

2015 ASSESSMENT REPORT

Property Comprising the Following Claims :

Alex 486, Alex 497 – Alex 501, Alex 503, Alex 529.

Located in the:
Keno Hill Area
Mayo Mining District
Yukon Territory, Canada
N.T.S. 105M/14 and 106D/03

UTM NAD 83 Z8: 484,000 East
UTM NAD 83 Z8: 7,097,070 North

PREPARED FOR:

Alexco Keno Hill Mining Corp.
1150-200 Granville Street
Vancouver, B.C. V6C 1S4

and

PREPARED BY:

Al McOnie

Alexco Resource Corp.
1150-200 Granville St.
Vancouver, B.C. V6C 1S4

DATES WORK PERFORMED : July 19 - 26, 2015

DATE OF REPORT: October 16, 2015

TABLE OF CONTENTS

1.0	SUMMARY	4
2.0	INTRODUCTION	4
3.0	LOCATION AND ACCESS	4
4.0	CLAIM STATUS	5
5.0	REGIONAL GEOLOGY	6
6.0	PROPERTY GEOLOGY.....	7
7.0	CONCLUSIONS	10
8.0	LIST OF REFERENCES	10

LIST OF FIGURES

Figure 1:	Yukon Location map	5
Figure 2:	Location of Claim Block	6
Figure 3:	Aerial Magnetic Anomaly	7
Figure 4:	Outcrop Geology Claim Block	8
Figure 5:	Geological Legend	9

LIST OF APPENDICES

Appendix 1: List of Claims

Appendix 2: Personnel

Appendix 3: Statement of Expenditures

Appendix 4: Statement of Qualifications

1.0 SUMMARY

On July 19 and 26, 2015, surface geological mapping was undertaken on the Alex 486, Alex 497 – Alex 501, Alex 503 and Alex 529 claims. This confirmed the area to be underlain by the Earn Group that underlies the Keno Hill Quartzite, the host to the majority of the high grade silver (- lead – zinc) mineralization of the Keno Hill district.

2.0 INTRODUCTION

This report summarizes surface geologic mapping conducted on the Alex 486, Alex 497 – Alex 501, Alex 503 and Alex 529 claims on 19 and 26 July 2015.

Planning, field work, and reporting of this work were performed by Alexco Resource Corp. staff.

The work was conducted as part of a broader program of re-mapping the Keno Hill district, an exercise that has developed a revised stratigraphy for the mineral hosting sequence.

3.0 LOCATION AND ACCESS

The eight quartz claims on which assessment work has been undertaken are held under the name of Alexco Keno Hill Mining Corp 100%, and are located in the Keno Hill district, Mayo Mining District approximately 350 km north of Whitehorse (Figure 1). The area is covered by NTS map sheets 105M/14 and 106D/03. The reference datum used is UTM NAD83 Zone 8, unless otherwise noted.

The claims are located between 740 m and 1,398 m elevation on a prominent unnamed hill that lies immediately east of Hansen Lake. The vegetation is generally thick scrubby willow on the lower slopes while the upper slopes comprise predominantly thick spruce forest.

Access to the claim is on foot from the Hansen Lake Road that runs from the Silver Trail Highway to South McQuesten Lake.

The base of operations for Alexco is the abandoned company town of Elsa which contains camp and office facilities.



Figure 1 General Location of the Claim Block

4.0 CLAIM STATUS

The claims are active having been staked between 9 – 11 June 2007, and prior to the current work had an expiry date of 22 December 2019 (Appendix 1).

The location of the quartz claims is shown in Figure 2. A list of personnel and cost statement related to the application of Certificates of Work are included as Appendices 2 and 3.

