



Tertiary Gold Limited

Lassedalen Fluorspar Project

Work Summary Report

For the Period

26th November 2011

to

25th October 2018

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Lassedalen Work Summary Report

1. Introduction

This Work Summary Report provides a record of the work conducted by Tertiary Gold Limited (“Tertiary” or “the Company”), a subsidiary of Tertiary Minerals plc, on the Lassedalen Fluorspar Project during the period 26th November 2011 to 25th October 2018.

The Lassedalen Fluorspar Project (“the Project”) comprises 15 contiguous Exploration Permits which together cover 590 hectares approximately 5 kilometres southwest of Kongsberg, Buskerud county. See Table 1 for Exploration Permit Details.

Permit Name	Permit Number	Area (Ha)	Date Granted	Expiry Date
Lassedalen 1	1206/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 2	1207/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 3	1208/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 4	1209/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 5	1210/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 6	1211/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 7	1212/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 8	1213/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 9	1214/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 10	1215/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 11	1216/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 12	1217/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 13	1218/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen 14	1219/2008-Ø B	25	26/11/2008	26/11/2018
Lassedalen	0286-1/2011	240	15/07/2011	31/12/2019

Table 1: Exploration Permit Details

2. Location and Access

The Lassedalen Fluorspar Project is located approximately 5 kilometres southwest of the town of Kongsberg, Buskerud county and 38 kilometres west of the port of Drammen. Access is gained via highway E134 and then by local roads and tracks which pass through the Project Area. See Figure 1.

3. Landowner Agreements

During the life of the Project Tertiary has actively engaged with the landowners and entered into agreements to acquire the fluorspar rights on their respective land parcels. The agreements provide landowner remuneration in the form of pre-production annual payments and, when mining operations commence, annual production royalties. See Table 2.

