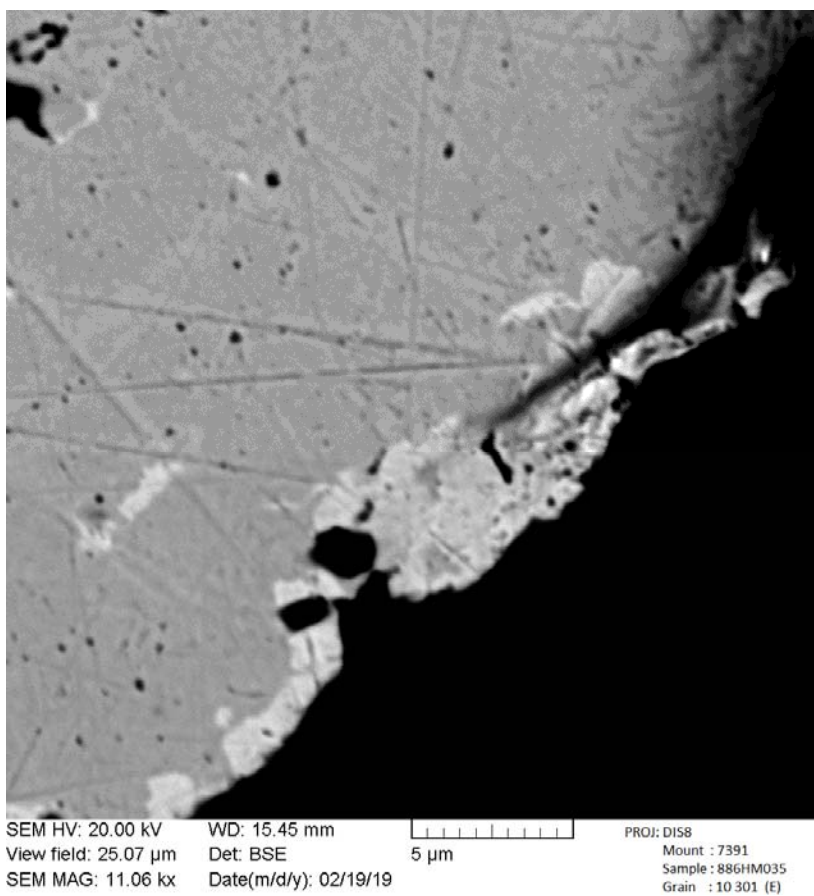
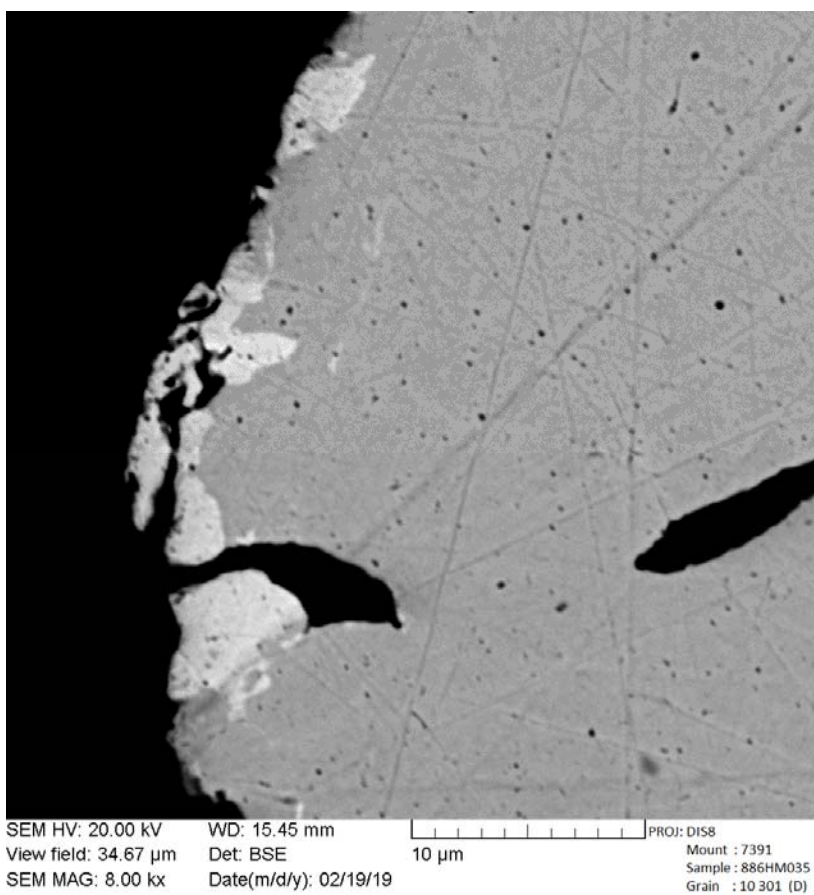
PROJ: DIS8  
Mount : 7391  
Sample : 886HM035  
Grain : 10 301 (B)

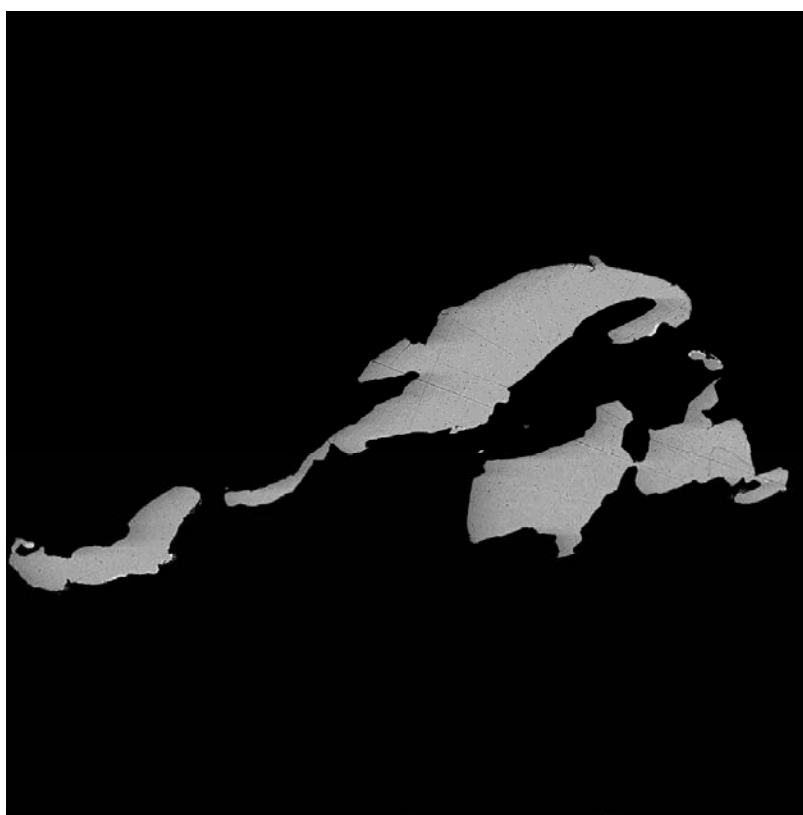


SEM HV: 20.00 kV WD: 15.40 mm  
View field: 50.51  $\mu$ m Det: BSE  
SEM MAG: 5.49 kx Date(m/d/y): 02/15/19

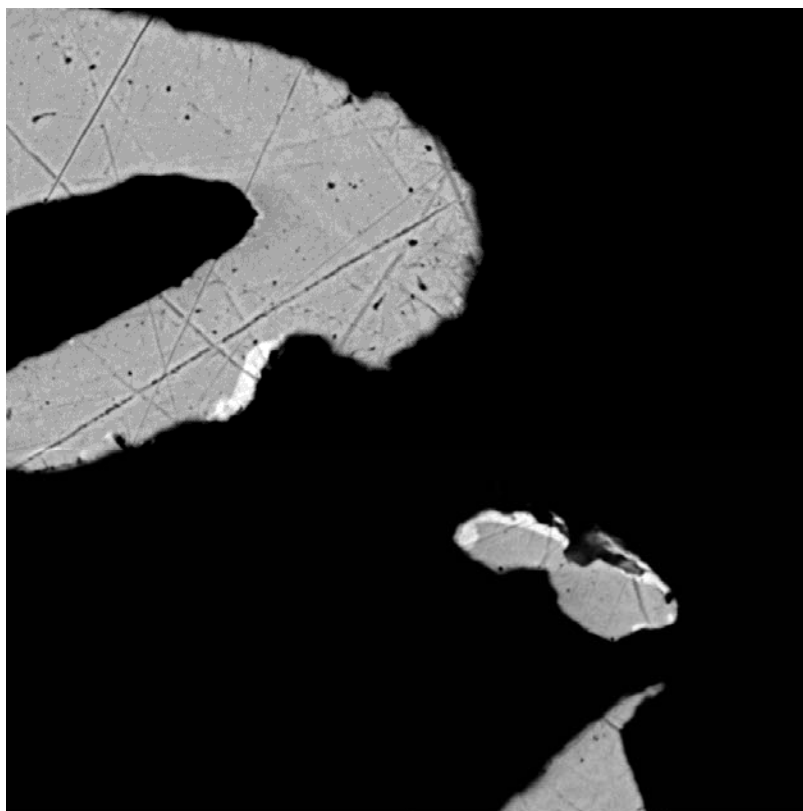


PROJ: DIS8  
Mount : 7391  
Sample : 886HM035  
Grain : 10 301 (C)

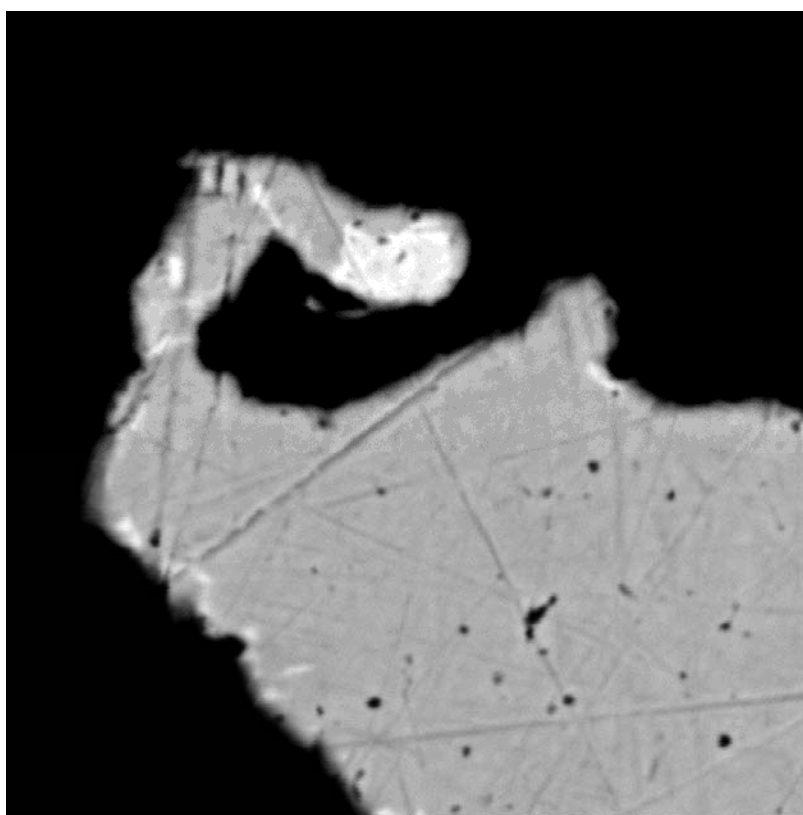




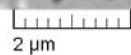
SEM HV: 20.00 kV WD: 15.41 mm 50 µm PROJ: DIS8  
 View field: 204.1 µm Det: BSE Mount : 7391  
 SEM MAG: 1.36 kx Date(m/d/y): 02/15/19 Sample : 886HM047  
 Grain : 10 302



SEM HV: 20.00 kV WD: 15.41 mm 10 µm PROJ: DIS8  
 View field: 32.42 µm Det: BSE Mount : 7391  
 SEM MAG: 8.55 kx Date(m/d/y): 02/15/19 Sample : 886HM047  
 Grain : 10 302 (A)



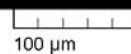
SEM HV: 20.00 kV WD: 15.41 mm  
View field: 13.87  $\mu$ m Det: BSE  
SEM MAG: 20.00 kx Date(m/d/y): 02/15/19



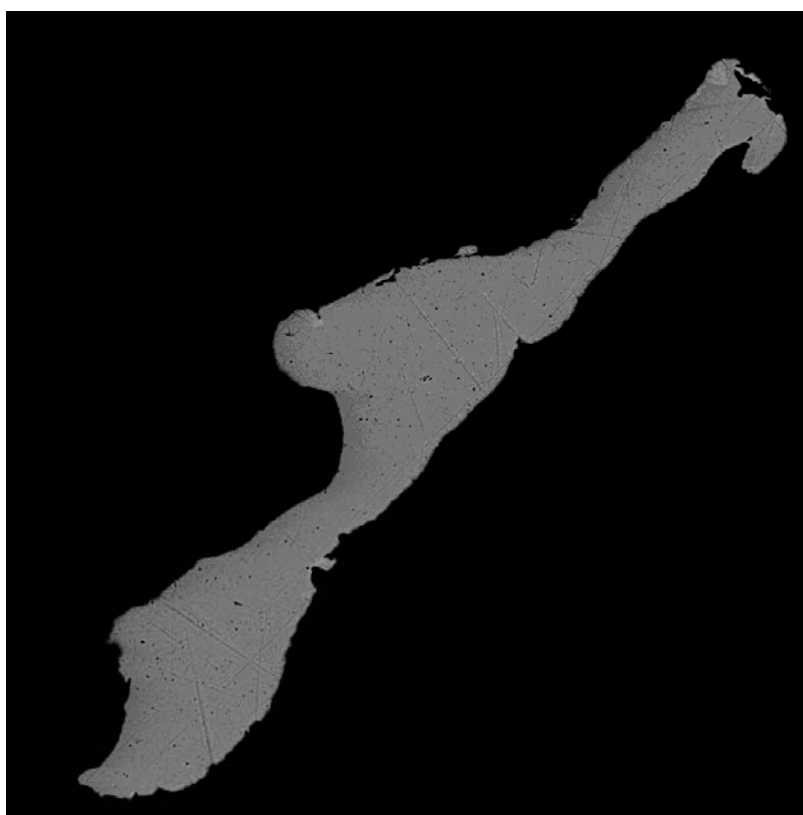
PROJ: DIS8  
Mount : 7391  
Sample : 886HM047  
Grain : 10 302 (B)



SEM HV: 20.00 kV WD: 15.41 mm  
View field: 326.8  $\mu$ m Det: BSE  
SEM MAG: 849 x Date(m/d/y): 02/15/19



PROJ: DIS8  
Mount : 7391  
Sample : 886HM050  
Grain : 10 303

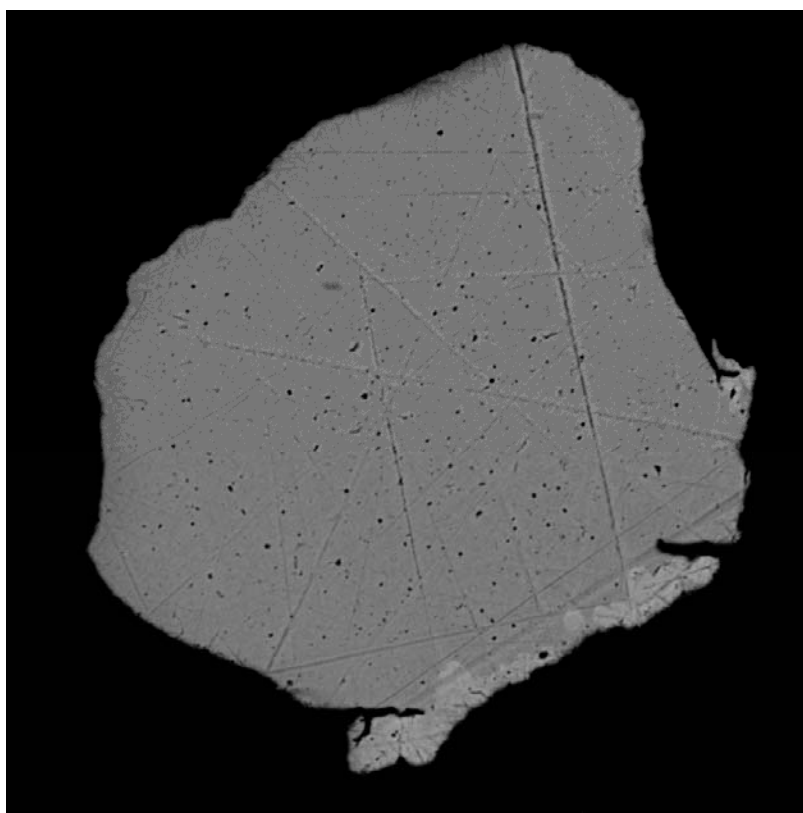


SEM HV: 20.00 kV  
View field: 89.23  $\mu$ m  
SEM MAG: 3.11 kx

WD: 15.39 mm  
Det: BSE  
Date(m/d/y): 02/19/19

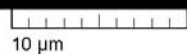


PROJ: DIS8  
Mount : 7391  
Sample : 886HM050  
Grain : 10 303 (A)

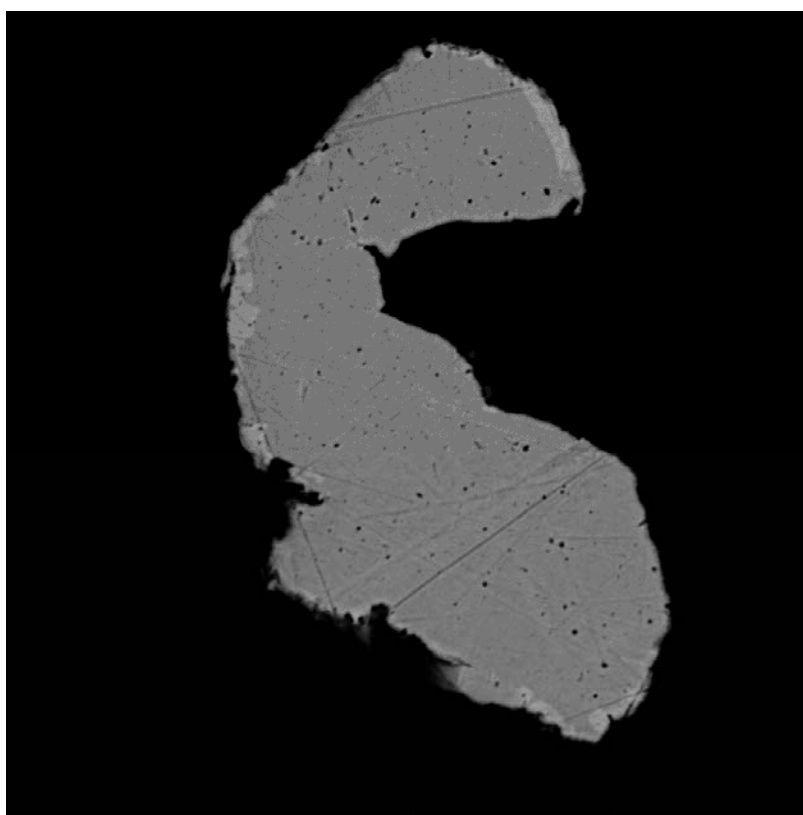


SEM HV: 20.00 kV  
View field: 46.22  $\mu$ m  
SEM MAG: 6.00 kx

WD: 15.39 mm  
Det: BSE  
Date(m/d/y): 02/19/19



PROJ: DIS8  
Mount : 7391  
Sample : 886HM050  
Grain : 10 303 (B)



SEM HV: 20.00 kV WD: 15.39 mm  
View field: 39.12 μm Det: BSE  
SEM MAG: 7.09 kx Date(m/d/y): 02/19/19

10 μm

PROJ: DIS8  
Mount : 7391  
Sample : 886HM050  
Grain : 10 303 (C)

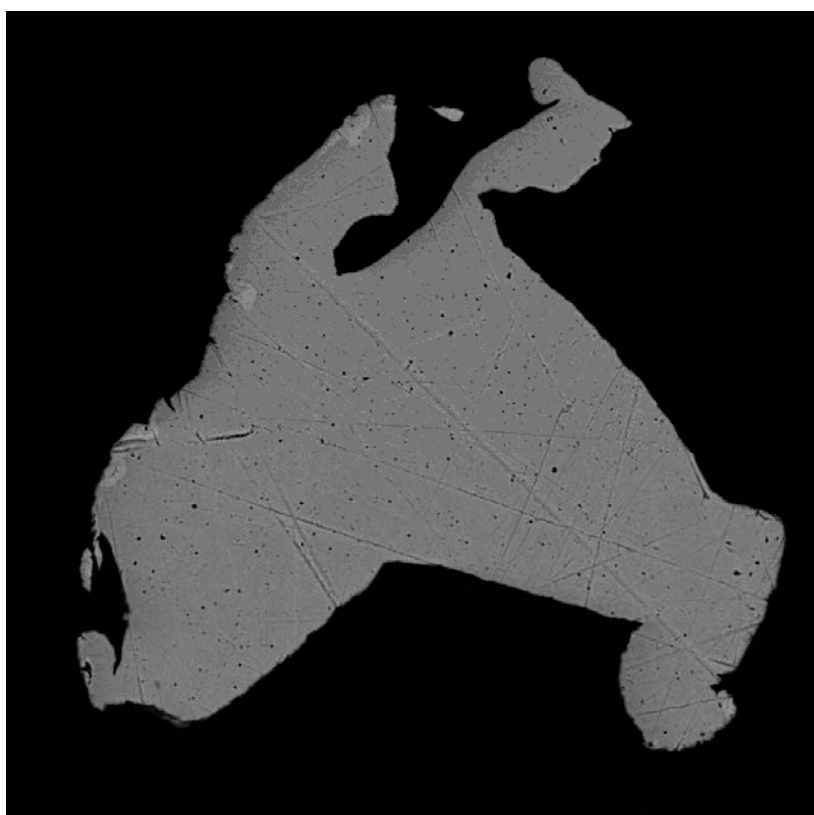


SEM HV: 20.00 kV WD: 15.43 mm  
View field: 18.52 μm Det: BSE  
SEM MAG: 14.97 kx Date(m/d/y): 02/19/19

5 μm

PROJ: DIS8  
Mount : 7391  
Sample : 886HM050  
Grain : 10 303 (D)