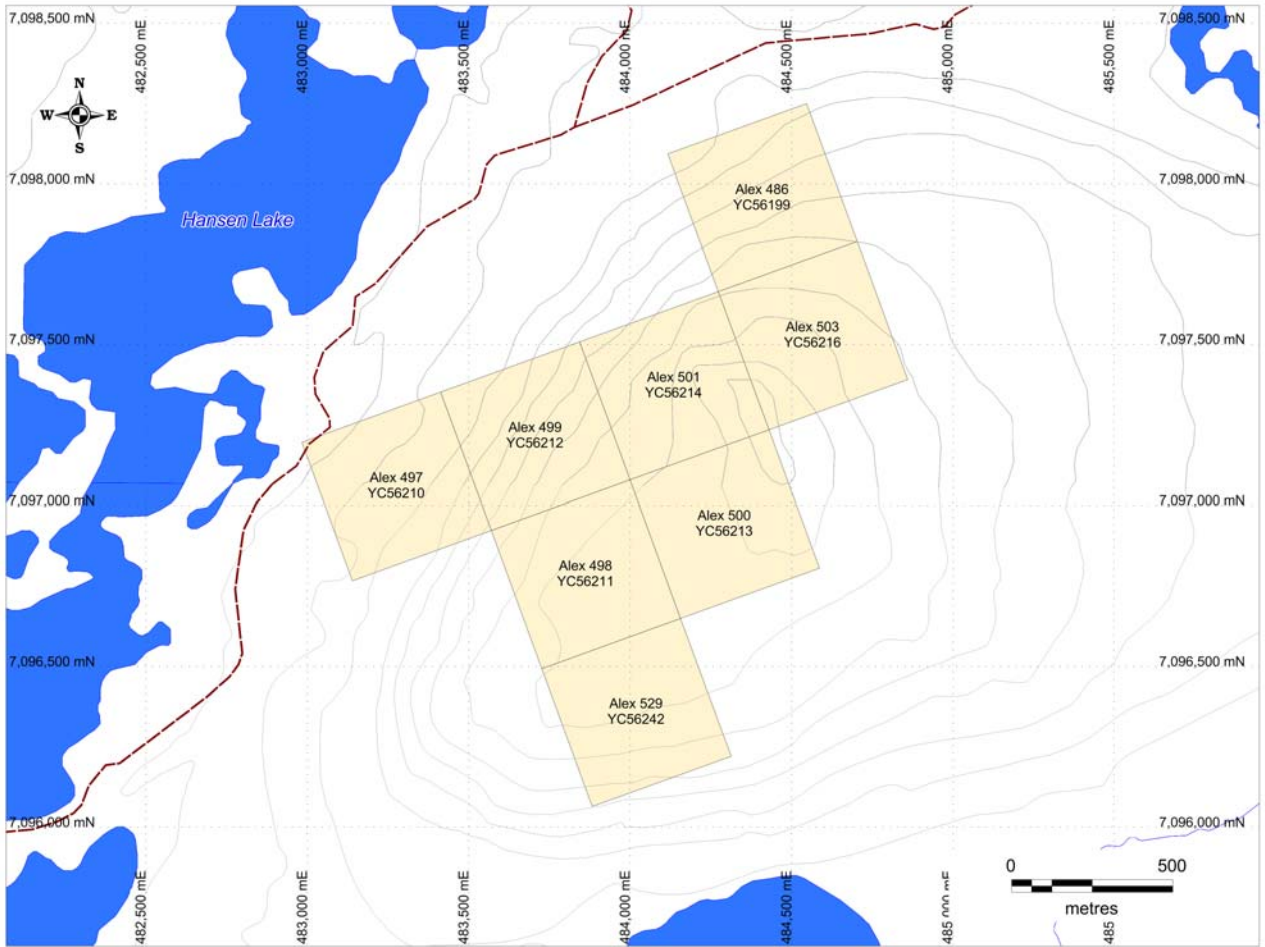


Figure 2 Location of the Claims

5.0 REGIONAL GEOLOGY

The claims are situated within the western part of the Selwyn Basin in an area dominated by deformed and metamorphosed sediments accumulated at the edge of the Neoproterozoic to Paleozoic continental margin. During the Jurassic and Cretaceous, the area was subjected to compressional tectonic forces producing imbricate thrust sheets and widespread folding. In the mid-Cretaceous, renewed tectonism resulted in extensive brittle deformation and the emplacement of intrusive plutons.

The rock unit underlying the claim forms part of the Devonian Earn Group.