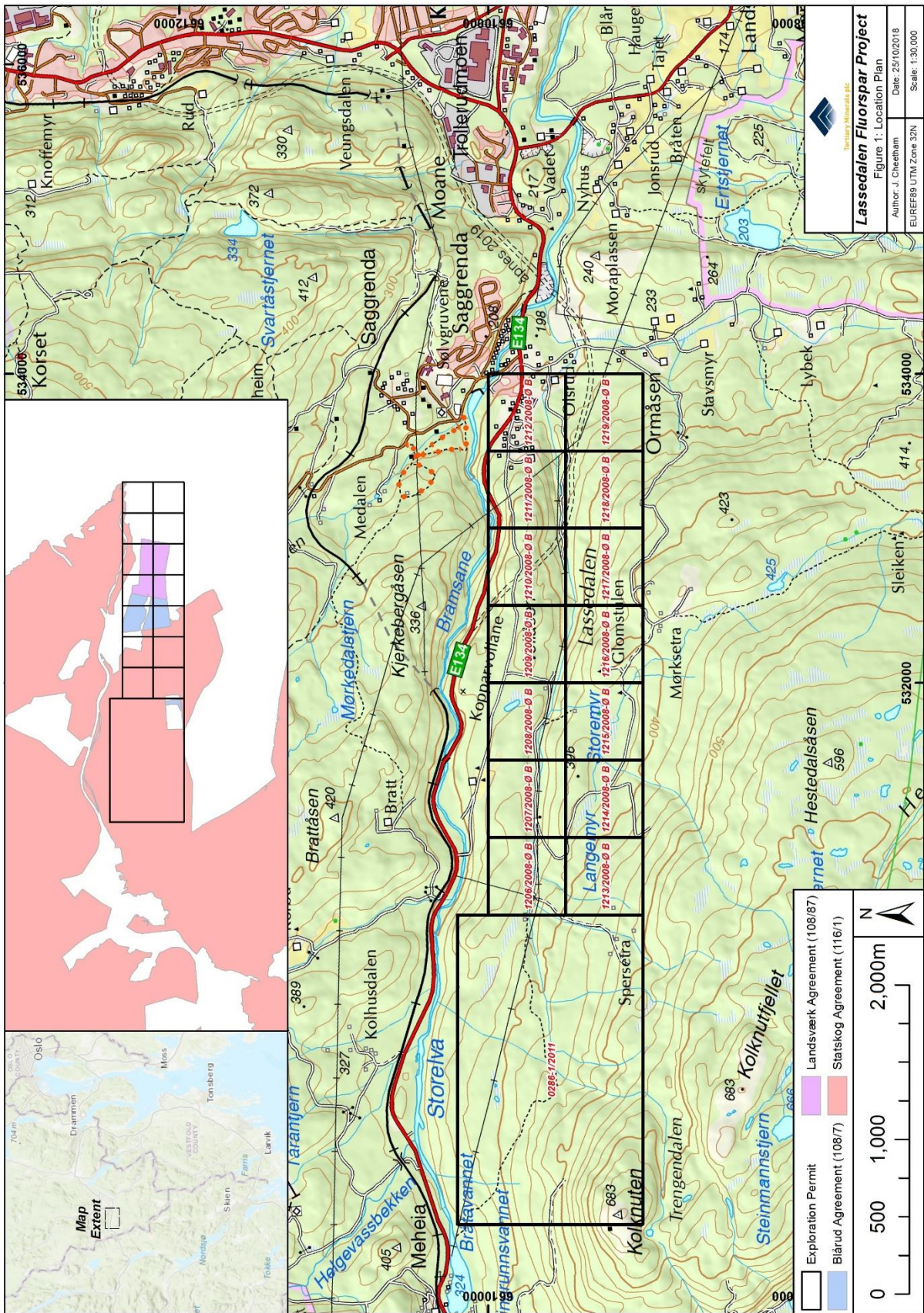


Figure 1: Location Plan

Landowner	Parcel Number	Date Signed
Gunnar Johnny Blårud	108/7	30 th June 2011
Statskog SF	116/1	12 th January 2012
Odd Helge Landsvaerk	108/87	12 th September 2017

Table 2: Landowner Agreements

4. Historical Exploration and Development

The Lassedalen fluorspar deposit was mined on a small scale during World War II when it was developed to a depth of 40 metres below surface where fluorspar was mined for use in aluminium smelting.

The mine was dewatered in the 1970s by Norsk Hydro A/S (“Hydro”) when drilling was carried out from both surface and underground. Twenty eight diamond drill holes were drilled at surface and proved the vein over at least a 2.7 kilometre strike length. Drill cuttings were also taken from holes drilled into the side walls of the underground mine level cut during World War II. This mine level, developed at an average depth of 40 metres below surface, was driven over a strike length of 560 metres almost entirely within the fluorspar vein.

5. Tertiary Minerals Exploration Activity

During the reporting period Tertiary conducted the following activities on the Lassedalen Fluorspar Project:

- Historical Data Compilation and Review;
- Historical Drill Core Relogging and Analysis;
- Mineralogical Analysis (QEMSCAN) and Metallurgical Testwork;
- JORC Code (2004) Compliant Mineral Resource Estimate;
- Scoping Study; and
- Environmental Studies.

Additional data and reports on the above work programmes can be provided upon request.

5.1 Historical Data Compilation and Review

In 2011 Tertiary Minerals acquired Hydro’s historical exploration data which comprised exploration reports, drill logs, plans and sections along with associated analytical and metallurgical testwork data.

Much of the data was provided in paper format so extensive review and digitisation of the data was required prior to GIS integration. All exploration data was imported into ESRI’s ArcGIS to provide spatial reference for subsequent exploration activities. To assist Tertiary with the historical data review Tore Vrålstad, a geologist involved in Hydro’s exploration activities, was contracted to provide an overview of the work.

5.2 Historical Drill Core Relogging and Analysis

To verify the accuracy of historical exploration data prior to mineral resource estimation Tertiary relogged and analysed drill core from the Hydro 1970s drill programme. Approximately 3,500 metres of drill core from 23 of the 28 drill holes were located. Kjell Nilson of Kjell Nilson Geoconsulting was contracted to relog and sample the Norsk Hydro drill core. A total of 352 core samples were split and sent to Labtium Oy, Finland, for analysis.