SEM HV: 20.00 kV WD: 15.43 mm  
 View field: 69.33  $\mu$ m Det: BSE  
 SEM MAG: 4.00 kx Date(m/d/y): 02/19/19

20  $\mu$ m

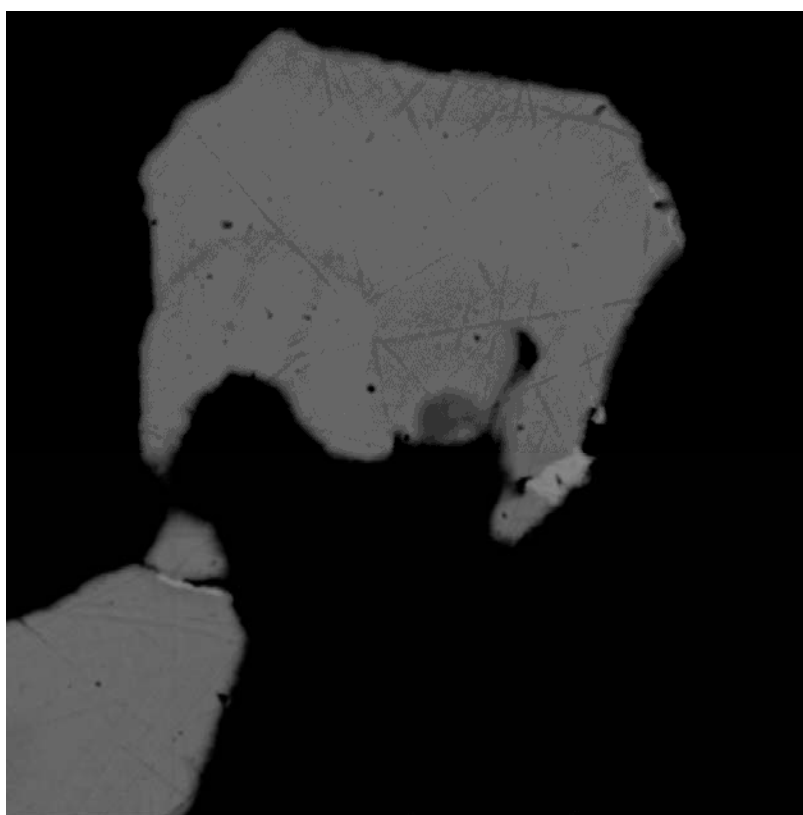
PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM050  
 Grain : 10 303 (E)



SEM HV: 20.00 kV WD: 15.41 mm  
 View field: 207.3  $\mu$ m Det: BSE  
 SEM MAG: 1.34 kx Date(m/d/y): 02/15/19

50  $\mu$ m

PROJ: DIS8  
 Mount : 7391  
 Sample : 886HM050  
 Grain : 10 304



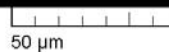
SEM HV: 20.00 kV WD: 15.41 mm  
View field: 25.38  $\mu$ m Det: BSE  
SEM MAG: 10.93 kx Date(m/d/y): 02/15/19



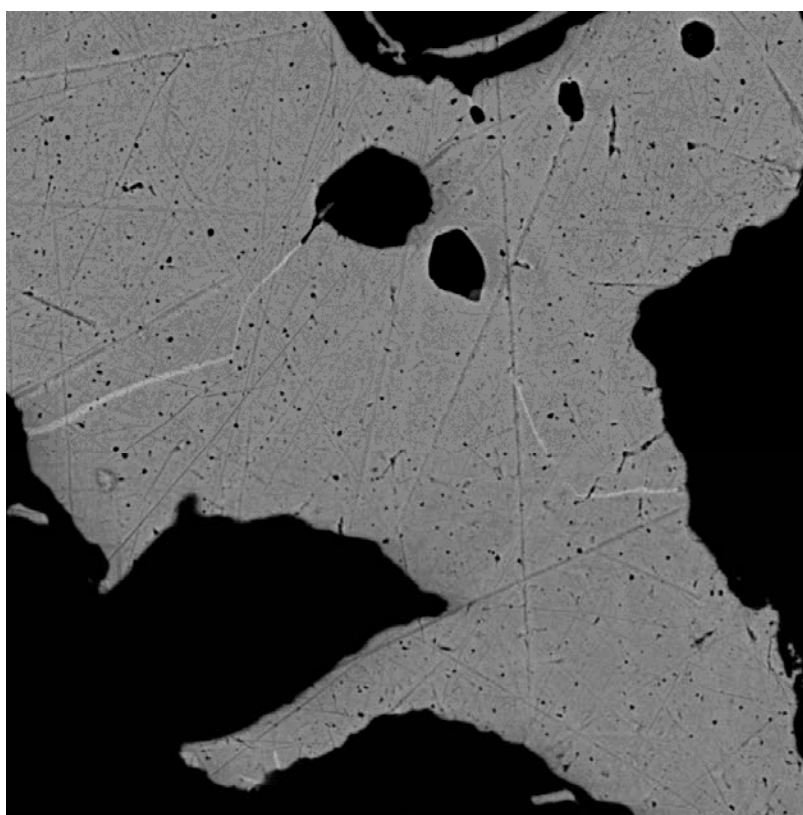
PROJ: DIS8  
Mount : 7391  
Sample : 886HM050  
Grain : 10 304 (A)



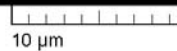
SEM HV: 20.00 kV WD: 15.41 mm  
View field: 171.0  $\mu$ m Det: BSE  
SEM MAG: 1.62 kx Date(m/d/y): 02/15/19



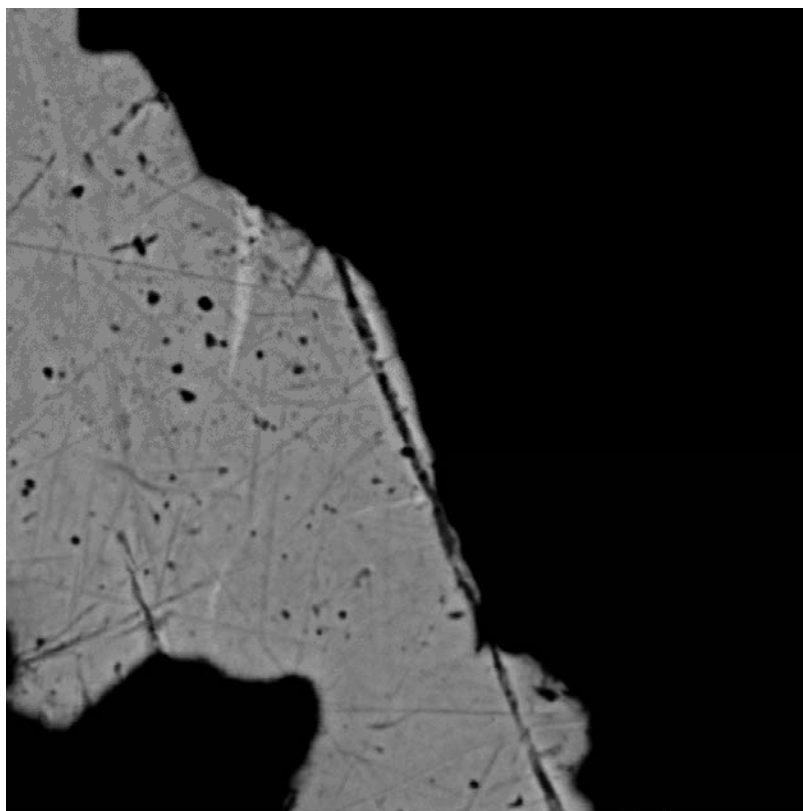
PROJ: DIS8  
Mount : 7391  
Sample : 886HM038  
Grain : 10 401



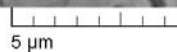
SEM HV: 20.00 kV WD: 15.41 mm  
View field: 46.22  $\mu$ m Det: BSE  
SEM MAG: 6.00 kx Date(m/d/y): 02/15/19



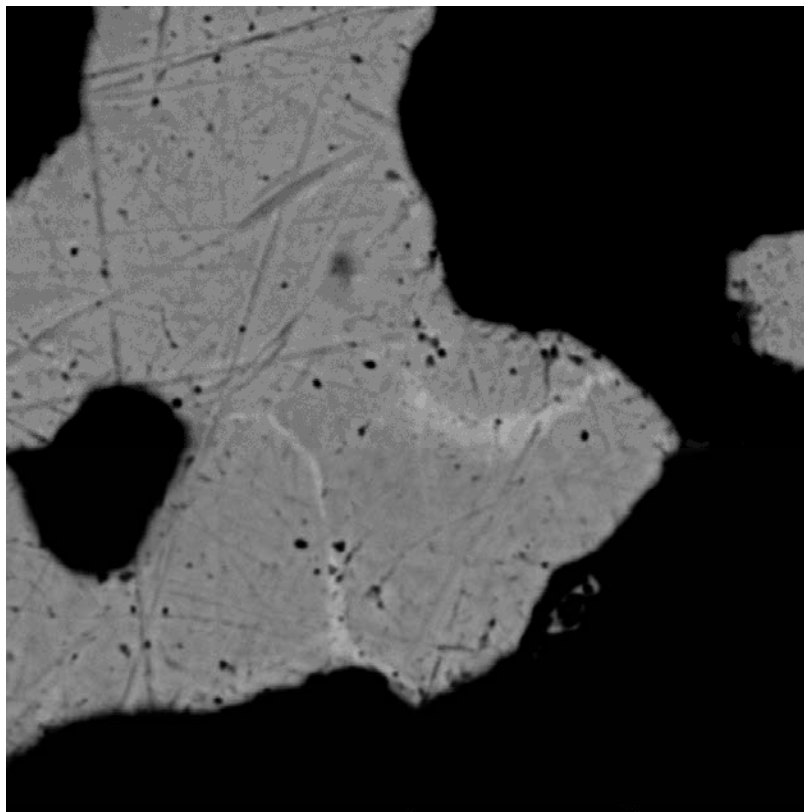
PROJ: DIS8  
Mount : 7391  
Sample : 886HM038  
Grain : 10 401 (A)



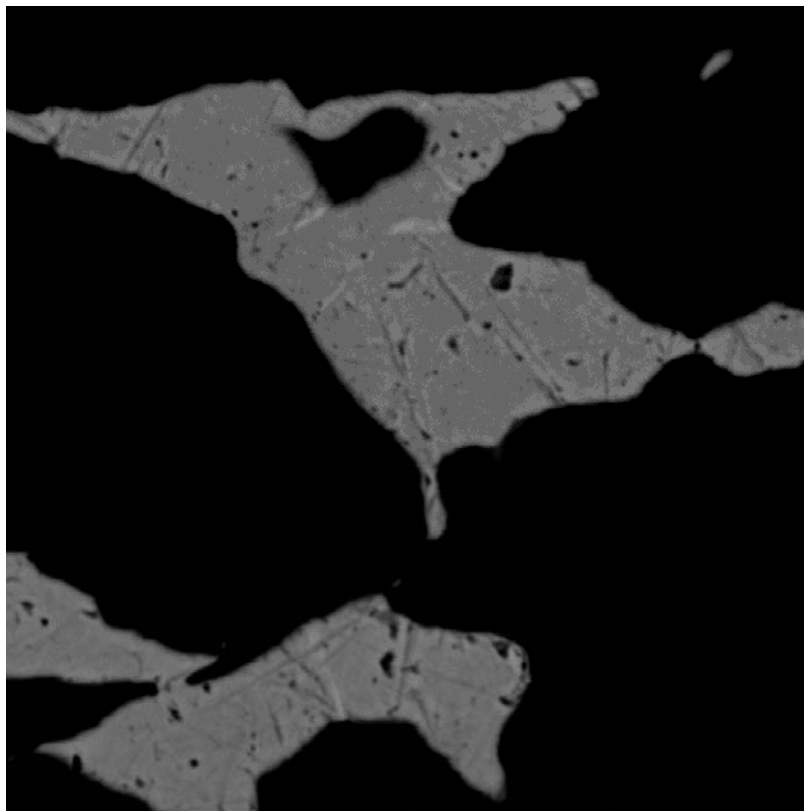
SEM HV: 20.00 kV WD: 15.41 mm  
View field: 18.49  $\mu$ m Det: BSE  
SEM MAG: 15.00 kx Date(m/d/y): 02/15/19



PROJ: DIS8  
Mount : 7391  
Sample : 886HM038  
Grain : 10 401 (B)



SEM HV: 20.00 kV WD: 15.41 mm 5  $\mu$ m PROJ: DIS8  
 View field: 18.49  $\mu$ m Det: BSE Mount : 7391  
 SEM MAG: 15.00 kx Date(m/d/y): 02/15/19 Sample : 886HM038  
 Grain : 10 401 (C)

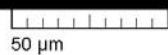


SEM HV: 20.00 kV WD: 15.41 mm 5  $\mu$ m PROJ: DIS8  
 View field: 20.64  $\mu$ m Det: BSE Mount : 7391  
 SEM MAG: 13.44 kx Date(m/d/y): 02/19/19 Sample : 886HM038  
 Grain : 10 401 (D)

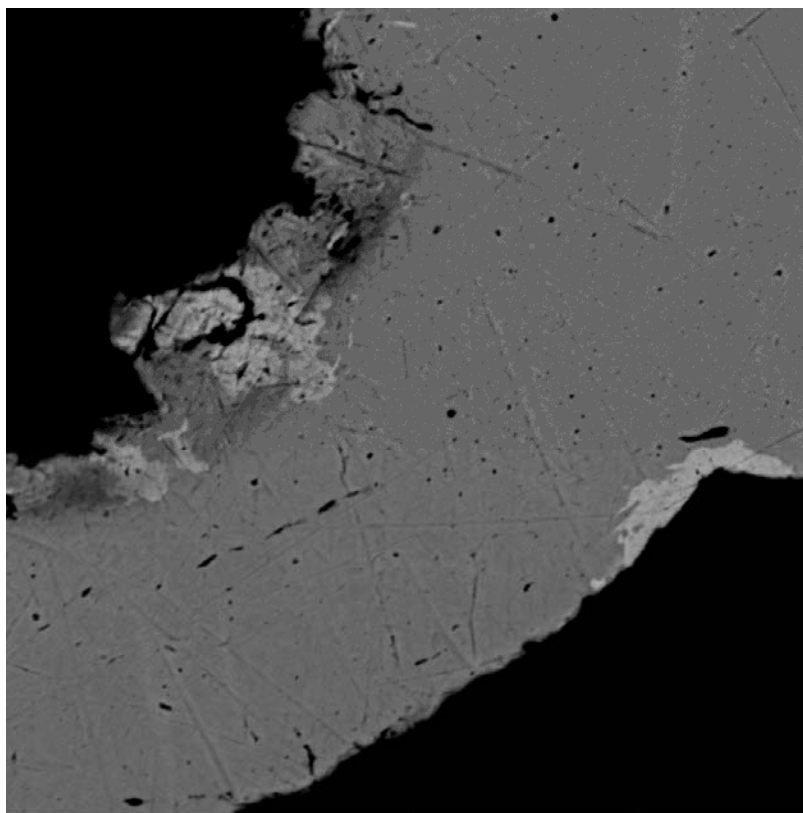


SEM HV: 20.00 kV  
View field: 259.0  $\mu$ m  
SEM MAG: 1.07 kx

WD: 15.39 mm  
Det: BSE  
Date(m/d/y): 02/19/19

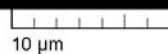


PROJ: DIS8  
Mount : 7391  
Sample : 886HM039  
Grain : 10 402

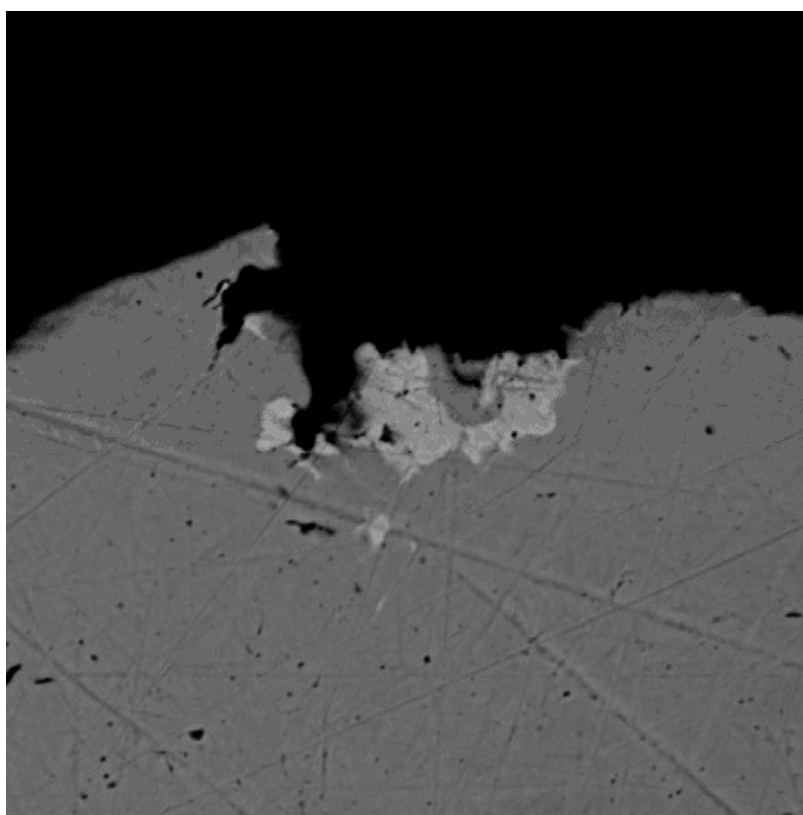


SEM HV: 20.00 kV  
View field: 35.71  $\mu$ m  
SEM MAG: 7.77 kx

WD: 15.39 mm  
Det: BSE  
Date(m/d/y): 02/19/19

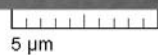


PROJ: DIS8  
Mount : 7391  
Sample : 886HM039  
Grain : 10 402 (A)



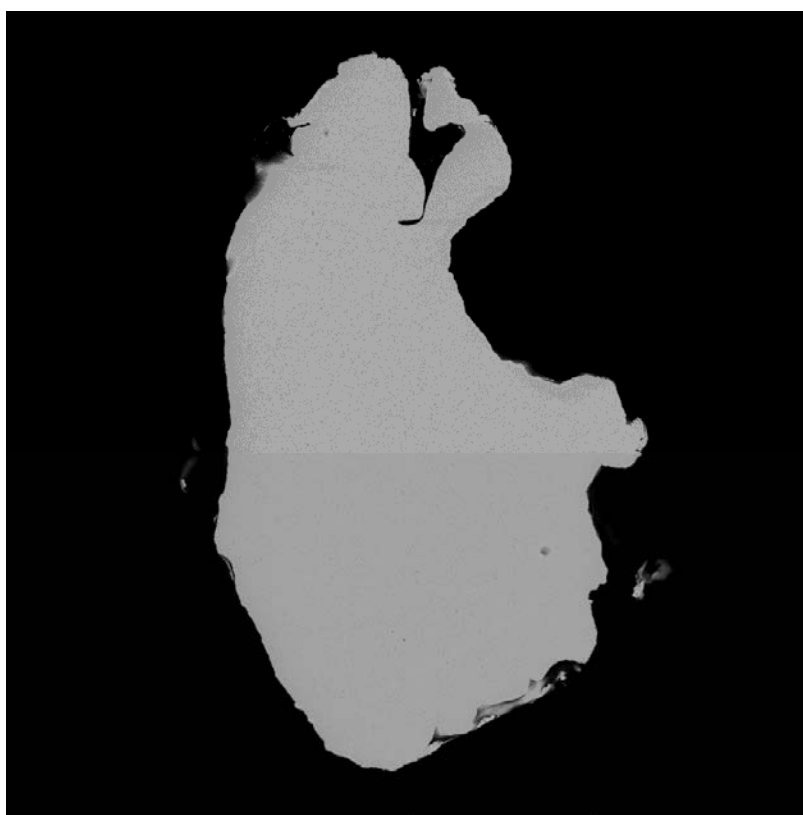
SEM HV: 20.00 kV  
View field: 27.73  $\mu\text{m}$   
SEM MAG: 10.00 kx

WD: 15.39 mm  
Det: BSE  
Date(m/d/y): 02/19/19

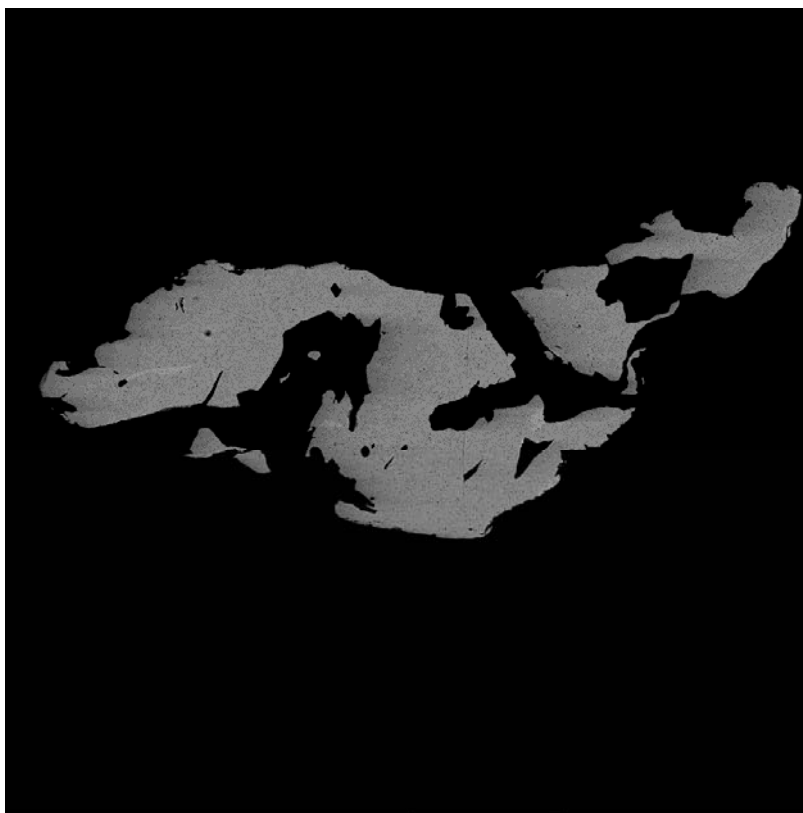


PROJ: DIS8  
Mount : 7391  
Sample : 886HM039  
Grain : 10 402 (B)