6.0 PROPERTY GEOLOGY

Aerial magnetic survey data (McPhar, 2006) suggests this area to lie close to a significant magnetic low anomaly as shown in blue in Figure 3. This does not appear to be related to topography or depth of overburden and is not explained by bedrock exposure.

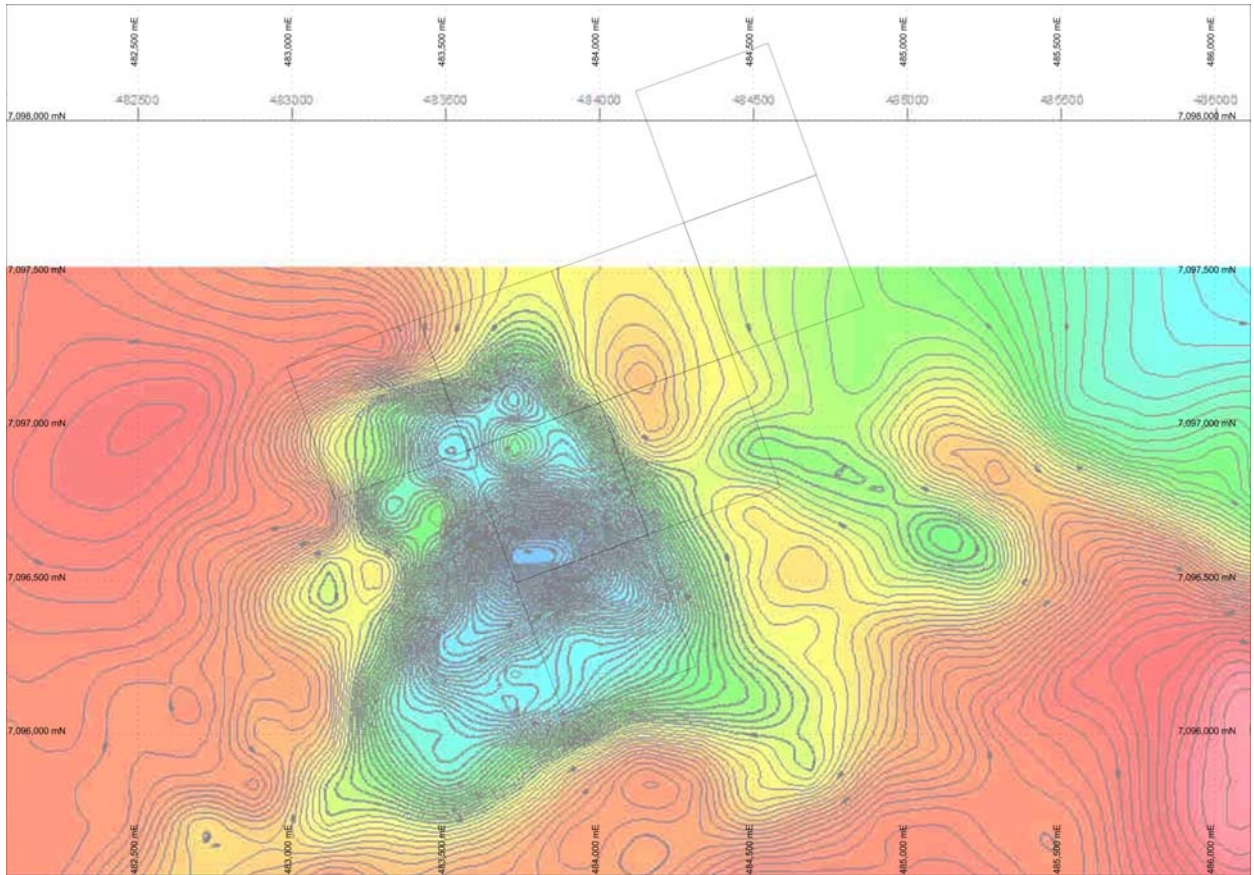


Figure 3 Aerial Magnetic Anomaly

Although located on a prominent roche moutonnée, a remnant from the most recent glaciation when ice flowed southwest from the Ladue River system into the South McQuesten Valley, there is very little outcrop. The lower parts of the area are covered with unconsolidated Quaternary glacio-fluvio deposits.