Multi-element analysis (including fluorine) was conducted on 348 samples using the XRF pressed pellet method (175X). Additionally, 211 samples were subjected to multi-element analysis via aqua regia leach/ICP-AES finish (+ 510P) and Pb fire assay pre-concentration with ICP-AES finish for Au, Pd and Pt (+ 705P). Fluorine check analysis was performed using the Ion Specific Electrode method (725I).

The analytical results correlated well with the historical exploration data and could therefore be incorporated into future mineral resource estimation programmes.

5.3 Mineralogical Analysis (QEMSCAN) and Metallurgical Testwork

To investigate fluorine deportment prior to metallurgical testwork, mineralogical analysis (QEMSCAN) was conducted by Helford Geosciences LLP, UK. Four sub-samples of the metallurgical head were analysed which comprised the following size fractions: 425/+180 μm , -180/+75 μm , -75/+45 μm and -45 μm . The results suggested the ore would be amenable to heavy liquid pre-concentration and upgrading via conventional flotation.

The objective of the metallurgical testwork programme was to produce acid-grade fluorspar concentrate from the historic drill core. Acid-grade fluorspar must meet the following specifications: $\geq 97\% \text{CaF}_2$, $< 1\% \text{SiO}_2$, $< 1\% \text{CaCO}_3$.

Testwork was performed by Wardell Armstrong International, UK ("WAI"), in conjunction with Malcolm Crawford of Delta Minerals, UK, and testwork products were analysed using the XRF pressed pellet method. QA/QC duplicate samples were analysed by Labtium using XRF pressed pellet. A total of 28 separate flotation tests were performed during which a range of operating variables were investigated including:

- Primary grind size;
- Slimes pre-flotation vs. Sulphide pre-flotation;
- Conditioning temperature;
- Gangue mineral depressant regime – type and dosage;
- Fluorspar collector dosage; and
- Number of cleaning stages.

The metallurgical testwork programme was successful in producing acid-grade fluorspar concentrate by means of flotation however overall recoveries need improvement, see Table 3.

Test	Product	Weight (%)	Analysis (%)		Distribution (%)	
			CaF ₂	SiO ₂	CaF ₂	SiO ₂
FT8	Cleaner 5 Conc	7.42	98.14	0.77	25.91	0.13
FT9	Cleaner 10 Conc	10.34	97.91	0.40	34.27	0.10
FT11	Cleaner 8 Conc (Primary)	5.97	97.48	0.58	20.46	0.08
	Cleaner 8 Conc (Secondary)	14.21	95.78	1.25	47.86	0.42
	Σ Concentrate	20.18	96.28	1.05	68.32	0.50
FT18	Cleaner 10 Conc	16.42	99.67	1.00	55.22	0.39
FT28	Cleaner 10 Conc	18.93	96.69	0.84	65.29	0.37

Table 3: Metallurgical Testwork Results Summary

5.4 JORC Code (2004) Compliant Mineral Resource Estimate

In 2012 Tertiary Minerals contracted SRK Consulting (Sweden) AB ("SRK") to produce geological models and a JORC Code (2004) compliant Mineral Resource Estimate for the Lassedalen fluorspar deposit using historical and Tertiary produced exploration data.

SRK modelled two separate ore zones: a north zone based solely on the underground sampling assays, and a south zone based solely on surface diamond drilling assays comprising two separate veins. The presence of a parallel vein structure was discussed with Tore Vrålstad who agreed with the interpretation, see Figure 2. SRK stated that due to uncertainties in the location of the north vein data that is supported by underground drilling, only the south vein has been classified as a resource in accordance with the 2004 JORC code. The JORC Code (2004) compliant Mineral Resource Estimate is shown in Table 4.