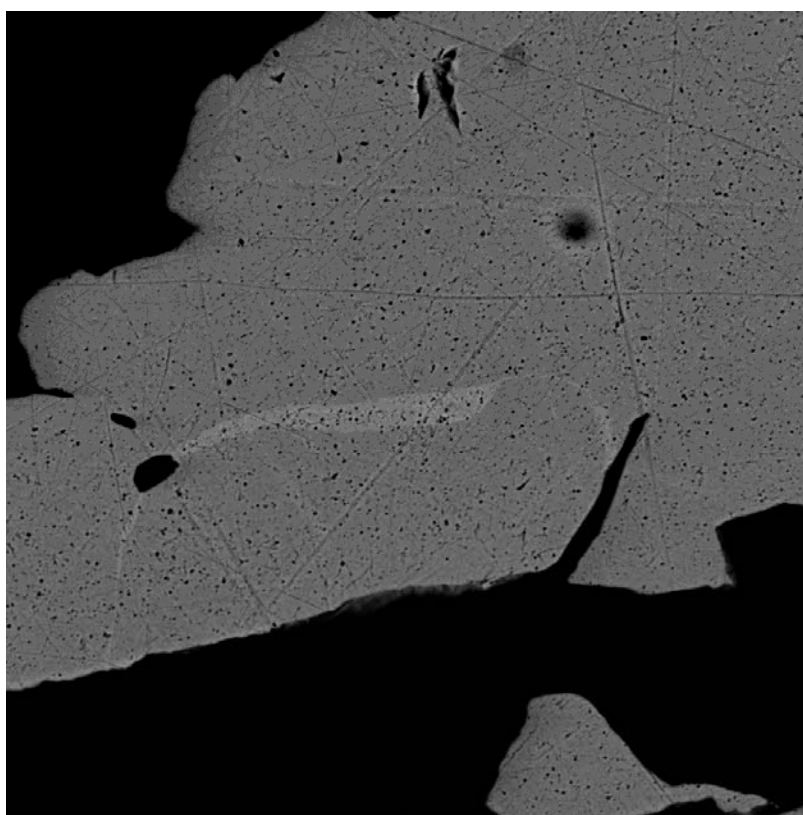




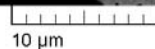
SEM HV: 20.00 kV WD: 15.46 mm 50 µm PROJ: DIS8  
 View field: 222.7 µm Det: BSE Mount : 7392  
 SEM MAG: 1.25 kx Date(m/d/y): 02/15/19 Sample : 886HM019  
 Grain : 10 101



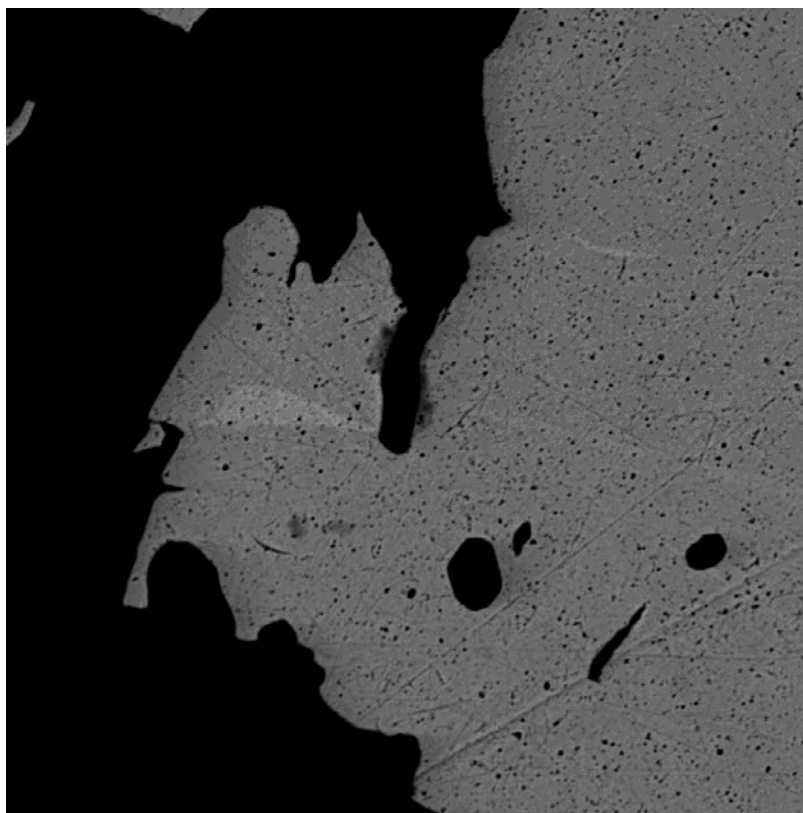
SEM HV: 20.00 kV WD: 15.46 mm 50 µm PROJ: DIS8  
 View field: 273.8 µm Det: BSE Mount : 7392  
 SEM MAG: 1.01 kx Date(m/d/y): 02/15/19 Sample : 886HM020  
 Grain : 10 102



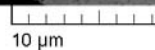
SEM HV: 20.00 kV WD: 15.47 mm  
 View field: 55.47  $\mu$ m Det: BSE  
 SEM MAG: 5.00 kx Date(m/d/y): 02/14/19



PROJ: DIS8  
 Mount : 7392  
 Sample : 886HM020  
 Grain : 10 102 (A)



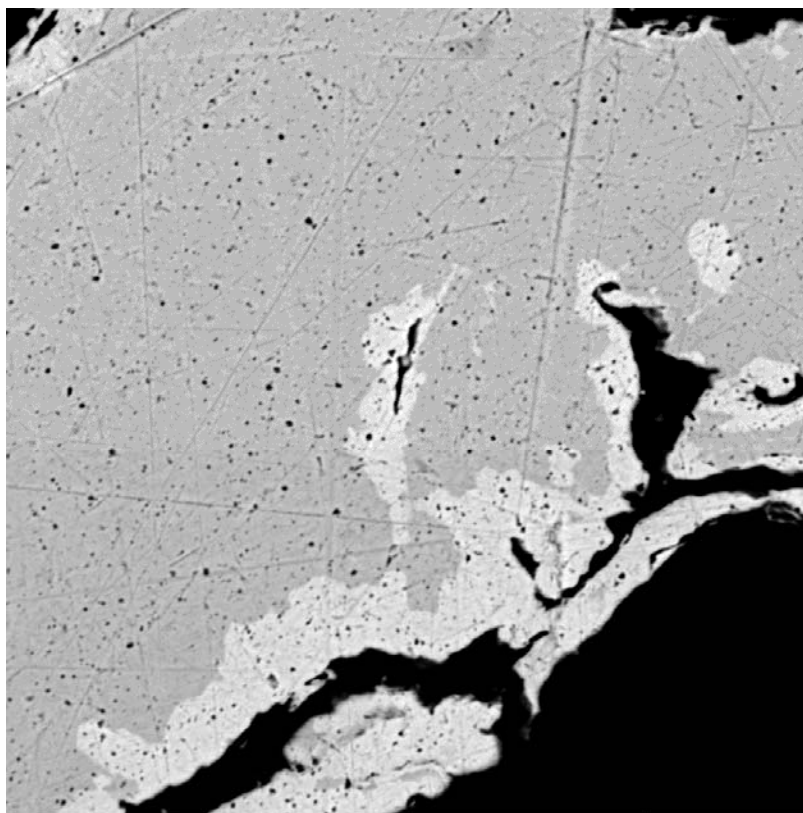
SEM HV: 20.00 kV WD: 15.45 mm  
 View field: 46.22  $\mu$ m Det: BSE  
 SEM MAG: 6.00 kx Date(m/d/y): 02/19/19



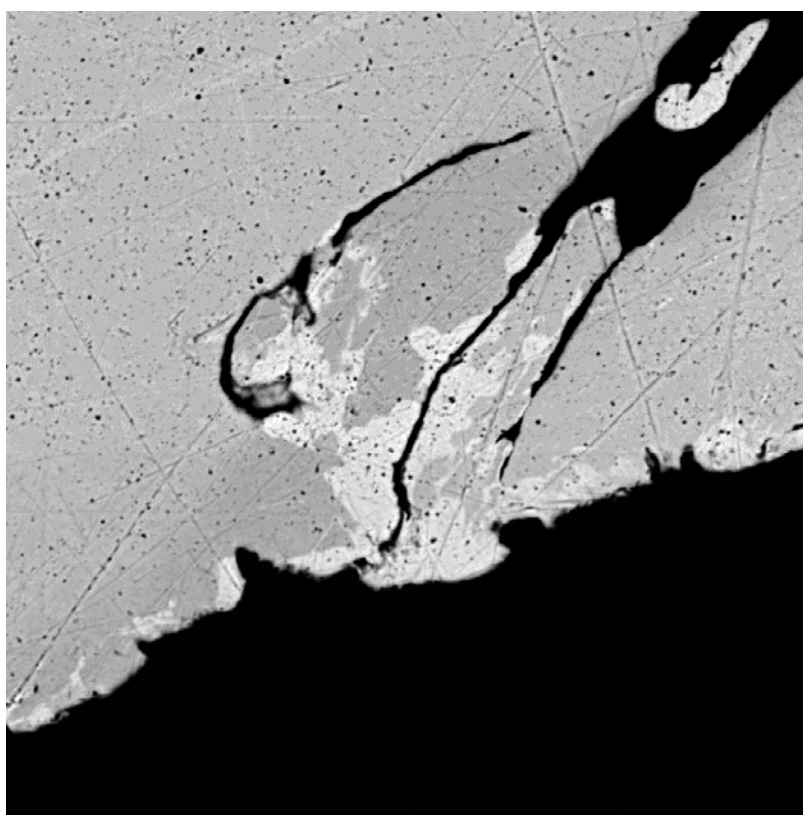
PROJ: DIS8  
 Mount : 7392  
 Sample : 886HM020  
 Grain : 10 102 (B)



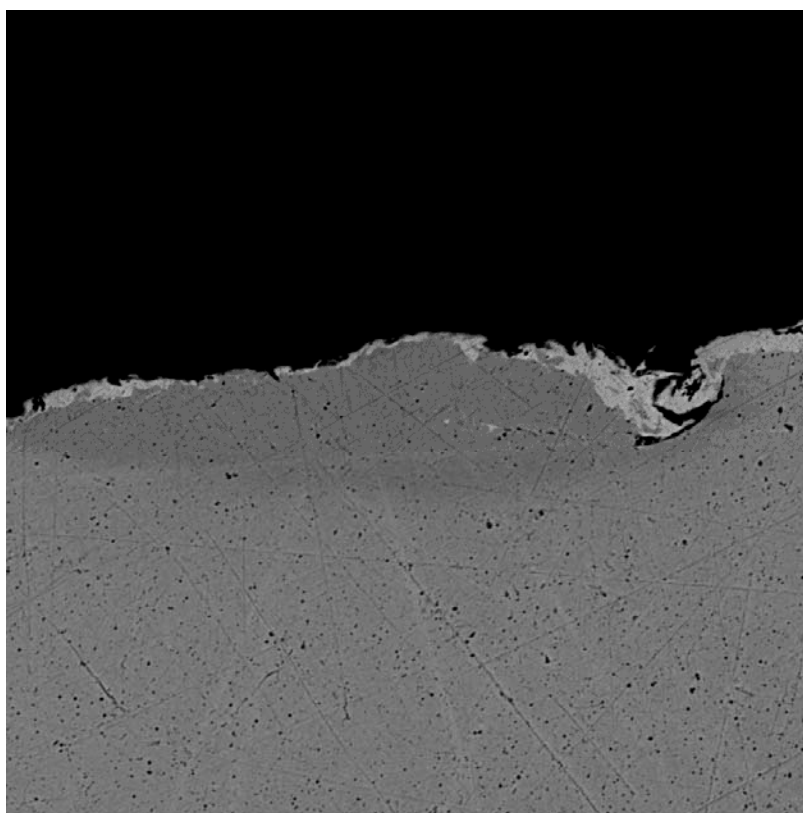
SEM HV: 20.00 kV WD: 15.46 mm 100 µm PROJ: DIS8  
 View field: 462.2 µm Det: BSE Mount : 7392  
 SEM MAG: 600 x Date(m/d/y): 02/15/19 Sample : 886HM020  
 Grain : 10 103



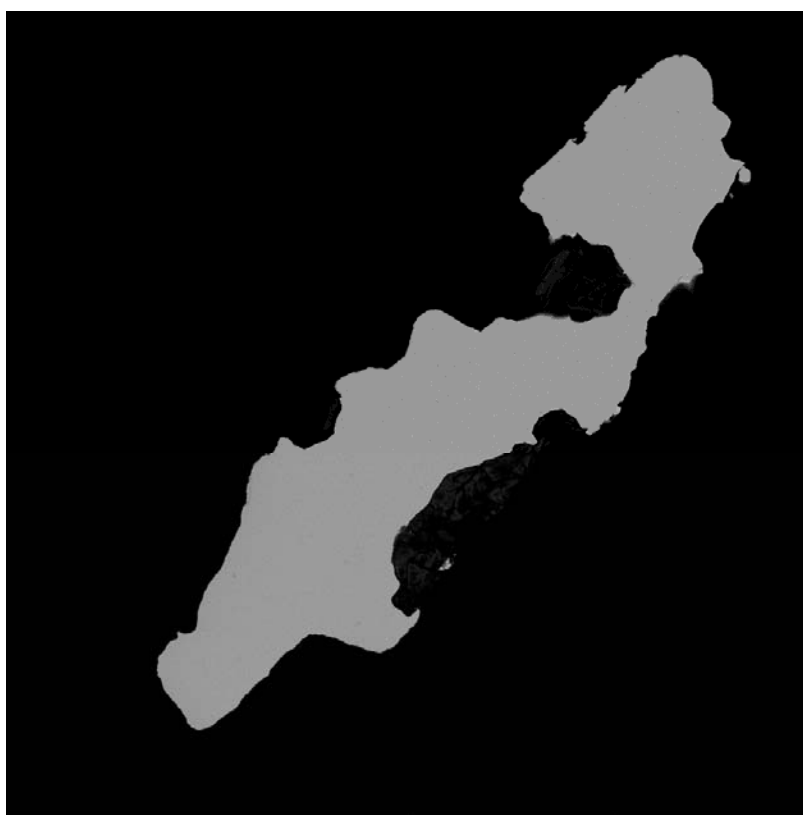
SEM HV: 20.00 kV WD: 15.47 mm 10 µm PROJ: DIS8  
 View field: 34.67 µm Det: BSE Mount : 7392  
 SEM MAG: 8.00 kx Date(m/d/y): 02/14/19 Sample : 886HM020  
 Grain : 10 103 (A)



SEM HV: 20.00 kV WD: 15.47 mm 10 µm PROJ: DIS8  
 View field: 39.62 µm Det: BSE Mount : 7392  
 SEM MAG: 7.00 kx Date(m/d/y): 02/14/19 Sample : 886HM020  
 Grain : 10 103 (B)



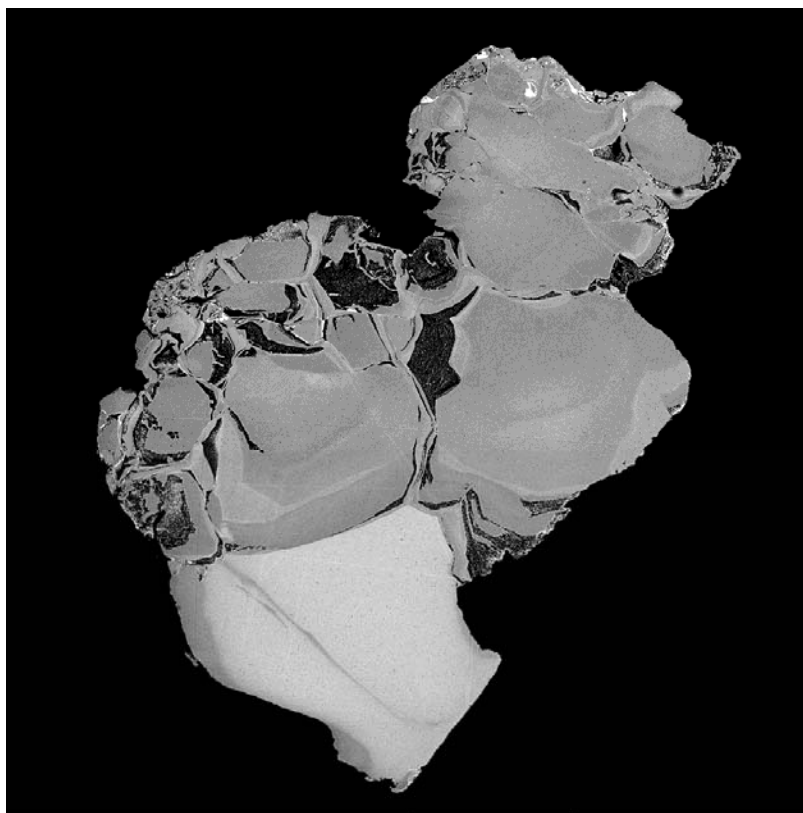
SEM HV: 20.00 kV WD: 15.46 mm 10 µm PROJ: DIS8  
 View field: 55.47 µm Det: BSE Mount : 7392  
 SEM MAG: 5.00 kx Date(m/d/y): 02/15/19 Sample : 886HM020  
 Grain : 10 103 (C)



SEM HV: 20.00 kV WD: 15.46 mm  
View field: 398.7  $\mu$ m Det: BSE  
SEM MAG: 696 x Date(m/d/y): 02/15/19

100  $\mu$ m

PROJ: DIS8  
Mount : 7392  
Sample : 886HM022  
Grain : 10 104

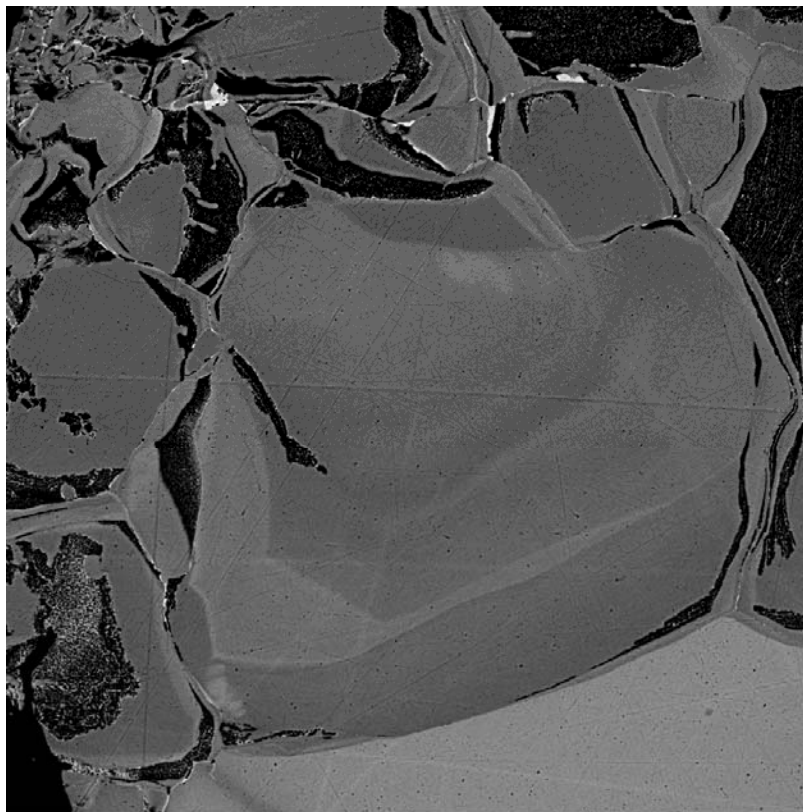


SEM HV: 20.00 kV WD: 15.46 mm  
View field: 255.2  $\mu$ m Det: BSE  
SEM MAG: 1.09 kx Date(m/d/y): 02/15/19

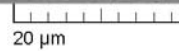
50  $\mu$ m

PROJ: DIS8  
Mount : 7392  
Sample : 886HM022  
Grain : 10 105

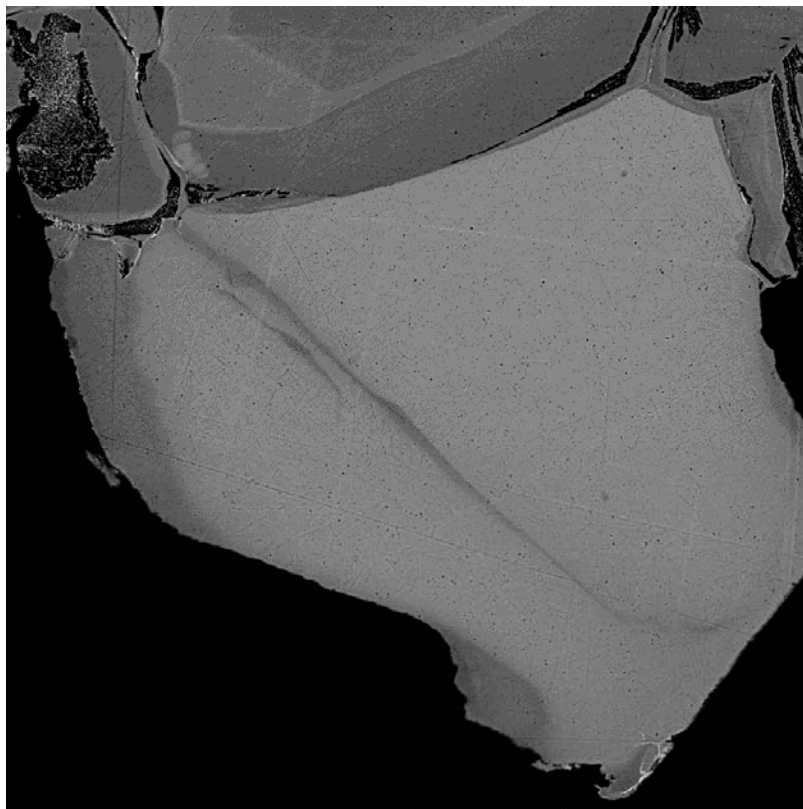




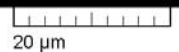
SEM HV: 20.00 kV WD: 15.47 mm  
View field: 92.44  $\mu$ m Det: BSE  
SEM MAG: 3.00 kx Date(m/d/y): 02/14/19



PROJ: DIS8  
Mount : 7392  
Sample : 886HM022  
Grain : 10 105 (A)