Rare outcrops of fine grained, dark grey carbonaceous schist belonging to the Devonian Earn Group occur at the western end of the hill with some intercalated Triassic greenstone, while the outcrop on the northern side appears to be entirely of the greenstone sill material (Figure 4).

The attitude of the dominant S1 foliation varies considerably in the small area where observed, and cannot be related to the more consistent attitudes observed elsewhere in the

Keno Hill district. The area is shown by Murphy (1997) to lie to the northwest of the trace of the regional McQuesten Anticline and thus it might be expected that attitudes might be more northwesterly in dip direction.

The stratigraphic position of the claim area is shown highlighted in Figure 5.

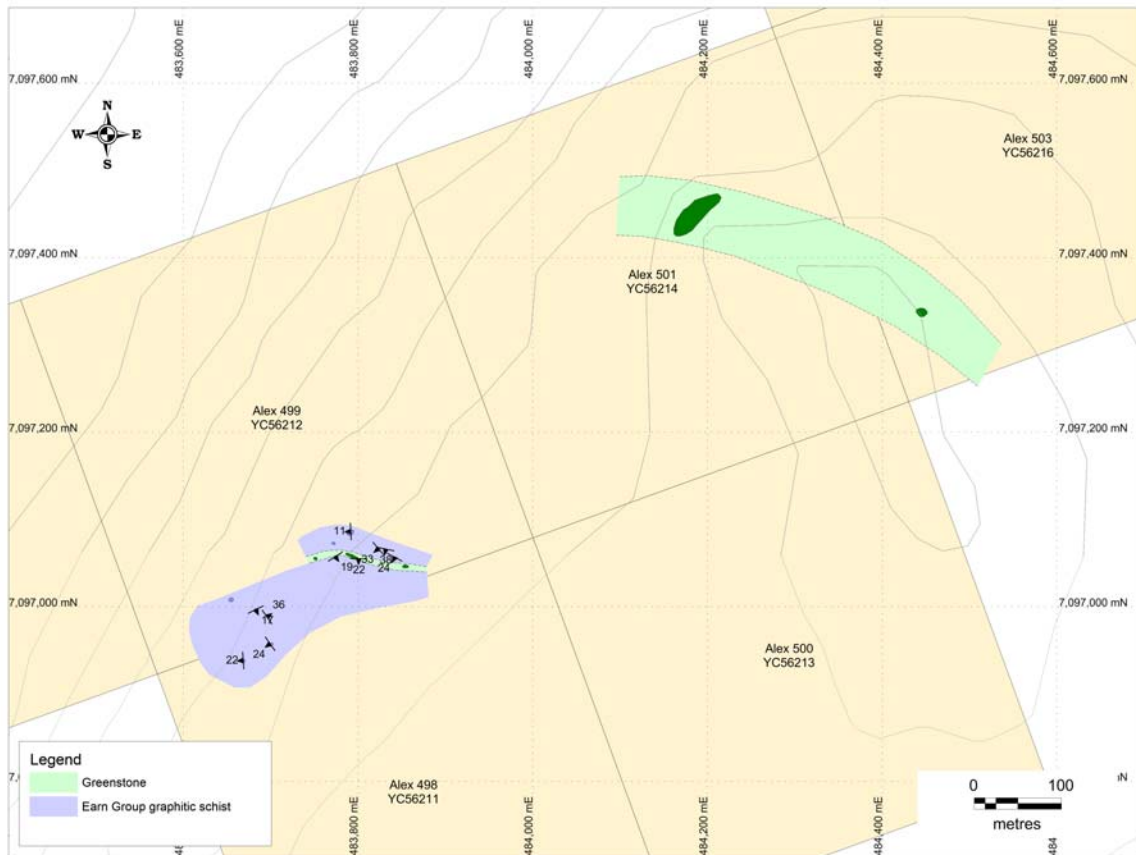


Figure 4 Outcrop Geology of the Claim Block

LEGEND

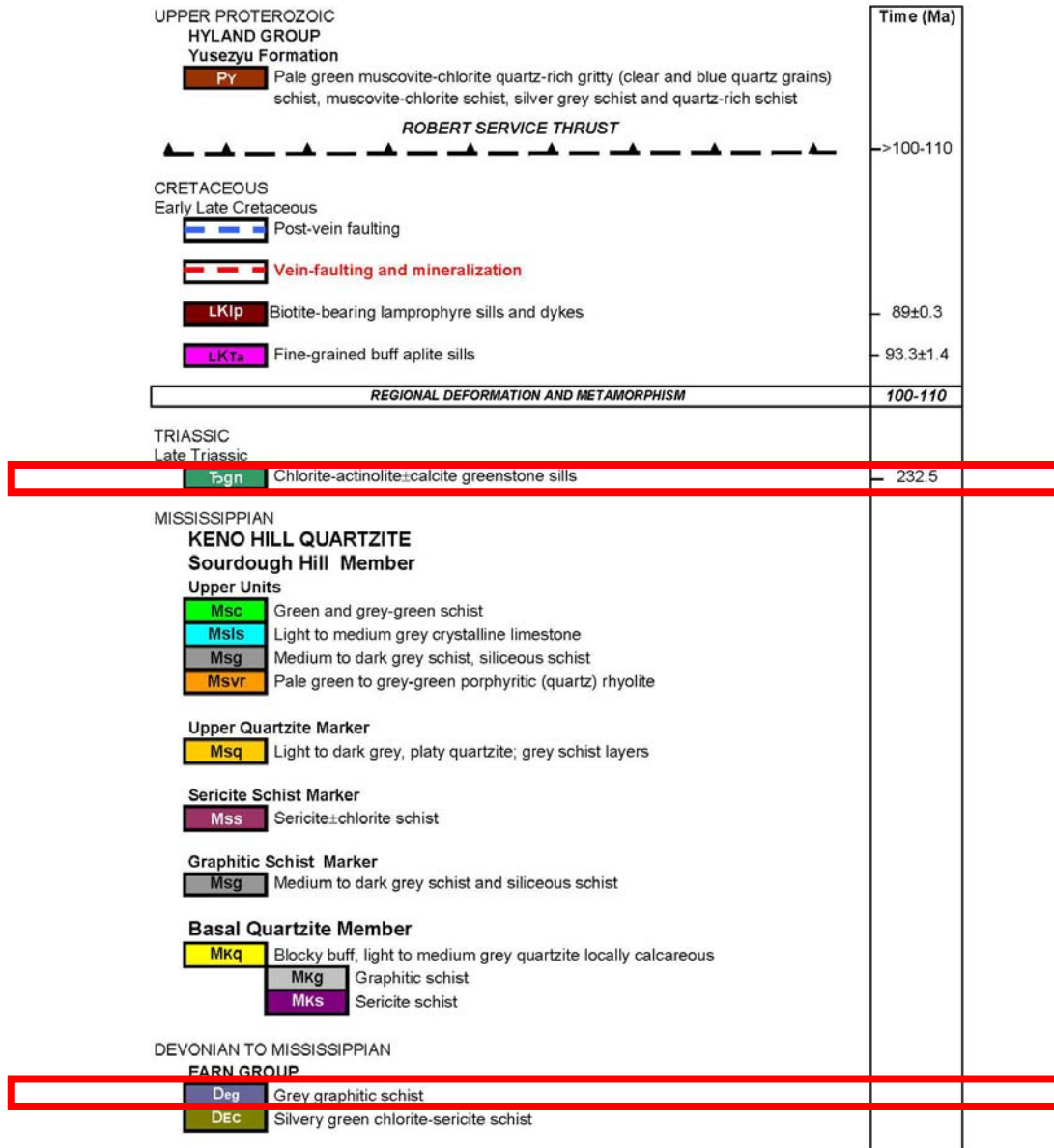


Figure 5 Stratigraphic Position of the Claim block (after McOnie & Read, 2010)

7.0 CONCLUSIONS

The results from the surface geological mapping demonstrate that this claim lies within the Earn Group that is stratigraphically below the Keno Hill Quartzite Formation. The rock types identified do not explain the presence of a significant negative aerial magnetic anomaly that underlies the claims.