Classification	Million Tonnes (Mt)	CaF ₂ (%)
Inferred	4.0	24.6

Table 4: 2012 JORC Code (2004) Compliant Mineral Resource Estimate

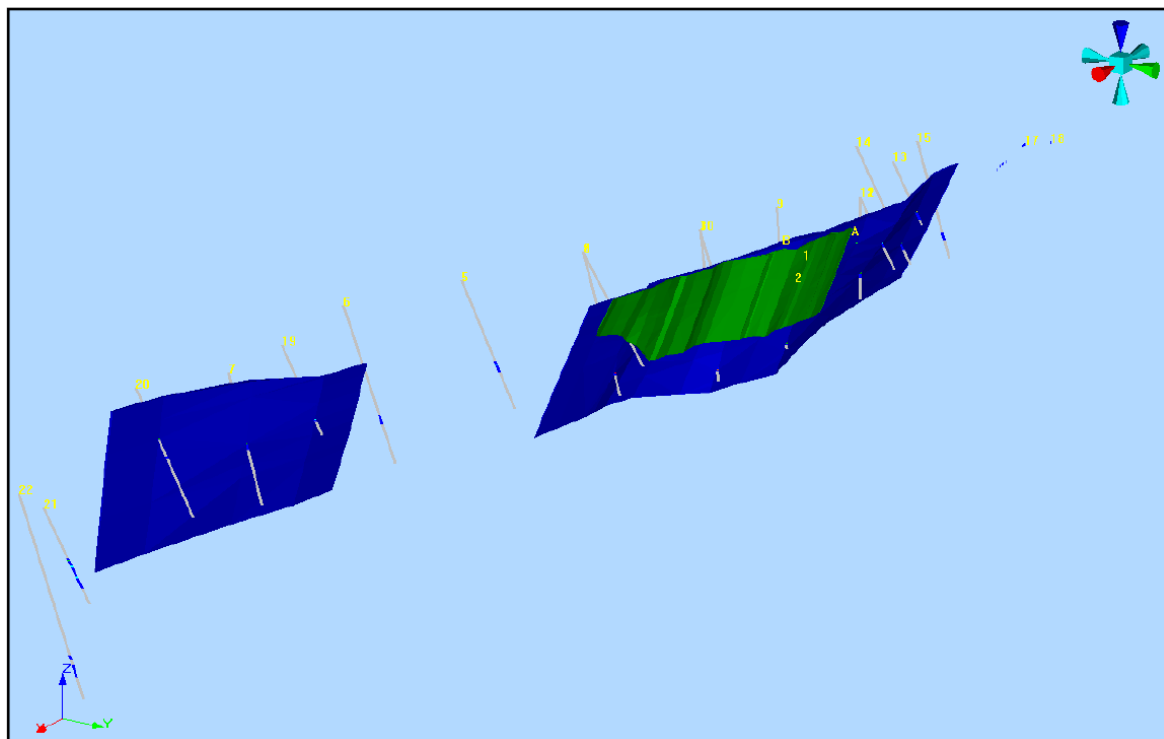


Figure 2: CaF₂ Mineralised Domains (Northern zone in green - view looking west-southwest)

5.5 Scoping Study

Following the reporting of the JORC Code (2004) Compliant Mineral Resource Estimation, Tertiary contracted WAI to produce an economic Scoping Study and associated mine design for an underground mining operation producing 100,500 tonnes of acid-grade fluorspar concentrate per annum.

The mining method adapted is sub-level open stoping with ore hauled to the surface via an incline ramp and transported to an onsite processing facility where it would be processed using 3 stage crushing, ball milling, pre-flotation of sulphide minerals and flotation to produce acid-grade fluorspar. See Figure 3.

The Scoping Study returned a positive economic evaluation with a pre-tax Net Present Value (“NPV”) at a 10% discount rate of US\$ 31.6 million and a pre-tax Internal Rate of Return (“IRR”) of 20.2% using an acid-grade fluorspar price of US\$ 491/tonne (CIF Rotterdam). See Table 5 for the Scoping Study Highlights.