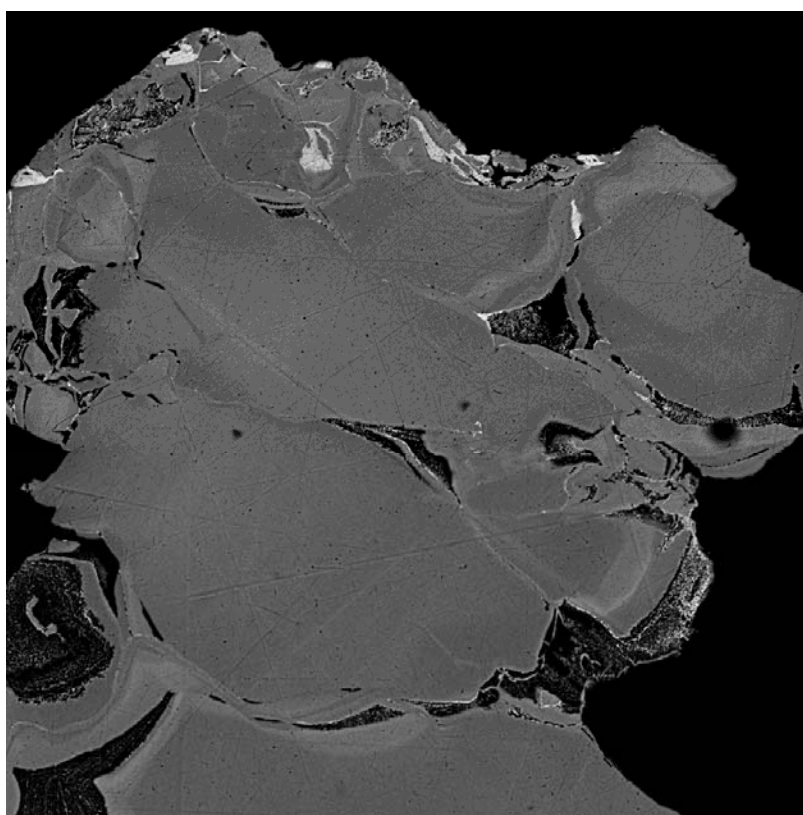


SEM HV: 20.00 kV WD: 15.47 mm  
View field: 103.2  $\mu$ m Det: BSE  
SEM MAG: 2.69 kx Date(m/d/y): 02/14/19



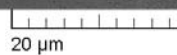
PROJ: DIS8  
Mount : 7392  
Sample : 886HM022  
Grain : 10 105 (B)



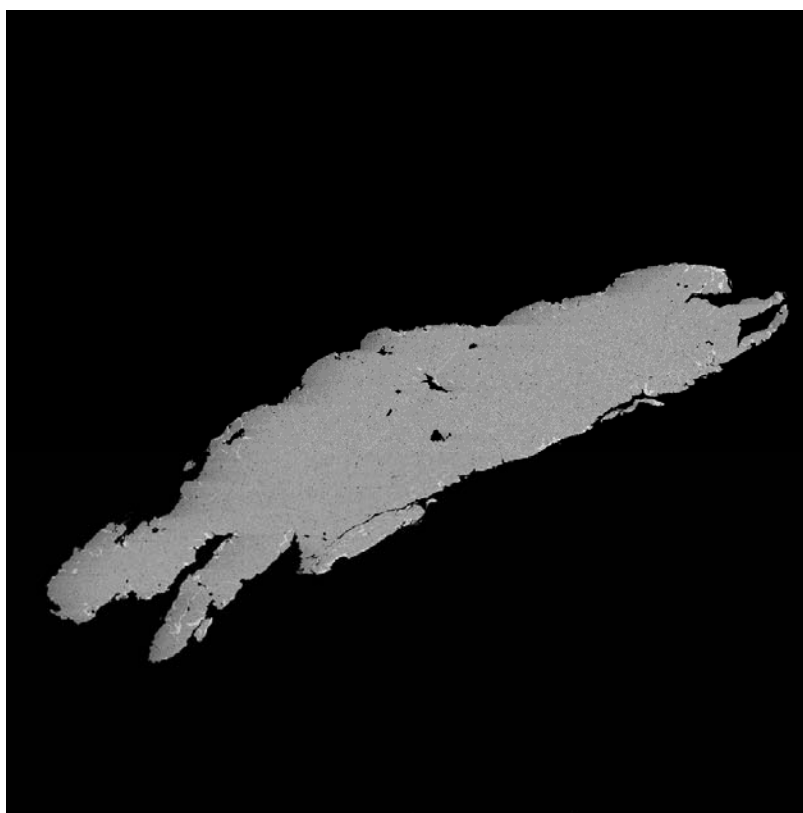


SEM HV: 20.00 kV  
View field: 92.44  $\mu$ m  
SEM MAG: 3.00 kx

WD: 15.47 mm  
Det: BSE  
Date(m/d/y): 02/14/19

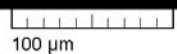


PROJ: DIS8  
Mount : 7392  
Sample : 886HM022  
Grain : 10 105 (C)

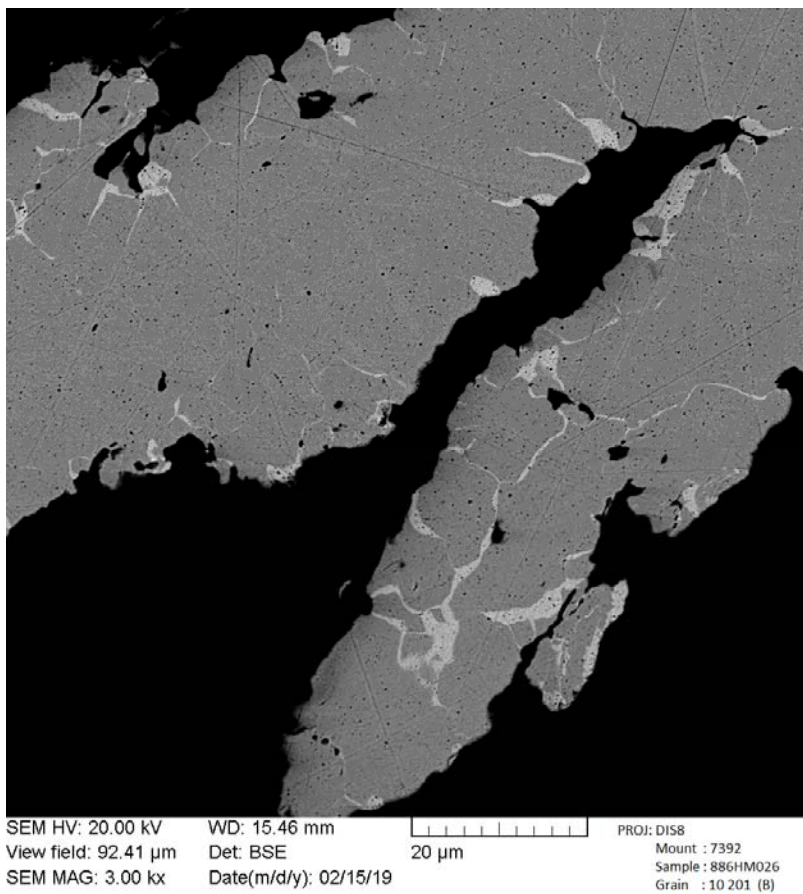
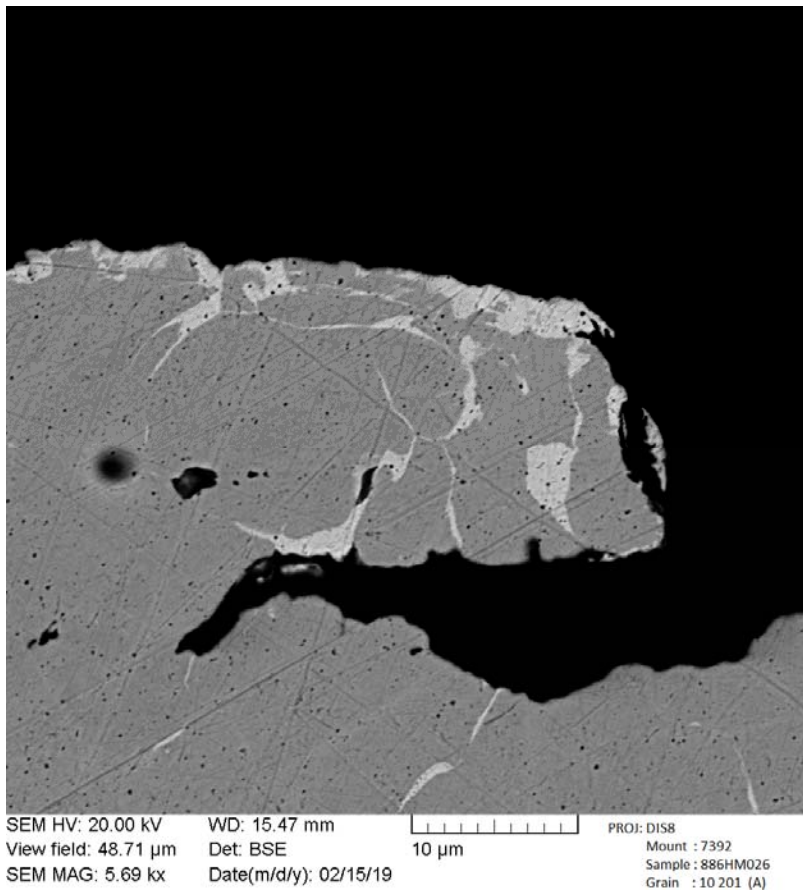


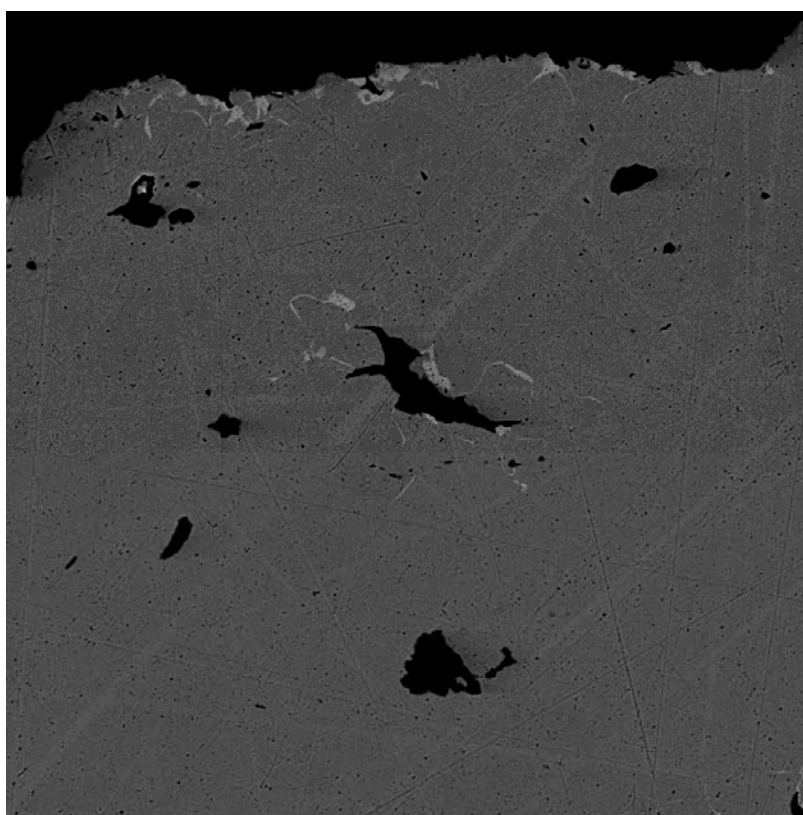
SEM HV: 20.00 kV  
View field: 502.3  $\mu$ m  
SEM MAG: 552 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

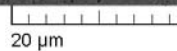


PROJ: DIS8  
Mount : 7392  
Sample : 886HM026  
Grain : 10 201

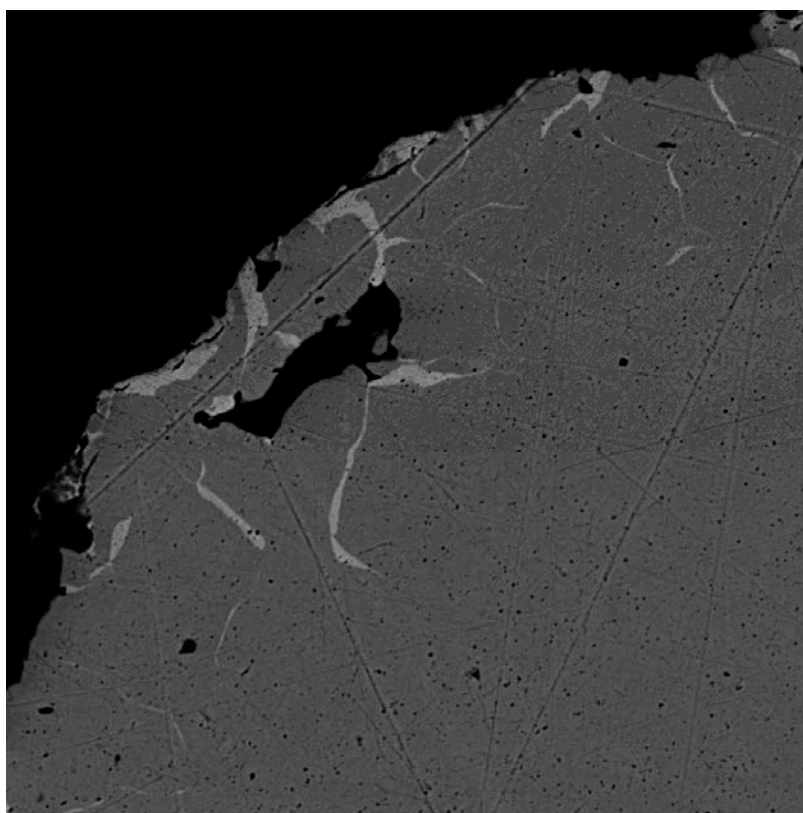




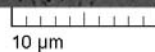
SEM HV: 20.00 kV WD: 15.45 mm  
View field: 92.44 μm Det: BSE  
SEM MAG: 3.00 kx Date(m/d/y): 02/19/19



PROJ: DIS8  
Mount : 7392  
Sample : 886HM026  
Grain : 10 201 (C)



SEM HV: 20.00 kV WD: 15.45 mm  
View field: 55.47 μm Det: BSE  
SEM MAG: 5.00 kx Date(m/d/y): 02/19/19



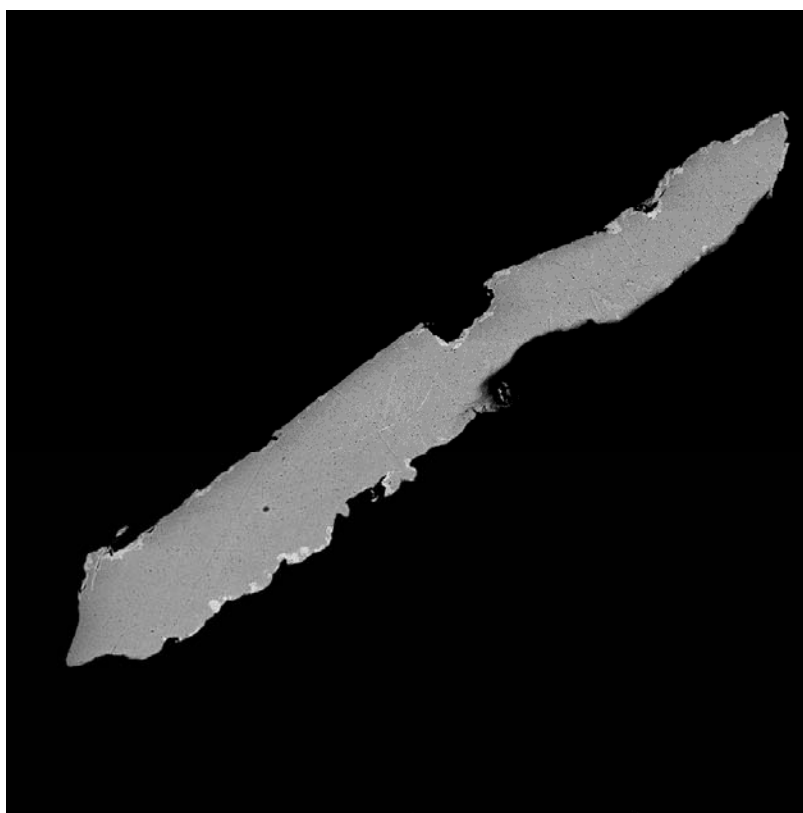
PROJ: DIS8  
Mount : 7392  
Sample : 886HM026  
Grain : 10 201 (D)



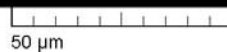
SEM HV: 20.00 kV WD: 15.46 mm  
 View field: 236.7  $\mu$ m Det: BSE  
 SEM MAG: 1.17 kx Date(m/d/y): 02/15/19



PROJ: DIS8  
 Mount : 7392  
 Sample : 886HM036  
 Grain : 10 202

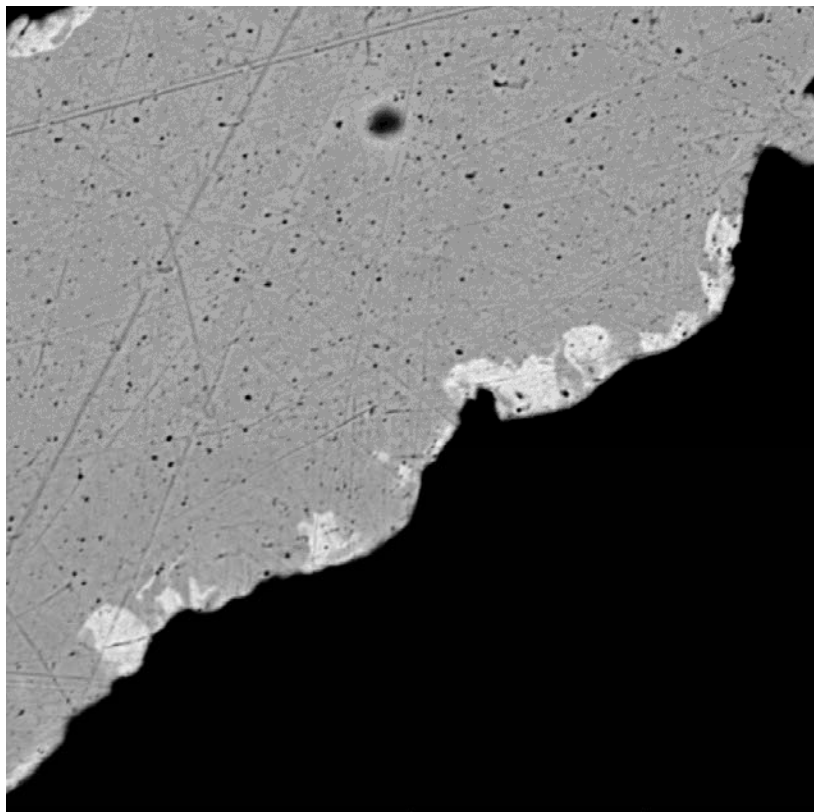


SEM HV: 20.00 kV WD: 15.46 mm  
 View field: 183.8  $\mu$ m Det: BSE  
 SEM MAG: 1.51 kx Date(m/d/y): 02/15/19

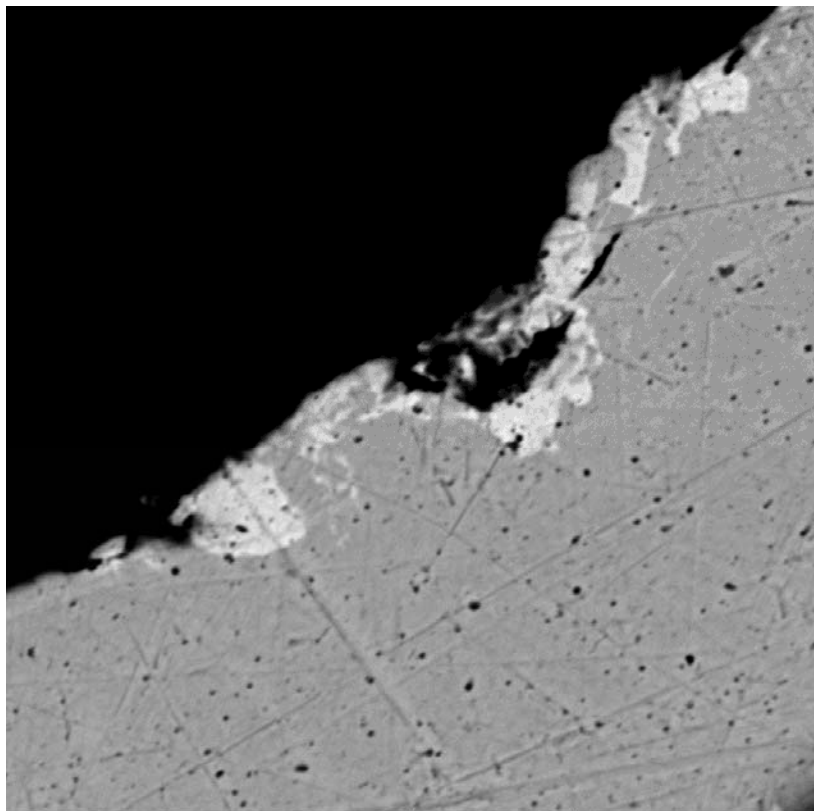


PROJ: DIS8  
 Mount : 7392  
 Sample : 886HM036  
 Grain : 10 203

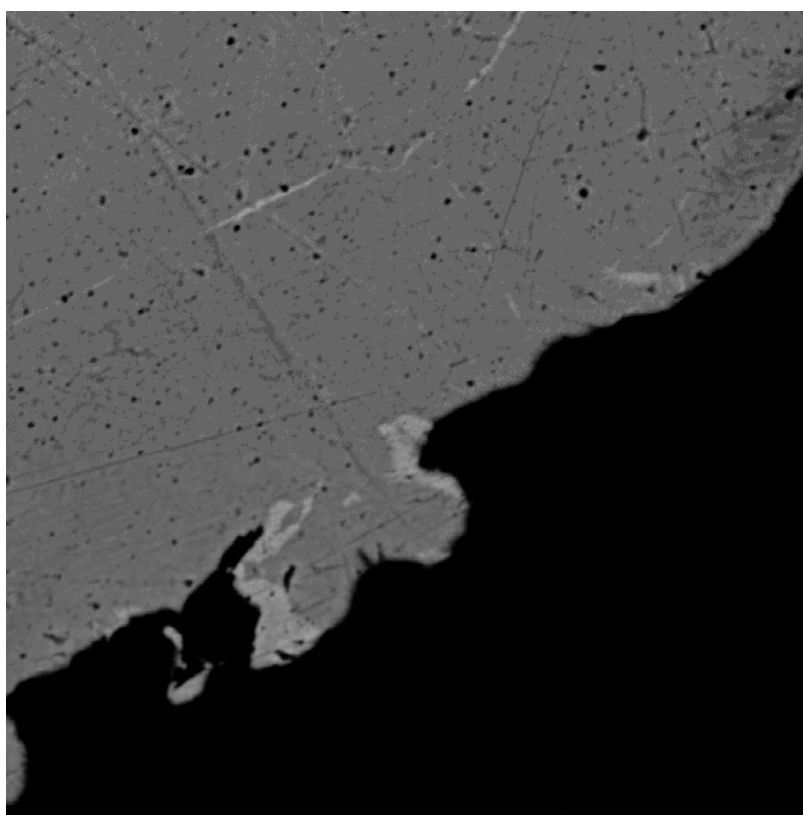




SEM HV: 20.00 kV WD: 15.46 mm 10  $\mu$ m PROJ: DIS8  
 View field: 34.67  $\mu$ m Det: BSE Mount : 7392  
 SEM MAG: 8.00 kx Date(m/d/y): 02/15/19 Sample : 886HM036  
 Grain : 10 203 (A)