8.0 LIST OF REFERENCES

McOnie, A., and Read P.B., 2010.

Stratigraphy, Structure and Exploration Opportunities Sourdough, Galena and part of Keno Hills, Keno Hill Mining Camp, Central Yukon.

Internal Report Alexco Resource Corp.

McPhar Geosurveys, 2006

Final Report on a Helicopter-born Geophysical Survey, Keno Hill, Yukon.

Internal Report for Alexco Resource Corp.

Murphy, D.C., 1997.

Geology of the McQuesten River region, northern McQuesten and Mayo map area, Yukon Territory (115P14, 15, 16; 105M/13, 14).

Yukon Geological Survey, Bulletin 6, 95 p.

APPENDIX 1

LIST OF CLAIMS

Quartz Claim	Grant	Owner	Staking Date	Recorded Date	Expiry Date
Alex 486	YC56199	Alexco Keno Hill Mining Corp. - 100%	09/06/2007	22/06/2007	22/12/2019
Alex 497	YC56210	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019
Alex 498	YC56211	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019
Alex 499	YC56212	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019
Alex 500	YC56213	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019
Alex 501	YC56214	Alexco Keno Hill Mining Corp. - 100%	10/06/2007	22/06/2007	22/12/2019
Alex 503	YC56216	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019
Alex 529	YC56242	Alexco Keno Hill Mining Corp. - 100%	11/06/2007	22/06/2007	22/12/2019

APPENDIX 2

LIST OF PERSONNEL

Jos Hantelmann
#96 – 11 Clover Bar Lane
Sherwood Park, AB T8H 0C4

Alicia Vainio
Box 291
Faro, YT, Y0B 1K0

Liana Stammers
941 Kennedy Ave
North Vancouver, BC
V7R 1L4

Al McOnie
694 SH 2, RD3
Katikati
New Zealand
3170

APPENDIX 3

STATEMENT OF EXPENDITURES

Cost Statement - Alexco Resource Corp. October 2015 "Alex Claims 486, 497, 498, 499, 500, 501, 503, 529" Assessment Filing						
Claims	Grant	Owner	Field Staff and Reporting	Camp Overhead	Vehicles - Support	Estimated Total
Alex 486	YC56199	Alexco Keno Hill Mining Corp.				
Alex 497	YC56210	Alexco Keno Hill Mining Corp.				
Alex 498	YC56211	Alexco Keno Hill Mining Corp.				
Alex 499	YC56212	Alexco Keno Hill Mining Corp.				
Alex 500	YC56213	Alexco Keno Hill Mining Corp.				
Alex 501	YC56214	Alexco Keno Hill Mining Corp.				
Alex 503	YC56216	Alexco Keno Hill Mining Corp.				
Alex 529	YC56242	Alexco Keno Hill Mining Corp.				
		Total	\$2,421	\$627	\$220	\$3,268
Work conducted between 19 - 26 July 2015						

APPENDIX 4

STATEMENT OF QUALIFICATIONS

Al McOnie

I, Alan McOnie of 694 SH2, RD3, Katikati, New Zealand
DO HEREBY CERTIFY:

- 1 THAT, I am a VP Exploration and Qualified Person with Alexco Resource Corp., 1150-200 Granville Street, Vancouver, BC, V6C 1S4.
- 2 THAT, I have practiced my profession with various mining companies in the Canada, New Zealand, Australia, United States, Mexico, and China for over 35 years.
- 3 THAT, I am graduate in geology holding a BSc (Hons) from the University of Otago, New Zealand and a MSc from the University of Toronto, Canada.
- 4 THAT, I am a member of the Society of Economic Geologists.
- 5 THAT, I am a Fellow of the Australasian Institute of Mining and Metallurgy.
- 6 THAT, this report is based on work which I personally managed during the year 2015.
- 7 THAT, I have no interest in the property described herein, nor do I expect to receive any such interest.

DATED at Vancouver, BC, this 16th day of October, 2015.



Al McOnie