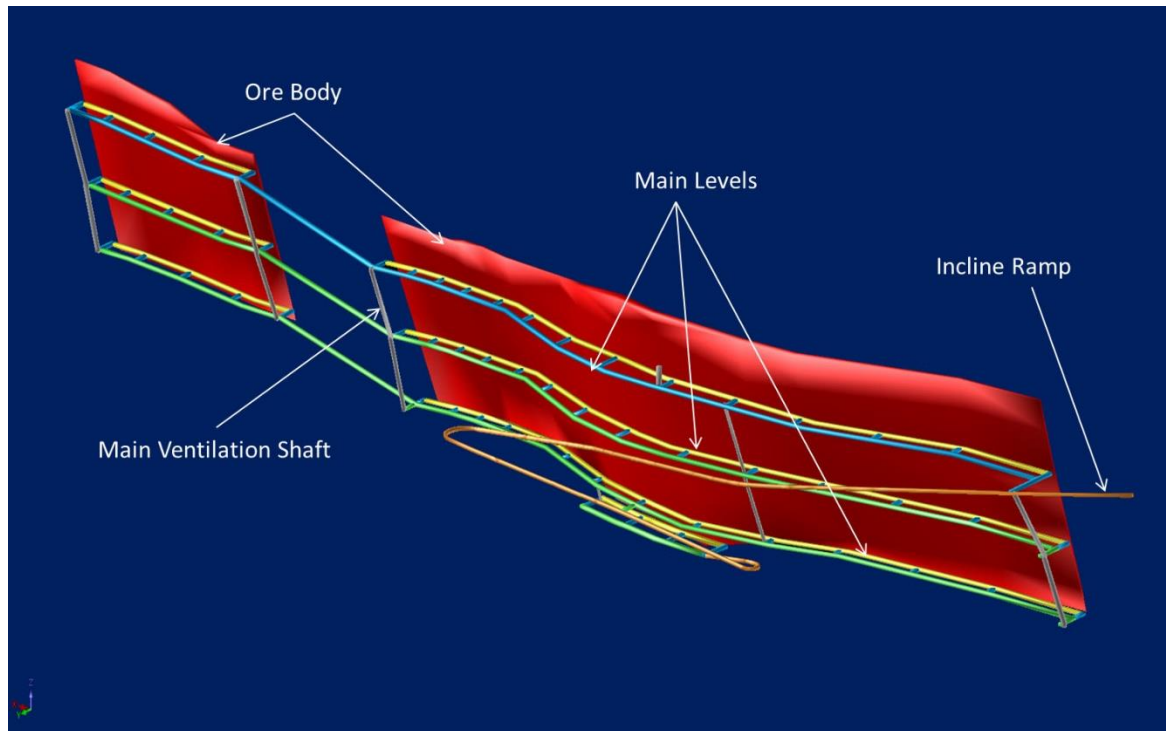


Figure 3: Underground Mine Design

Total Ore Mined	3,595,922 tonnes
Total Acid-Grade Concentrate Produced	662,658 tonnes
Life of Mine	6.6 years
CaF₂ Price (CIF Rotterdam)	US\$ 491/tonne
Initial Capex	US\$ 77.8 million
Sustaining and Mine Closure Capex	US\$ 9.1 million
Gross Revenue over Life of Mine	US\$ 325 million
Total Pre-Tax Cashflow	US\$ 95 million
Net Present Value (NPV) at 10% Discount Rate	US\$ 31.6 million
Pre-Tax Internal Rate of Return (IRR)	20.20%
Payback	34 months

Table 5: Scoping Study Highlights

WAI recommended that further drilling be conducted to test for additional resources at depth and to in-fill drill the known resource to increase the classification of the Mineral Resource Estimate.

5.6 Environmental Studies

In 2017 Tertiary conducted environmental monitoring for a due diligence review of a proposed land acquisition agreement with Hydro where Tertiary would acquire the Norsk Hydro land which hosts the historical mine developments.

The Norwegian Institute for Water Research (“NIVA”) were contracted to assess seasonal fluoride and heavy metal concentrations in Lassedalsbekken, a small stream which passes through the land parcels and historical mine developments.

The Company was not fully satisfied with the results of the studies and requested an extension of time from Hydro to carry out further studies during the spring snow melt in 2018 when the river would be in full flood. Hydro were unwilling to grant an extension of time for due diligence and therefore the Company did not proceed with the Hydro land acquisition.

It should be noted that Hydro are unwilling to enter into a landowner agreement for Tertiary to acquire the fluorspar rights, unlike the surrounding landowners.

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