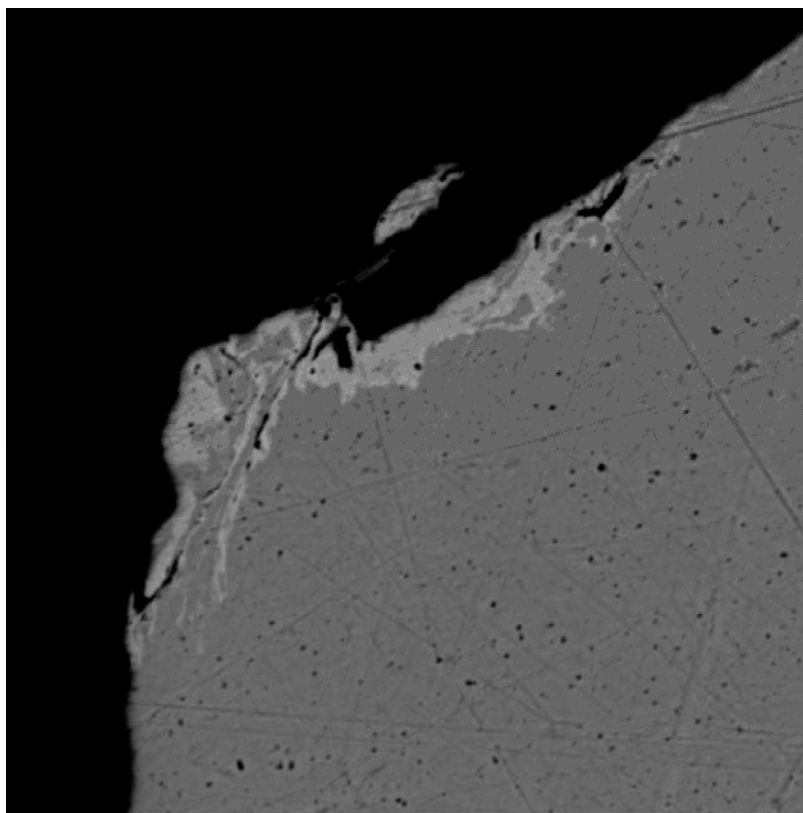
SEM HV: 20.00 kV WD: 15.46 mm 5  $\mu$ m PROJ: DIS8  
 View field: 25.08  $\mu$ m Det: BSE Mount : 7392  
 SEM MAG: 11.06 kx Date(m/d/y): 02/15/19 Sample : 886HM036  
 Grain : 10 203 (B)



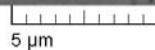
SEM HV: 20.00 kV WD: 15.45 mm  
View field: 27.73  $\mu$ m Det: BSE  
SEM MAG: 10.00 kx Date(m/d/y): 02/19/19



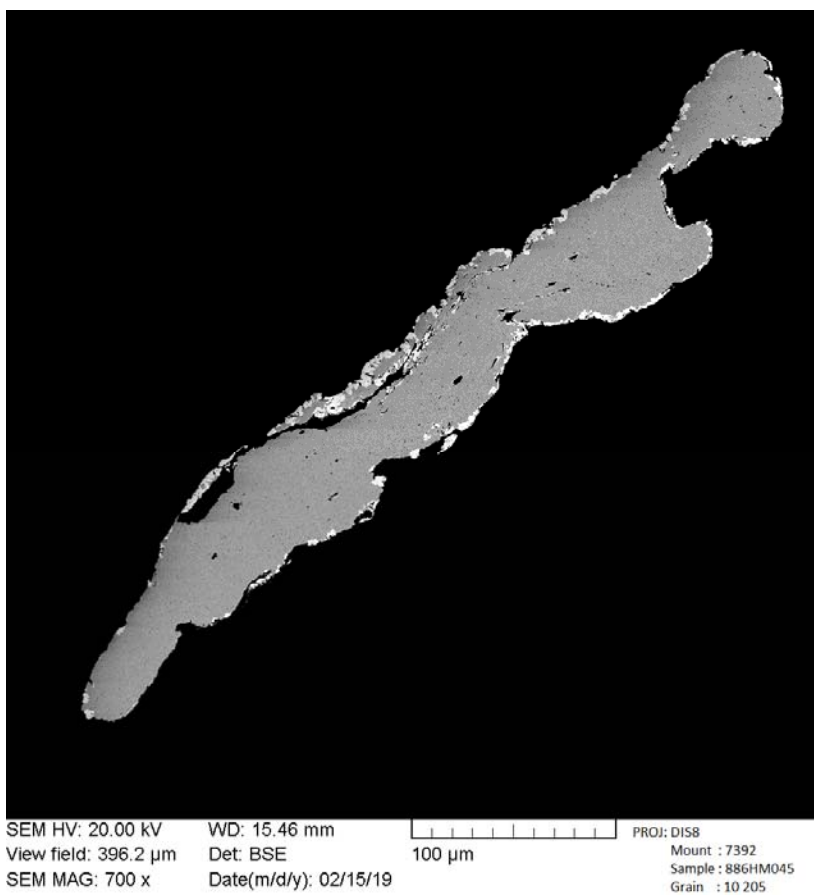
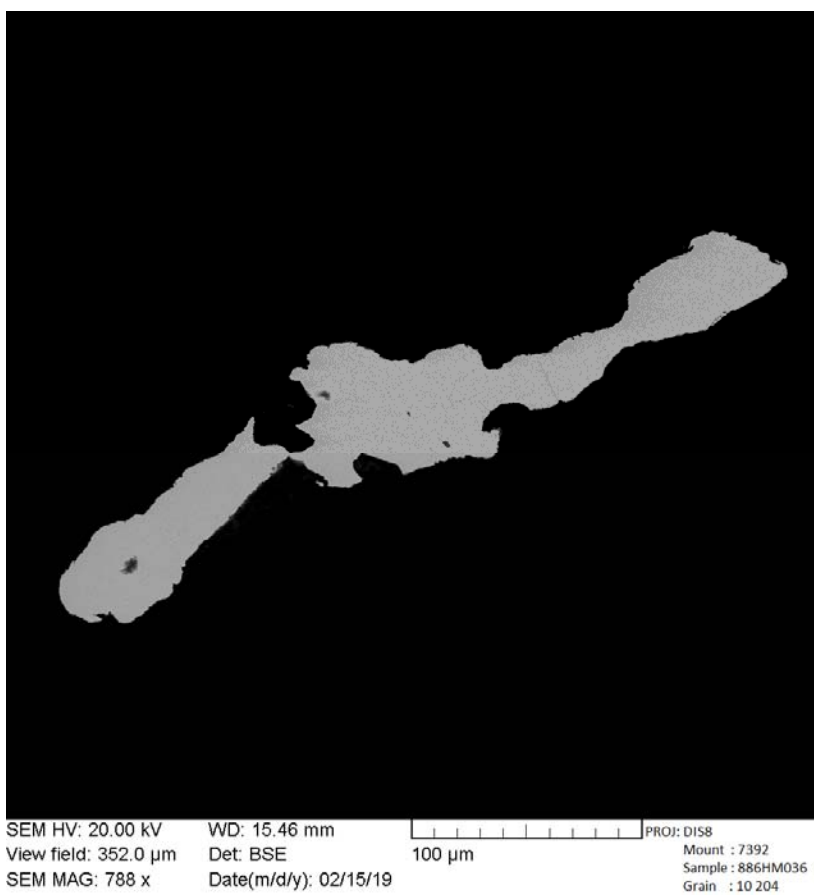
PROJ: DIS8  
Mount : 7392  
Sample : 886HM036  
Grain : 10 203 (C)



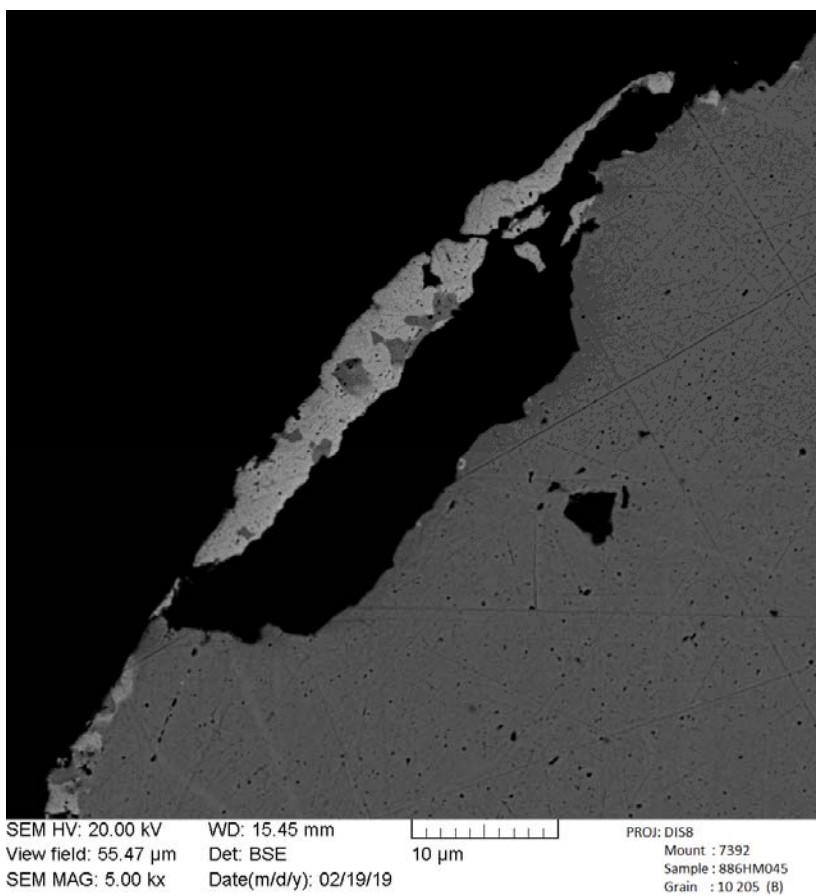
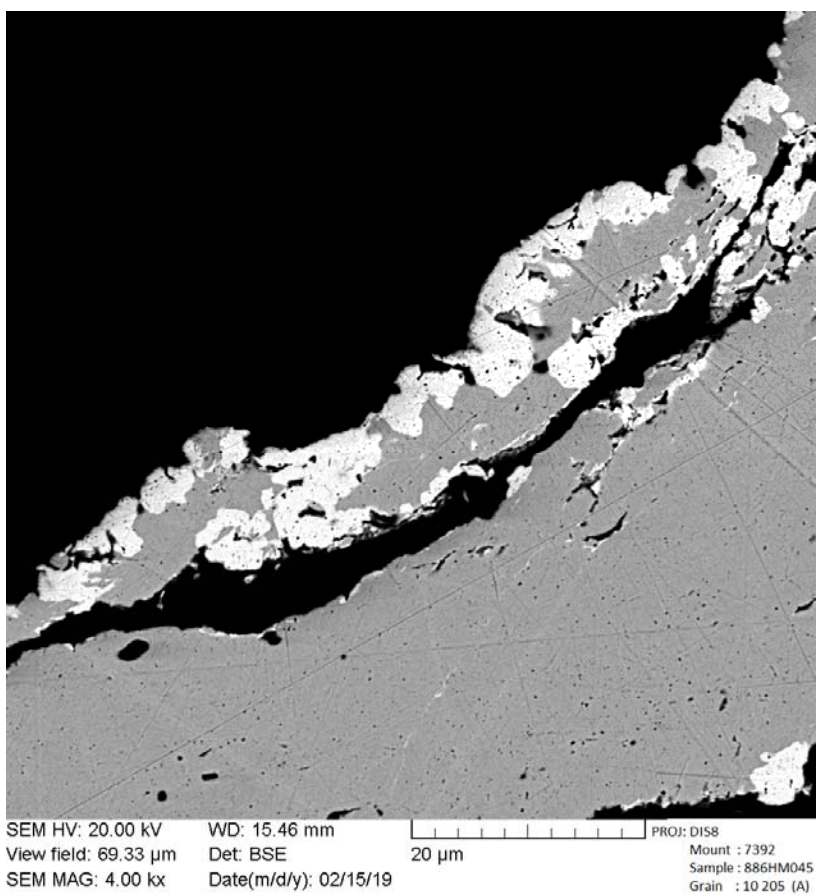
SEM HV: 20.00 kV WD: 15.45 mm  
View field: 27.73  $\mu$ m Det: BSE  
SEM MAG: 10.00 kx Date(m/d/y): 02/19/19

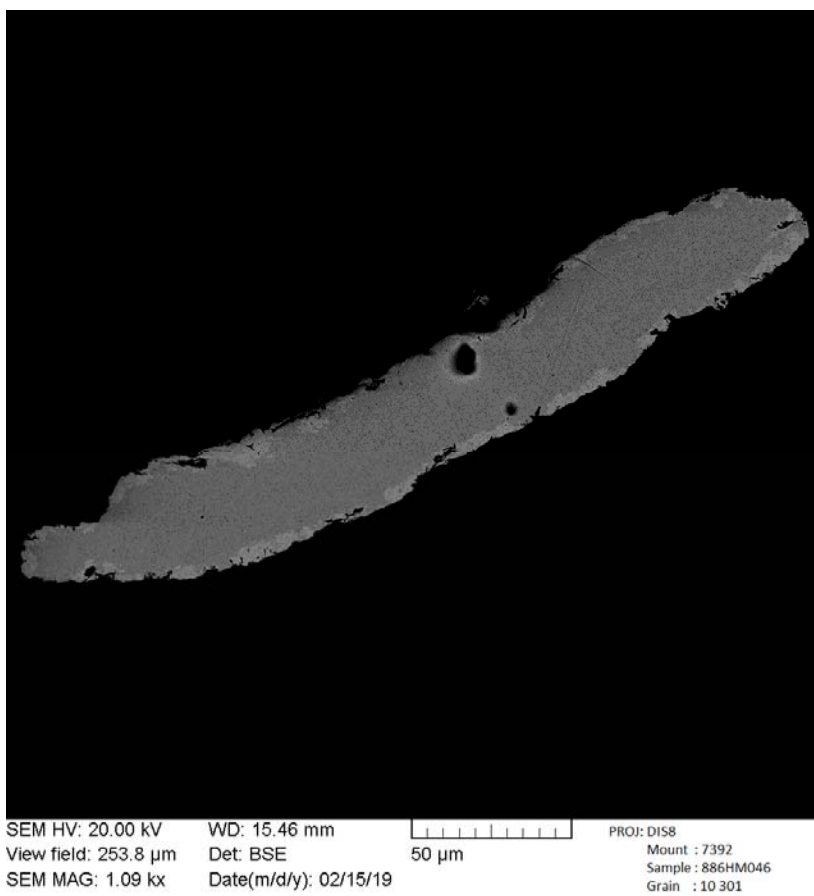
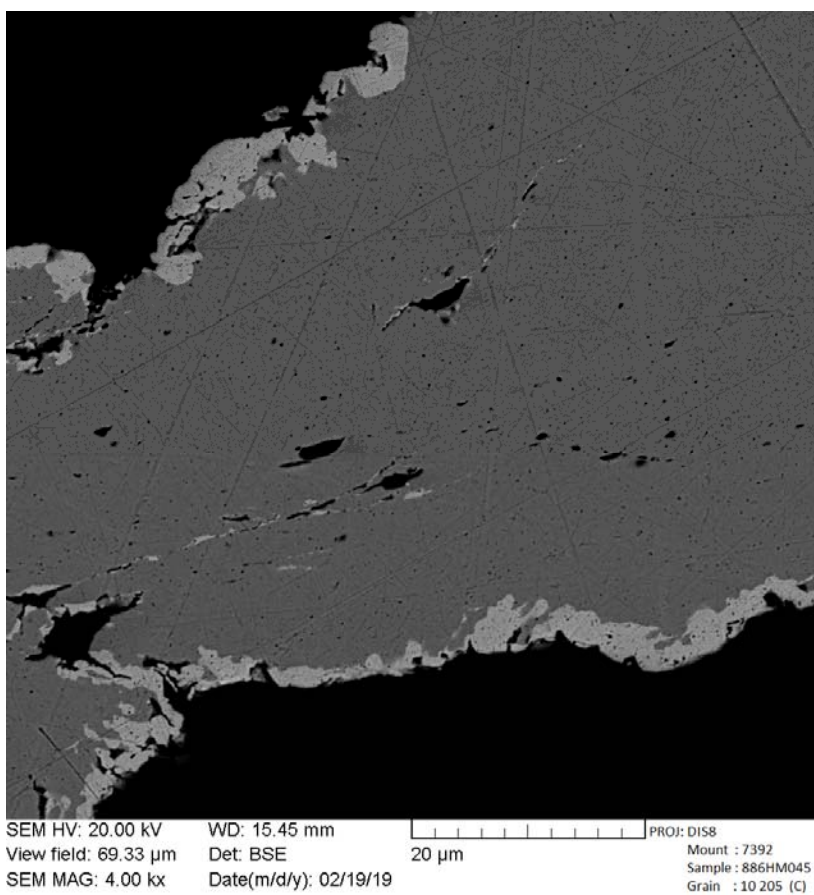


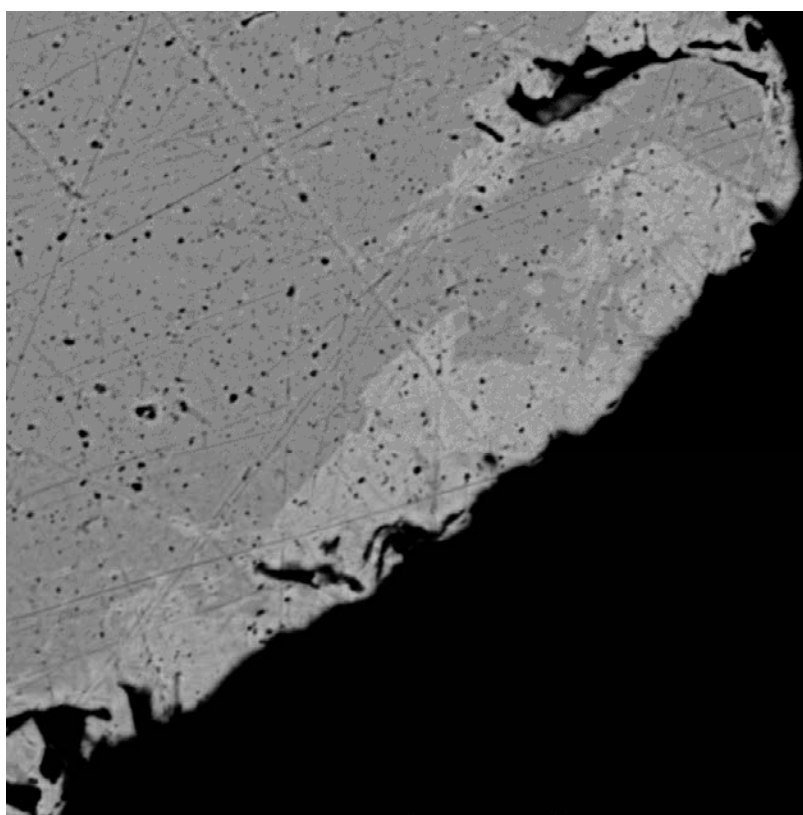
PROJ: DIS8  
Mount : 7392  
Sample : 886HM036  
Grain : 10 203 (D)







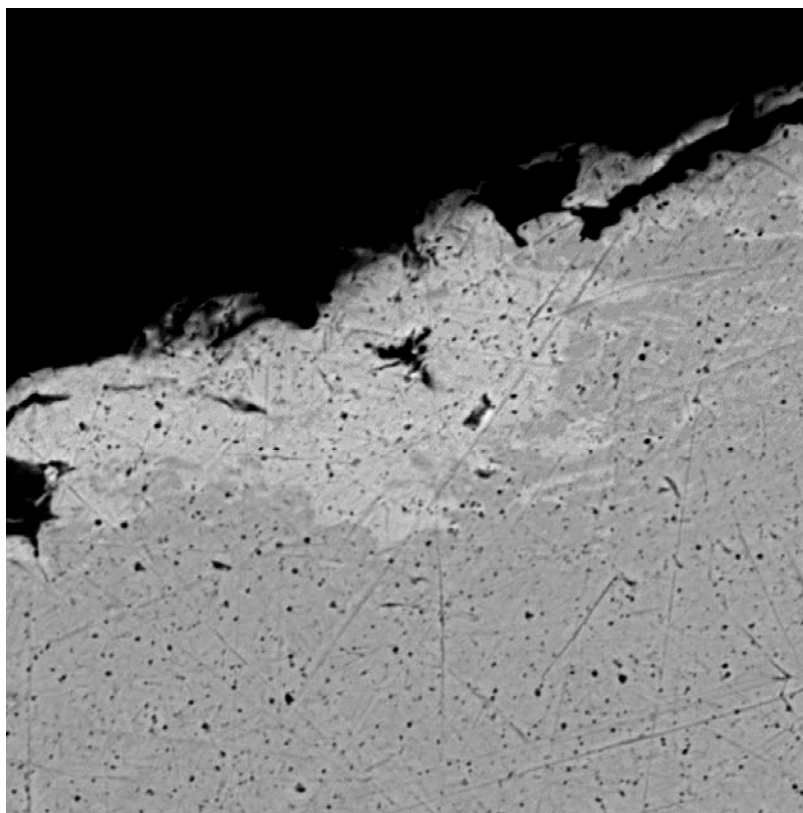




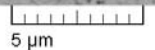
SEM HV: 20.00 kV WD: 15.47 mm  
View field: 27.73  $\mu$ m Det: BSE  
SEM MAG: 10.00 kx Date(m/d/y): 02/14/19



PROJ: DIS8  
Mount : 7392  
Sample : 886HM046  
Grain : 10 301 (A)



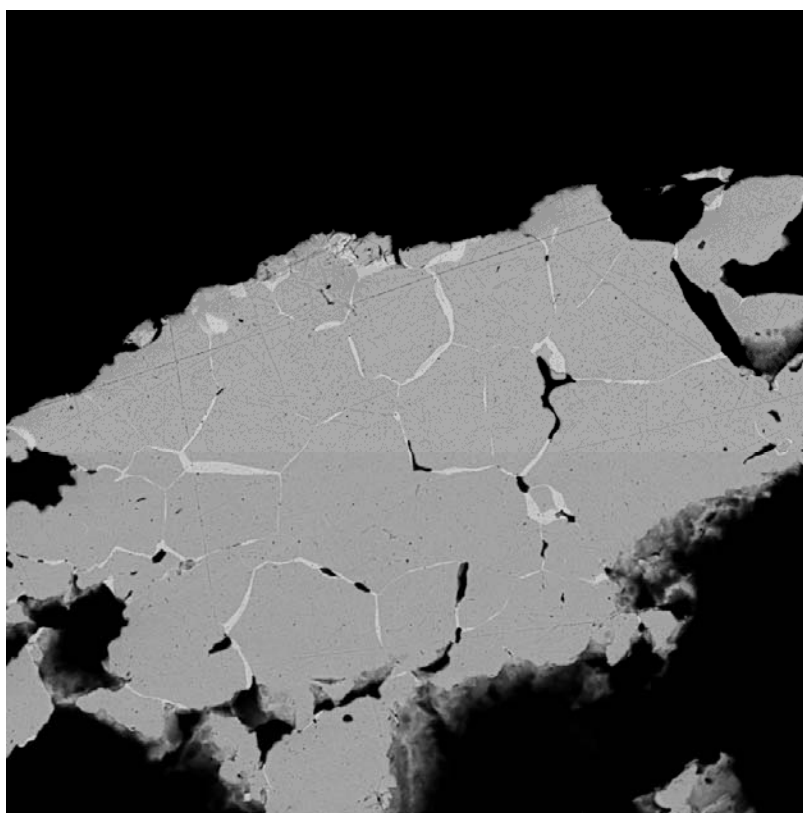
SEM HV: 20.00 kV WD: 15.47 mm  
View field: 30.82  $\mu$ m Det: BSE  
SEM MAG: 9.00 kx Date(m/d/y): 02/14/19



PROJ: DIS8  
Mount : 7392  
Sample : 886HM046  
Grain : 10 301 (B)



SEM HV: 20.00 kV WD: 15.46 mm 100  $\mu$ m PROJ: DIS8  
 View field: 396.2  $\mu$ m Det: BSE Mount : 7392  
 SEM MAG: 700 x Date(m/d/y): 02/15/19 Sample : 886HM047  
 Grain : 10 302

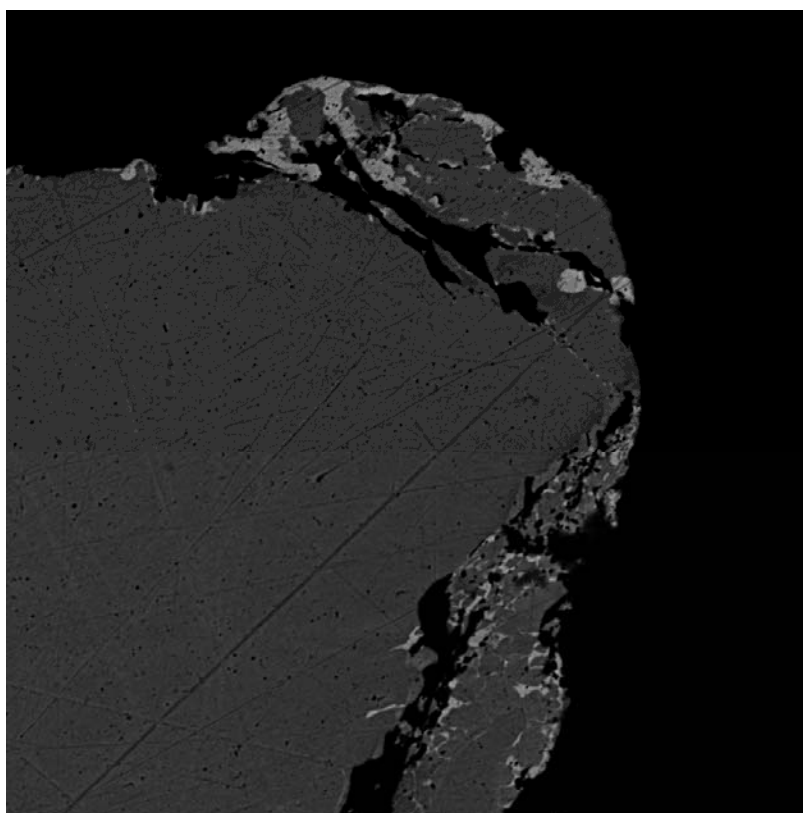


SEM HV: 20.00 kV WD: 15.47 mm 20  $\mu$ m PROJ: DIS8  
 View field: 92.44  $\mu$ m Det: BSE Mount : 7392  
 SEM MAG: 3.00 kx Date(m/d/y): 02/14/19 Sample : 886HM047  
 Grain : 10 302 (A)



SEM HV: 20.00 kV WD: 15.46 mm  
View field: 225.5  $\mu$ m Det: BSE  
SEM MAG: 1.23 kx Date(m/d/y): 02/15/19

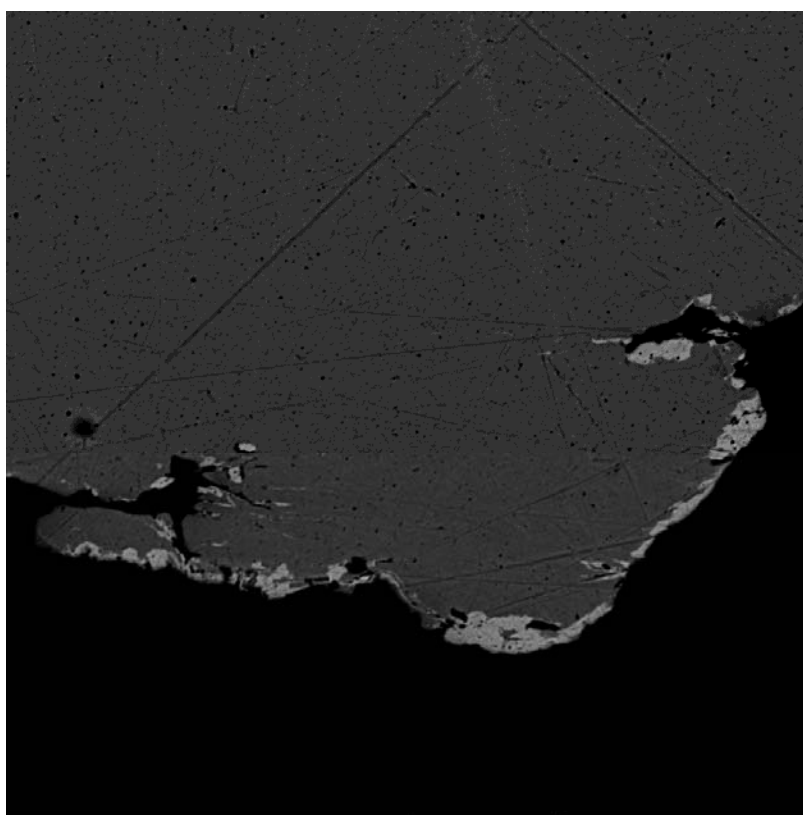
PROJ: DIS8  
Mount : 7392  
Sample : 886HM049  
Grain : 10 303



SEM HV: 20.00 kV WD: 15.45 mm  
View field: 55.47  $\mu$ m Det: BSE  
SEM MAG: 5.00 kx Date(m/d/y): 02/19/19

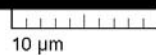
PROJ: DIS8  
Mount : 7392  
Sample : 886HM049  
Grain : 10 303 (A)



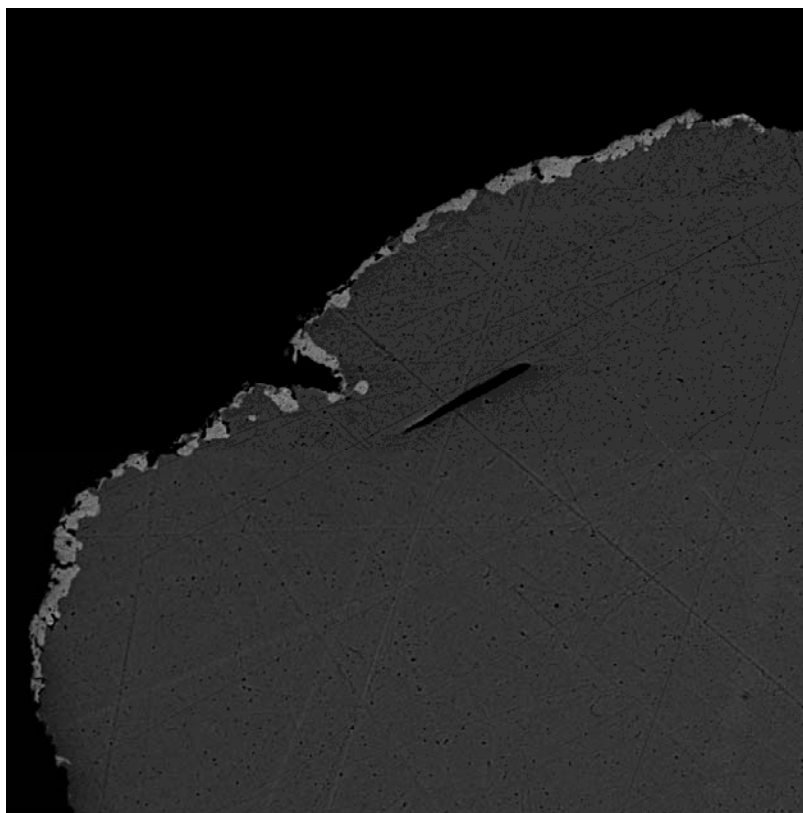


SEM HV: 20.00 kV  
View field: 55.47  $\mu$ m  
SEM MAG: 5.00 kx

WD: 15.45 mm  
Det: BSE  
Date(m/d/y): 02/19/19

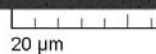


PROJ: DIS8  
Mount : 7392  
Sample : 886HM049  
Grain : 10 303 (B)

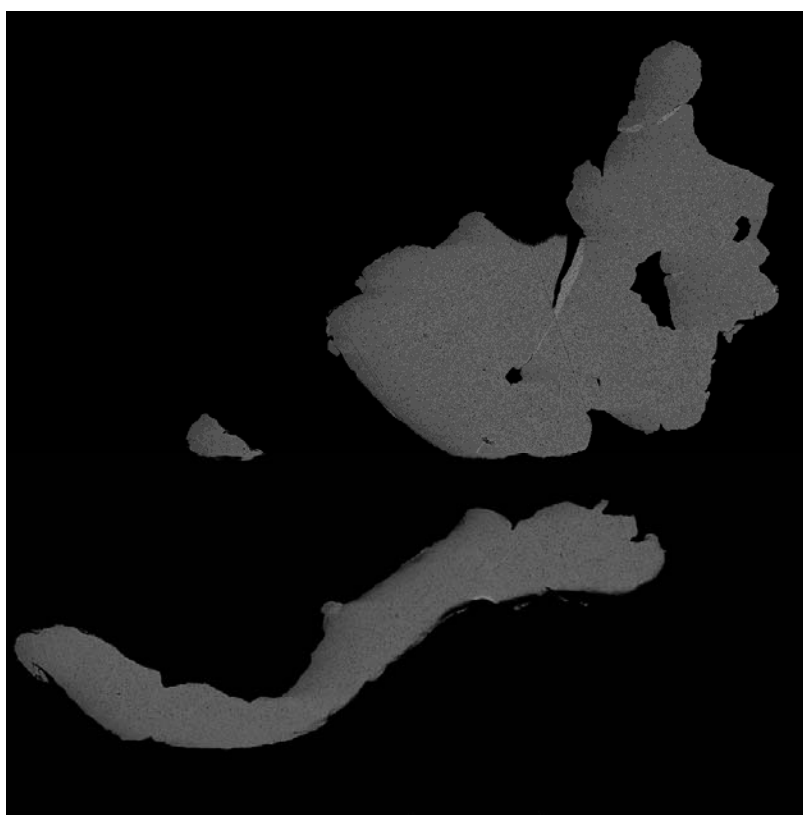


SEM HV: 20.00 kV  
View field: 69.33  $\mu$ m  
SEM MAG: 4.00 kx

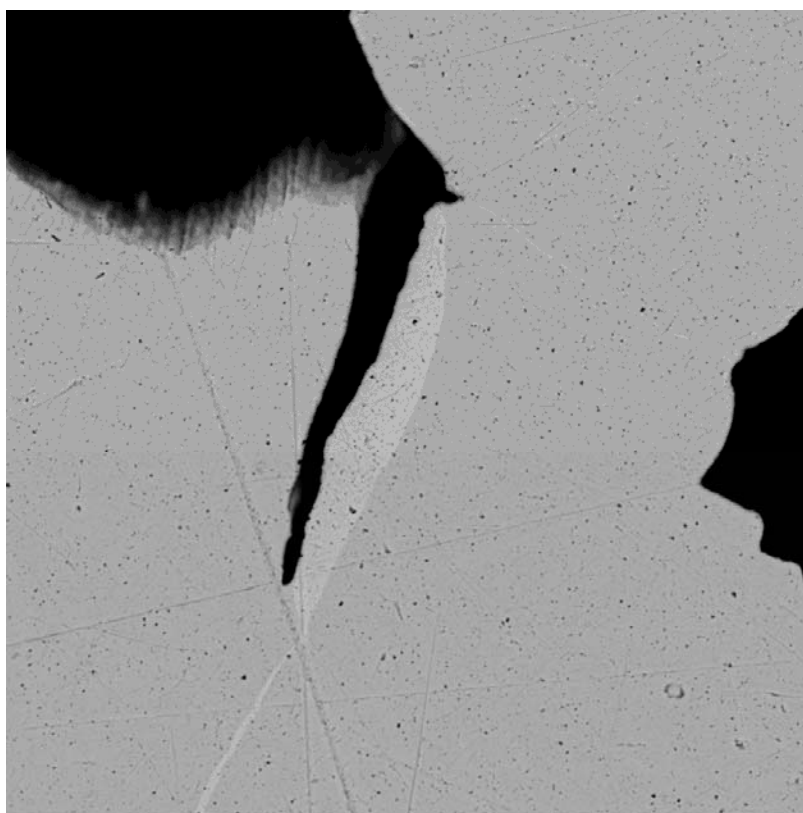
WD: 15.45 mm  
Det: BSE  
Date(m/d/y): 02/19/19



PROJ: DIS8  
Mount : 7392  
Sample : 886HM049  
Grain : 10 303 (C)

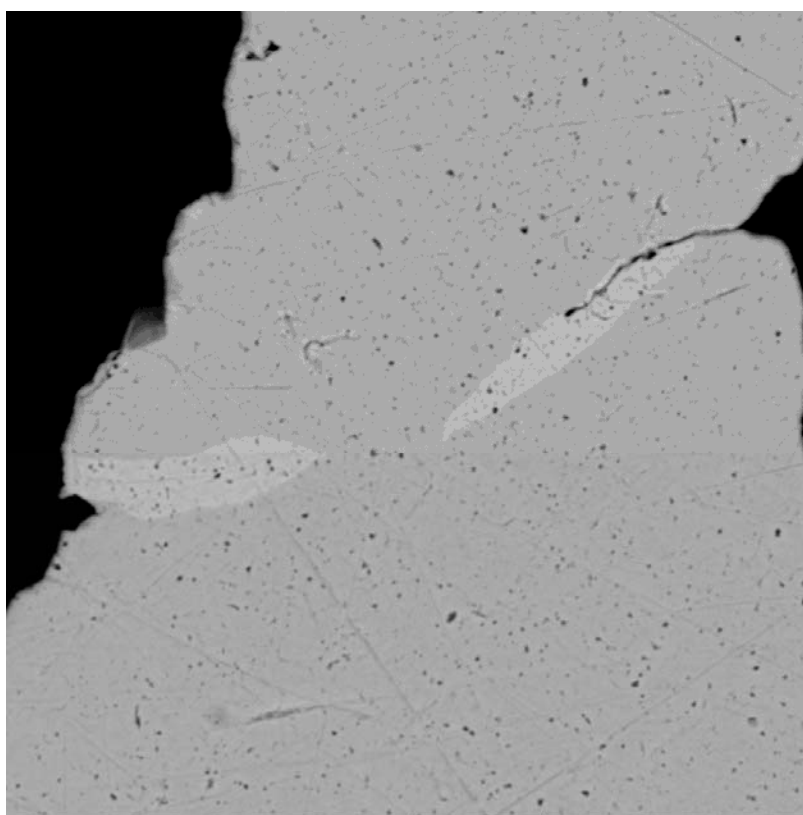


SEM HV: 20.00 kV WD: 15.46 mm 50 µm  
 View field: 299.0 µm Det: BSE  
 SEM MAG: 927 x Date(m/d/y): 02/15/19  
 PROJ: DIS8  
 Mount : 7392  
 Sample : 886HM050  
 Grain : 10 304



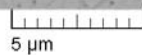
SEM HV: 20.00 kV WD: 15.47 mm 10 µm  
 View field: 55.47 µm Det: BSE  
 SEM MAG: 5.00 kx Date(m/d/y): 02/14/19  
 PROJ: DIS8  
 Mount : 7392  
 Sample : 886HM050  
 Grain : 10 304 (A)



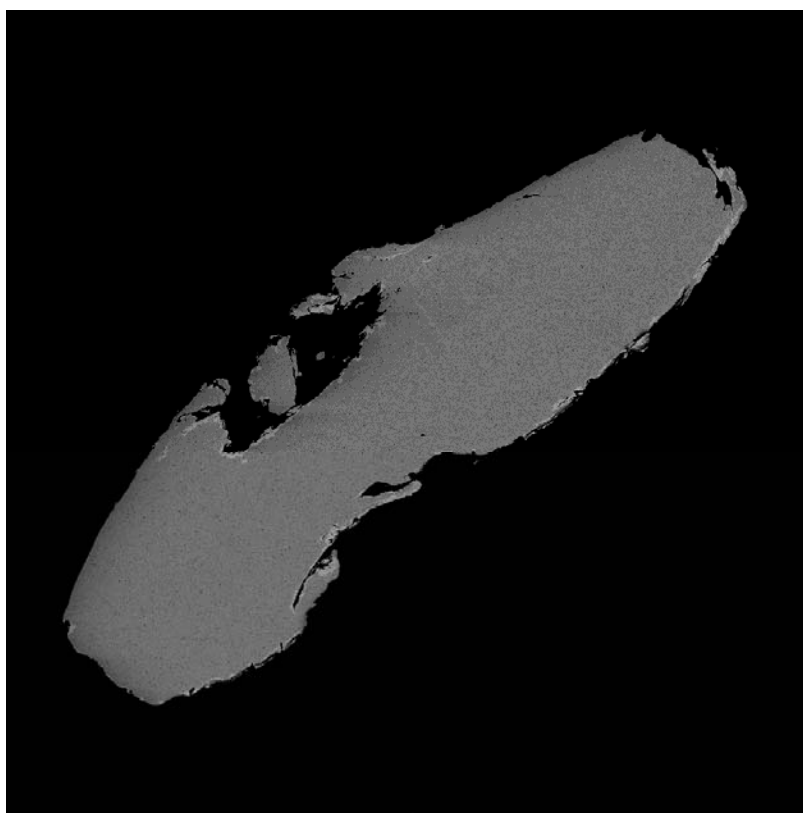


SEM HV: 20.00 kV  
View field: 30.82 μm  
SEM MAG: 9.00 kx

WD: 15.47 mm  
Det: BSE  
Date(m/d/y): 02/14/19

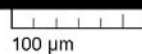


PROJ: DIS8  
Mount : 7392  
Sample : 886HM050  
Grain : 10 304 (B)

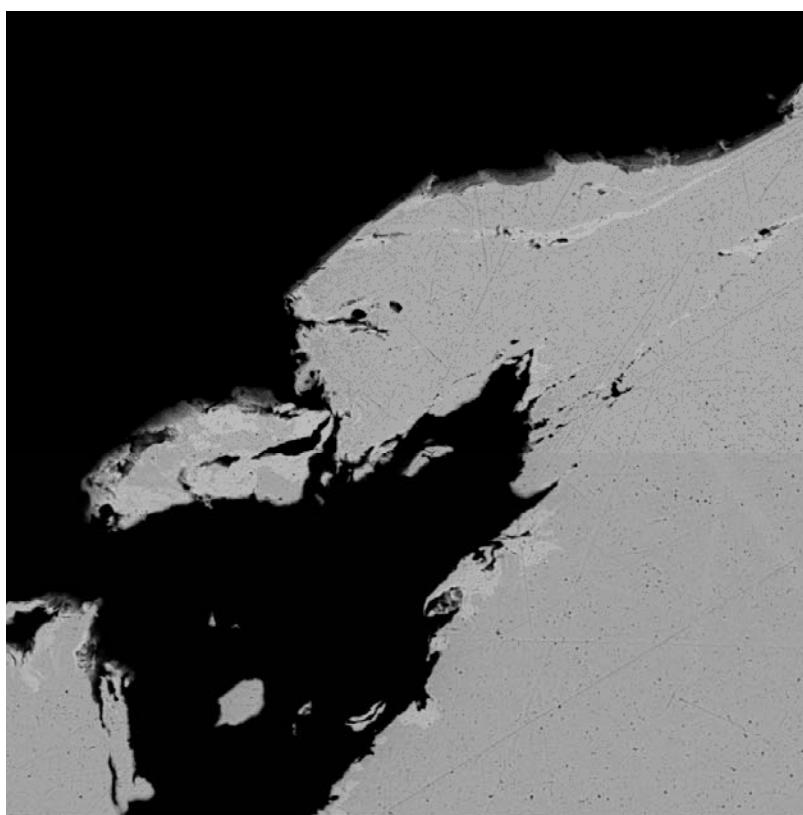


SEM HV: 20.00 kV  
View field: 361.9 μm  
SEM MAG: 766 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

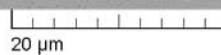


PROJ: DIS8  
Mount : 7392  
Sample : 886HM039  
Grain : 10 305

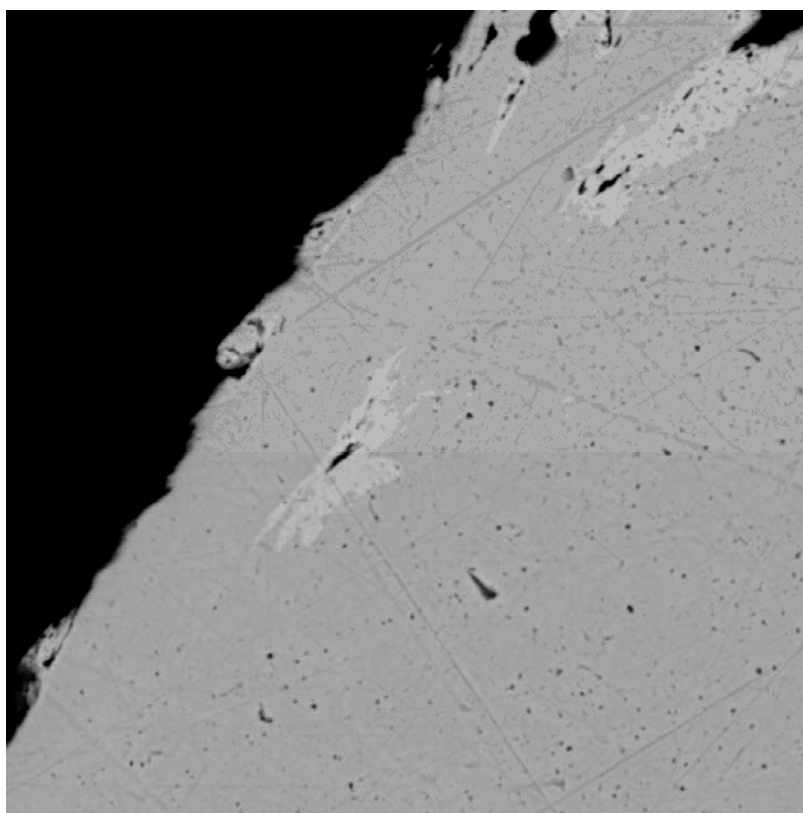


SEM HV: 20.00 kV  
View field: 75.23 μm  
SEM MAG: 3.69 kx

WD: 15.47 mm  
Det: BSE  
Date(m/d/y): 02/14/19

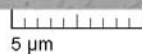


PROJ: DIS8  
Mount : 7392  
Sample : 886HM039  
Grain : 10 305 (A)

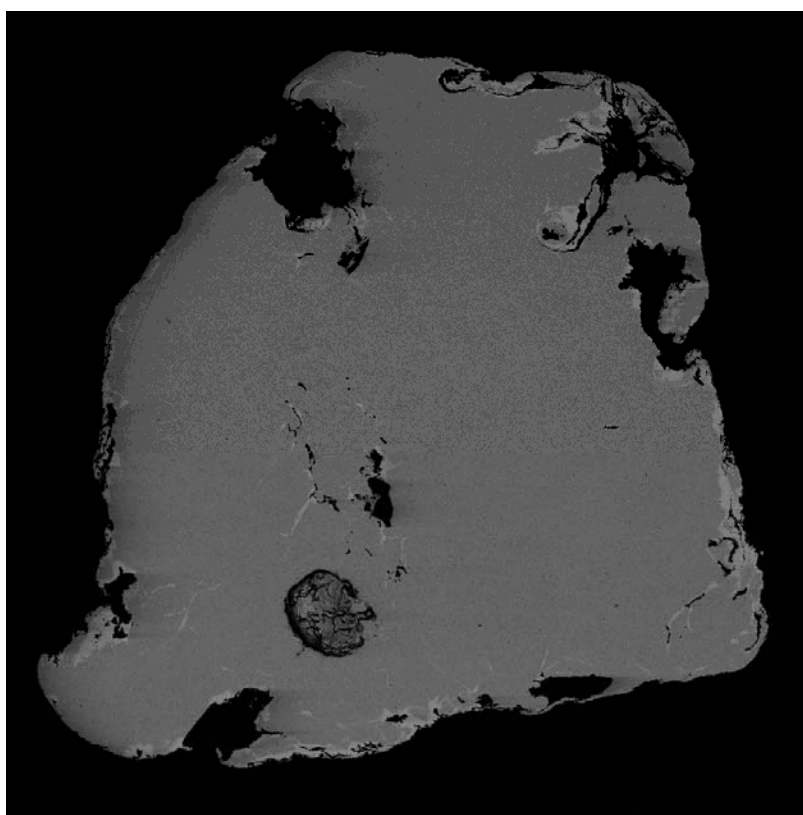


SEM HV: 20.00 kV  
View field: 30.82 μm  
SEM MAG: 9.00 kx

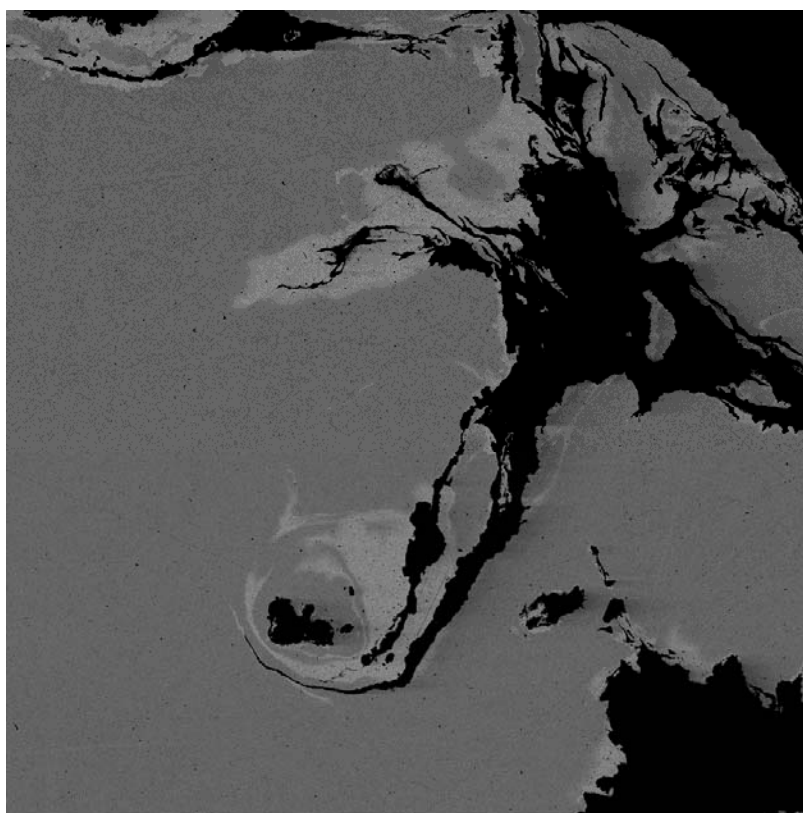
WD: 15.47 mm  
Det: BSE  
Date(m/d/y): 02/14/19



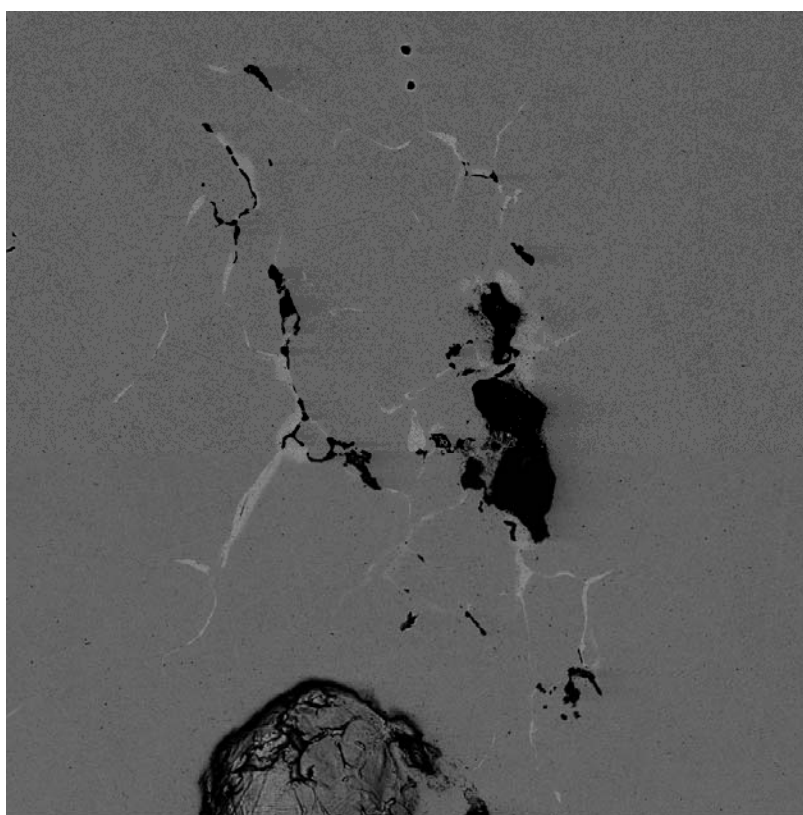
PROJ: DIS8  
Mount : 7392  
Sample : 886HM039  
Grain : 10 305 (B)



SEM HV: 20.00 kV WD: 15.46 mm 500  $\mu$ m PROJ: DIS8  
 View field: 1.81 mm Det: BSE Mount : 7393  
 SEM MAG: 153 x Date(m/d/y): 02/15/19 Sample : 886PL002  
 Grain : 10 101

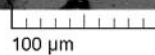


SEM HV: 20.00 kV WD: 15.46 mm 100  $\mu$ m PROJ: DIS8  
 View field: 462.2  $\mu$ m Det: BSE Mount : 7393  
 SEM MAG: 600 x Date(m/d/y): 02/15/19 Sample : 886PL002  
 Grain : 10 101 (A)

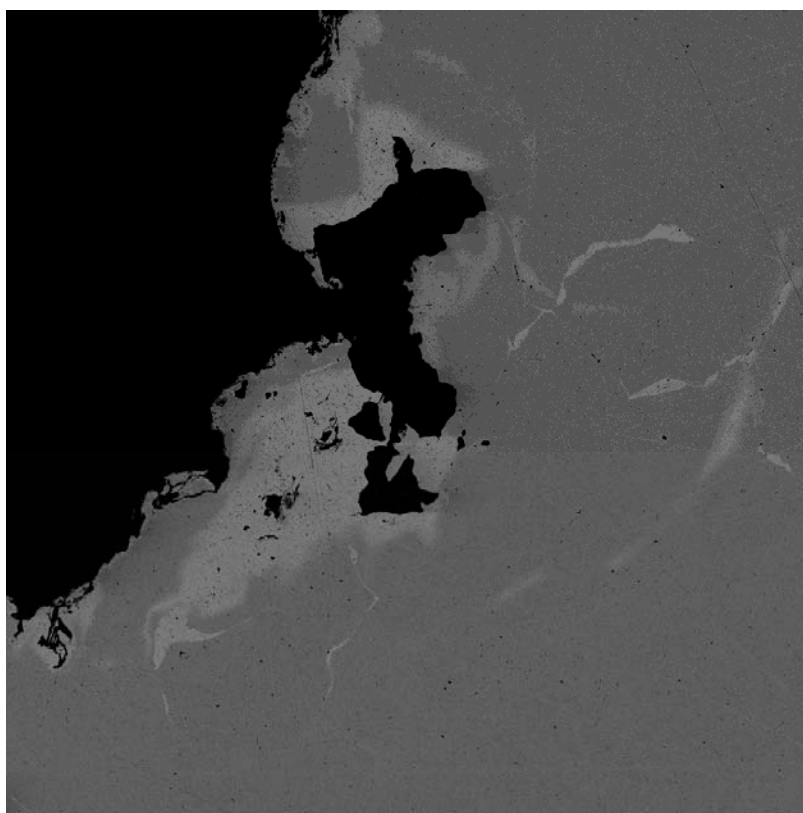


SEM HV: 20.00 kV  
View field: 554.7  $\mu$ m  
SEM MAG: 500 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

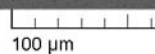


PROJ: DIS8  
Mount : 7393  
Sample : 886PL002  
Grain : 10 101 (B)

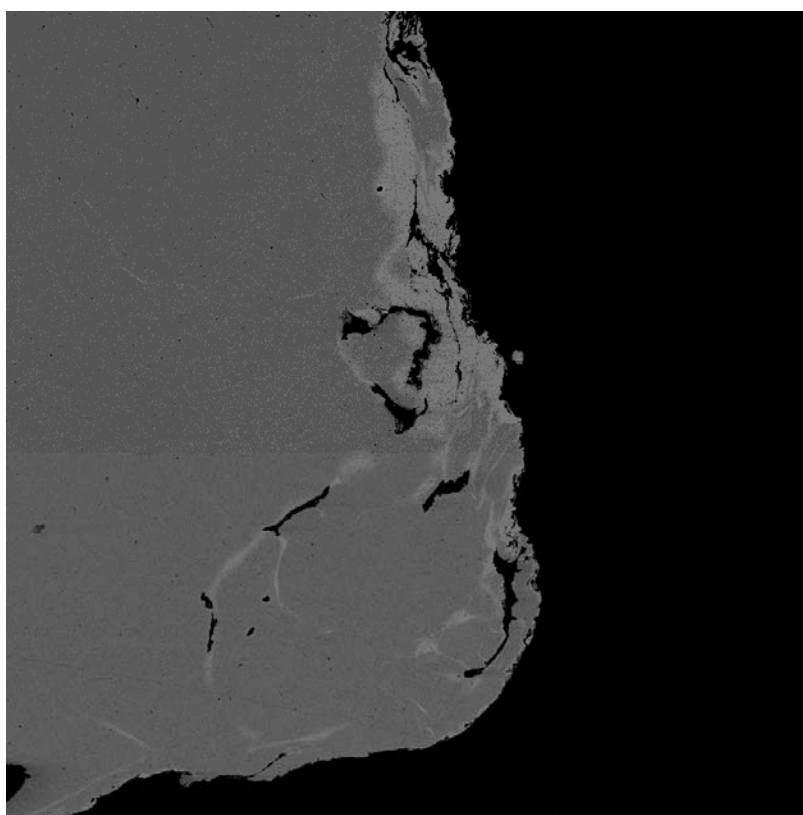


SEM HV: 20.00 kV  
View field: 346.7  $\mu$ m  
SEM MAG: 800 x

WD: 15.45 mm  
Det: BSE  
Date(m/d/y): 02/19/19

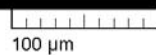


PROJ: DIS8  
Mount : 7393  
Sample : 886PL002  
Grain : 10 101 (C)

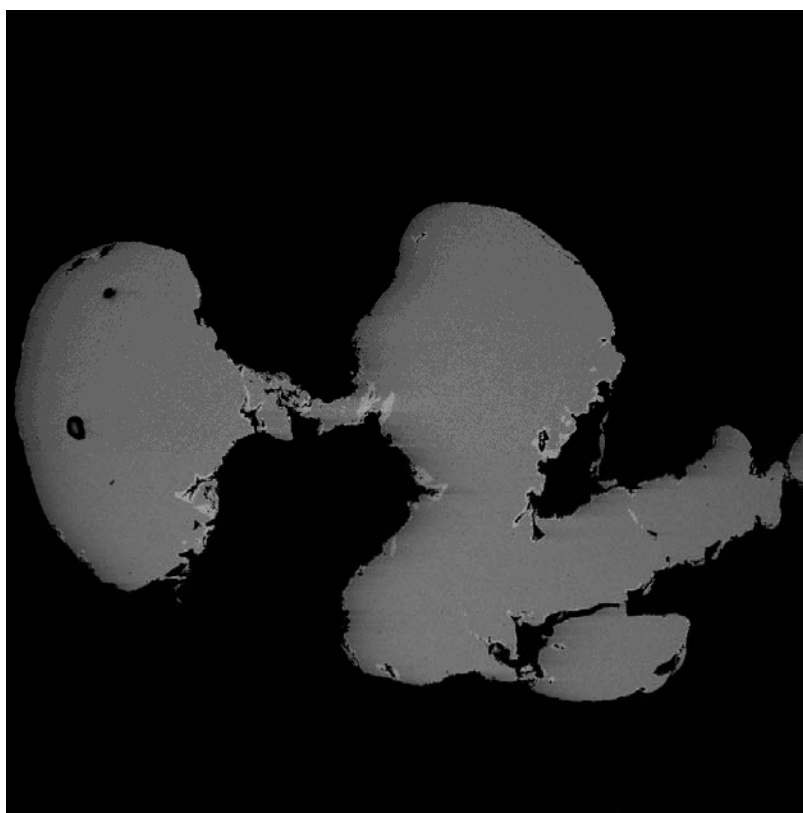


SEM HV: 20.00 kV  
View field: 554.7  $\mu$ m  
SEM MAG: 500 x

WD: 15.45 mm  
Det: BSE  
Date(m/d/y): 02/19/19

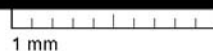


PROJ: DIS8  
Mount : 7393  
Sample : 886PL002  
Grain : 10 101 (D)



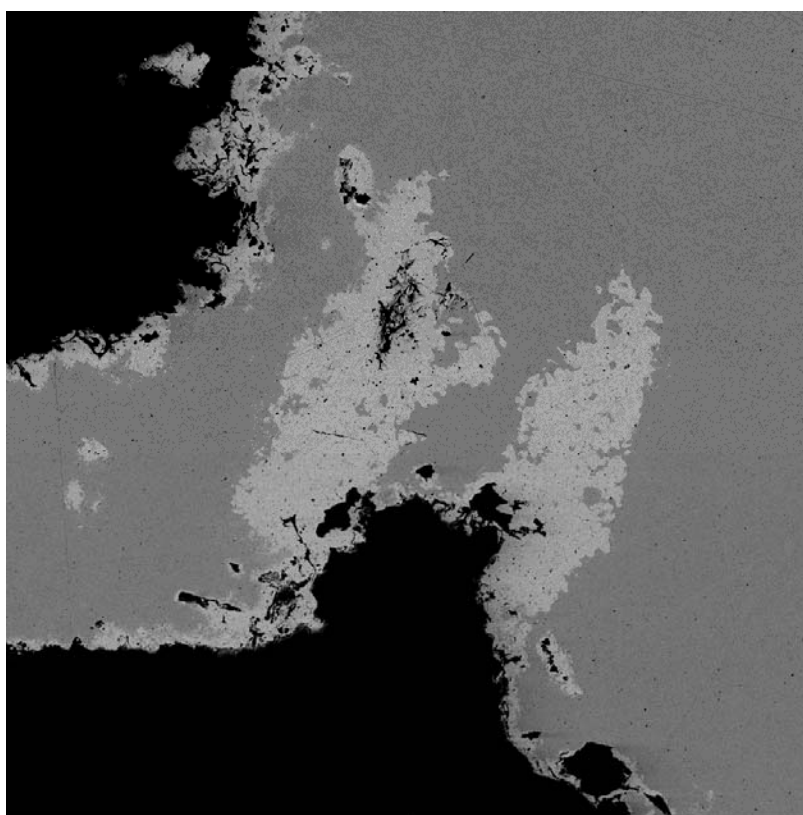
SEM HV: 20.00 kV  
View field: 3.95 mm  
SEM MAG: 70 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

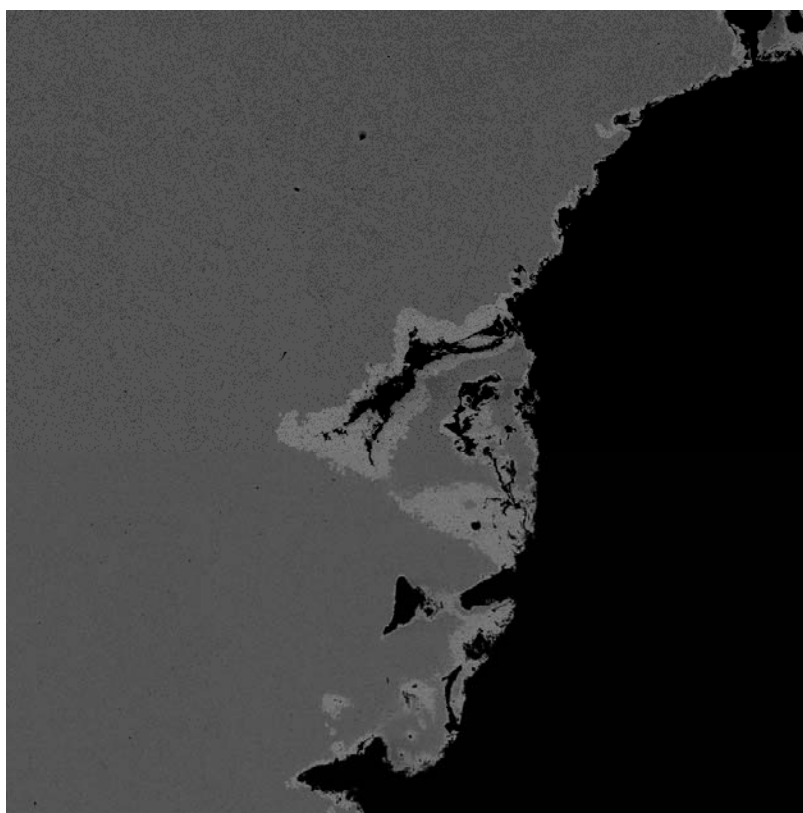


PROJ: DIS8  
Mount : 7393  
Sample : 886PL002  
Grain : 10 102

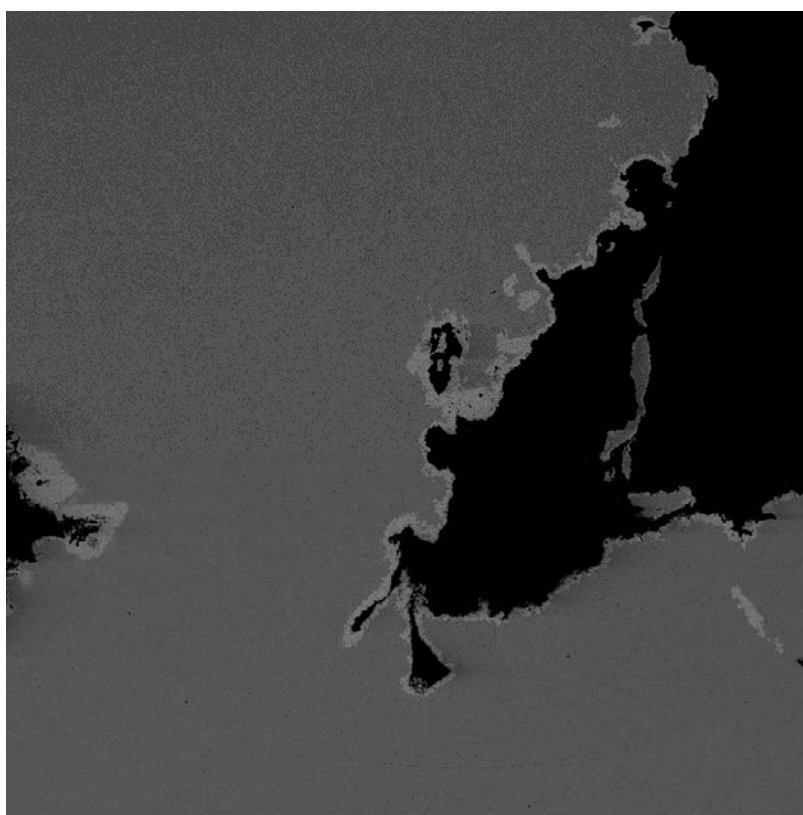




SEM HV: 20.00 kV WD: 15.46 mm 100 µm PROJ: DIS8  
 View field: 356.0 µm Det: BSE Mount : 7393  
 SEM MAG: 779 x Date(m/d/y): 02/15/19 Sample : 886PL002  
 Grain : 10 102 (A)

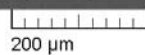


SEM HV: 20.00 kV WD: 15.45 mm 200 µm PROJ: DIS8  
 View field: 693.3 µm Det: BSE Mount : 7393  
 SEM MAG: 400 x Date(m/d/y): 02/19/19 Sample : 886PL002  
 Grain : 10 102 (B)

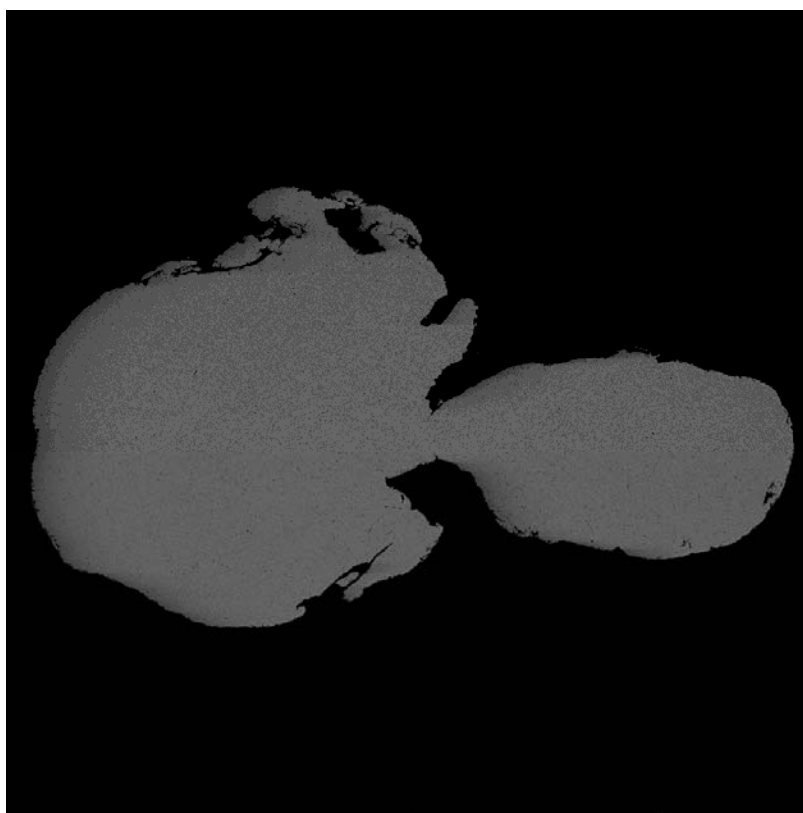


SEM HV: 20.00 kV  
View field: 1.20 mm  
SEM MAG: 232 x

WD: 15.45 mm  
Det: BSE  
Date(m/d/y): 02/19/19

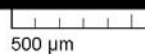


PROJ: DIS8  
Mount : 7393  
Sample : 886PL002  
Grain : 10 102 (C)



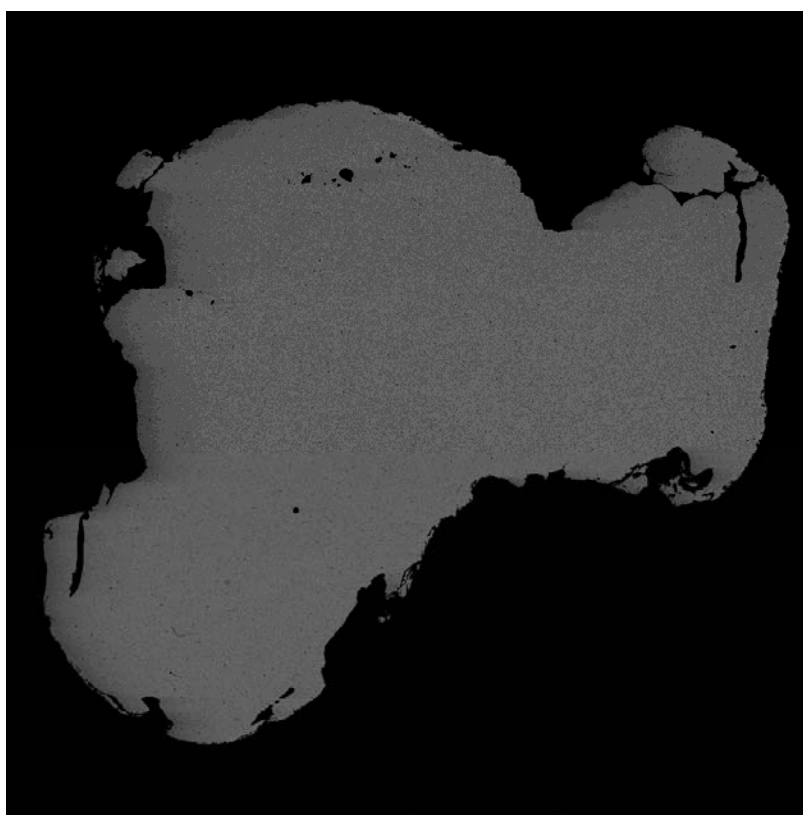
SEM HV: 20.00 kV  
View field: 1.68 mm  
SEM MAG: 165 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19



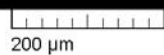
PROJ: DIS8  
Mount : 7393  
Sample : 886PL001  
Grain : 10 201



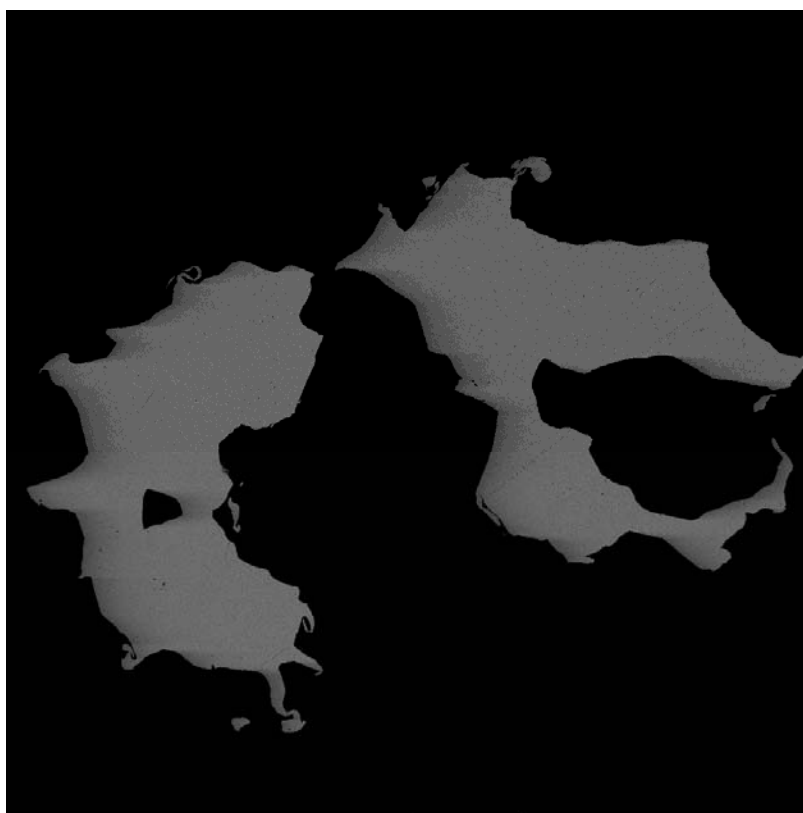


SEM HV: 20.00 kV  
View field: 1.06 mm  
SEM MAG: 261 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

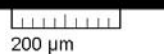


PROJ: DIS8  
Mount : 7393  
Sample : 886PL001  
Grain : 10 202

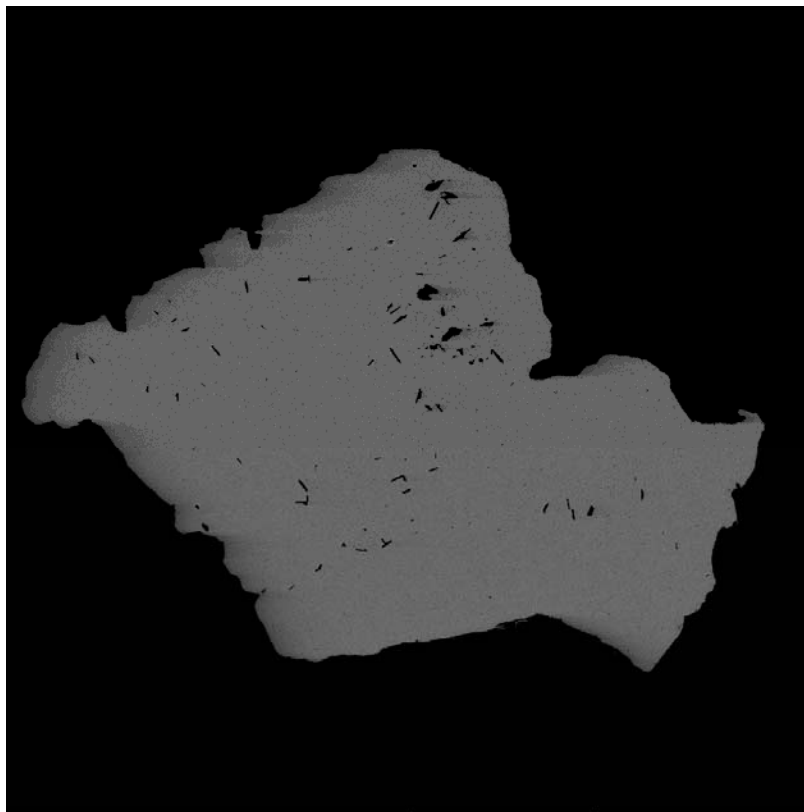


SEM HV: 20.00 kV  
View field: 1.49 mm  
SEM MAG: 186 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19

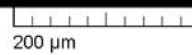


PROJ: DIS8  
Mount : 7393  
Sample : 886HR001  
Grain : 10 301



SEM HV: 20.00 kV  
View field: 871.4  $\mu\text{m}$   
SEM MAG: 318 x

WD: 15.46 mm  
Det: BSE  
Date(m/d/y): 02/15/19



PROJ: DIS8  
Mount : 7393  
Sample : 886HRO01  
Grain : 10 302

# **APPENDIX VI**

**Certificate of Analysis**

**CFM Mineral Lab**



ISO 9001:2015  
ISO 17025:2005



## C.F. MINERAL RESEARCH LIMITED

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CANADA V1X 4L1

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FAX (250) 862-9435  
info@cfmresearch.com

### C.F. Mineral Research Ltd.'s Analyses of Submitted Gold Samples

Source : C.F. Mineral Research Ltd. EPMA  
Status : BASE  
Project : DIS8

File Name : PRBDIS8 (Au analyses of 35 grains)  
# Analyses: 36  
Date : 14 March 2019

#### Caveats and explanations:

- '#' symbol (after the total) identifies analyses where the total is outside the range of 98.5 and 101.0 despite repeated analyses.
- '\*' symbol identifies a grain that was lost before EPMA analysis could be completed.
- 'Spot' column indicates separate analyses for different phases of a single grain.

SUBMISSION INFORMATION			AU MORPHOLOGY DATA (STUB)							AU EPMA DATA (MOUNT)											
Sample Name	Batch	Fraction	Stub	Grain	Grain	Grain	Distance	BSE	Mount	Grain	Spot	Cu	Ag	Au	Hg	Fe	S	As	Total	Fineness	BSE
			#	#	Size	Morph	Travelled	Micrograph	#	#		wt%	wt%	wt%	wt%	wt%	wt%	wt%	wt%		Micrograph
					um		metres														
886HM019	17-8256	-60+150HNN	8256A	10-101	403x200	DEL	200	8256A/10-101	7392	10-101		.00	16.00	84.22	.04	.00	.012	0.00	100.27	840	7392/10-101
886HM020	17-8256	-60+150HNN	8256A	10-104	270x100	ABR	500	8256A/10-104	7391	10-101		.01	26.41	73.84	.05	.01	.019	0.00	100.32	737	7391/10-101
886HM020	17-8256	-60+150HNN	8256A	10-105	215x140	IRR	200	8256A/10-105	7391	10-102		.00	41.65	57.72	.12	.00	.038	0.00	99.51	581	7391/10-102
886HM020	17-8256	-60+150HNN	8256A	10-102	270x260	IRR	200	8256A/10-102	7392	10-102		.04	9.37	91.39	.09	.02	.011	0.00	100.92	907	7392/10-102
886HM020	17-8256	-60+150HNN	8256A	10-103	490x150	ABR	500	8256A/10-103	7392	10-103		.00	16.04	84.35	.03	0.00	.013	0.00	100.42	840	7392/10-103
886HM021	17-8256	-60+150HNN	8256A	10-202	560x190	DEL	100-200	8256A/10-202	*												
886HM021	17-8256	-60+150HNN	8256A	10-201	320x215	IRR	200	8256A/10-201	7391	10-103		.01	17.25	83.29	.04	0.00	.012	0.00	100.59	828	7391/10-103
886HM022	17-8256	-60+150HNN	8256A	10-203	430x215	IRR	200	8256A/10-203	7392	10-104		.00	32.07	67.87	.11	.00	.032	0.00	100.07	679	7392/10-104
886HM022	17-8256	-60+150HNN	8256A	10-204	280x205	IRR	500	8256A/10-204	7392	10-105	1	.00	40.39	59.39	.05	.01	.034	0.00	99.86	595	7392/10-105
886HM022	17-8256	-60+150HNN	8256A	10-204	280x205	IRR	500	8256A/10-204	7392	10-105	2	.00	58.11	40.61	.35	.00	.026	0.00	99.09	411	7392/10-105
886HM026	17-8256	-60+150HNN	8256A	10-206	245x180	IRR	200	8256A/10-206	7391	10-104		.00	19.91	80.94	.16	.02	.024	0.00	101.04 #	803	7391/10-104
886HM026	17-8256	-60+150HNN	8256A	10-205	570x250	DEL/IRR	200	8256A/10-205	7392	10-201		.00	25.37	74.87	.20	0.00	.016	0.00	100.44	747	7392/10-201
886HM028	17-8256	-60+150HNN	8256A	10-301	275x150	DEL	100-200	8256A/10-301	7391	10-201		0.00	35.58	64.30	.04	.01	.018	0.00	99.92	644	7391/10-201
886HM028	17-8256	-60+150HNN	8256A	10-302	215x150	IRR	500	8256A/10-302	7391	10-202		.00	24.08	76.33	.09	.01	.017	0.00	100.52	760	7391/10-202
886HM029	17-8256	-60+150HNN	8256A	10-303	270x120	IRR	500	8256A/10-303	7391	10-203		.00	27.28	72.99	.05	.00	.018	0.00	100.33	728	7391/10-203
886HM029	17-8256	-60+150HNN	8256A	10-304	175x105	IRR	200-500	8256A/10-304	7391	10-204		.00	50.82	48.63	.04	.00	.036	0.00	99.52	489	7391/10-204
886HM035	17-8256	-60+150HNN	8256A	10-305	285x135	ABR	200	8256A/10-305	7391	10-301		.01	23.21	77.13	.04	.00	.013	0.00	100.38	769	7391/10-301
886HM036	17-8256	-60+150HNN	8256A	10-401	215x165	ABR	200-500	8256A/10-401	7392	10-202		.01	15.92	84.53	.05	.00	.012	0.00	100.50	842	7392/10-202
886HM036	17-8256	-60+150HNN	8256A	10-402	290x255	ABR	200	8256A/10-402	7392	10-203		.00	24.96	74.86	.27	.00	.015	0.00	100.11	750	7392/10-203
886HM036	17-8256	-60+150HNN	8256A	10-403	320x270	ABR	200-500	8256A/10-403	7392	10-204		.01	17.83	82.86	.17	.00	.014	0.00	100.87	823	7392/10-204

Grain Morphology:  
DEL - delicate  
IRR - irregular  
ABR - abraded  
ROU - rounded

SUBMISSION INFORMATION			AU MORPHOLOGY DATA (STUB)							AU EPMA DATA (MOUNT)											
Sample Name	Batch	Fraction	Stub	Grain	Grain Size	Grain Morph	Distance Travelled	BSE Micrograph	Mount	Grain	Spot	Cu wt%	Ag wt%	Au wt%	Hg wt%	Fe wt%	S wt%	As wt%	Total wt%	Fineness	BSE Micrograph
			#	#	um		metres		#	#											
886HM038	17-8257	-60+150HNN	8257A	10-101	280x155	DEL	200	8257A/10-101	7391	10-401		.00	15.41	85.51	.01	.00	.011	0.00	100.95	847	7391/10-401
886HM039	17-8257	-60+150HNN	8257A	10-103	285x150	IRR	200	8257A/10-103	7391	10-402		.00	29.24	70.92	.03	.00	.014	0.00	100.20	708	7391/10-402
886HM039	17-8257	-60+150HNN	8257A	10-102	330x165	IRR	200	8257A/10-102	7392	10-305		.00	21.80	78.39	.07	0.00	.014	0.00	100.26	782	7392/10-305
886HM045	17-8270	-60+150HNN	8270A	10-101	463x175	IRR	500	8270A/10-101	7392	10-205		0.00	38.93	60.62	.37	.01	.036	0.00	99.95	609	7392/10-205
886HM046	17-8270	-60+150HNN	8270A	10-102	260x245	ABR	500	8270A/10-102	7392	10-301		.00	13.63	87.23	.00	.01	.011	0.00	100.87	865	7392/10-301
886HM047	17-8270	-60+150HNN	8270A	10-103	200x160	DEL	200	8270A/10-103	7391	10-302		.00	26.10	74.01	.12	.02	.015	0.00	100.25	739	7391/10-302
886HM047	17-8270	-60+150HNN	8270A	10-104	415x275	DEL/IRR	200	8270A/10-104	7392	10-302		.00	38.25	61.18	.38	.01	.026	0.00	99.83	615	7392/10-302
886HM049	17-8270	-60+150HNN	8270A	10-201	200x185	ABR	500	8270A/10-201	7392	10-303		.00	38.36	60.70	.43	.01	.017	0.00	99.51	613	7392/10-303
886HM050	17-8270	-60+150HNN	8270A	10-203	485x155	DEL	100	8270A/10-203	7391	10-303		.01	15.72	84.92	.05	.00	.009	0.00	100.70	844	7391/10-303
886HM050	17-8270	-60+150HNN	8270A	10-204	190x145	DEL	200	8270A/10-204	7391	10-304		.00	28.46	71.65	.02	.00	.021	0.00	100.14	716	7391/10-304
886HM050	17-8270	-60+150HNN	8270A	10-202	380x280	DEL	200	8270A/10-202	7392	10-304		.00	15.77	84.57	.08	.00	.011	0.00	100.43	843	7392/10-304
886HR001	18-8561		8561A	10-301	1840x1340	DEL	100	8561A/10-301	7393	10-301		.01	19.88	80.94	.07	.00	.010	0.00	100.91	803	7393/10-301
886HR001	18-8561		8561A	10-302	1060x820	IRR	100	8561A/10-302	7393	10-302		.01	20.99	79.83	.06	0.00	.009	0.00	100.90	792	7393/10-302
886PL001	18-8561		8561A	10-201	1630x980	IRR	1000	8561A/10-201	7393	10-201		.05	4.97	96.64	.00	.00	.010	0.00	101.65 #	951	7393/10-201
886PL001	18-8561		8561A	10-202	990x895	IRR	800-1000	8561A/10-202	7393	10-202		.02	5.40	96.07	.01	.00	.011	0.00	101.50 #	947	7393/10-202
886PL002	18-8561		8561A	10-101	1660x1690	IRR	1000	8561A/10-101	7393	10-101		.02	16.79	84.29	.01	.00	.009	0.00	101.10 #	834	7393/10-101
886PL002	18-8561		8561A	10-102	4100x2500	IRR	1000	8561A/10-102	7393	10-102		.01	21.69	79.04	.01	.00	.009	0.00	100.75	785	7393/10-102

Grain Morphology:  
DEL - delicate  
IRR - irregular  
ABR - abraded  
ROU - rounded