

CANADA LANDS SURVEYS RECORDS  
F.B. 3 3 2 6 2  
DATE 17 MAR. 1982

*Survey Report* ~~\_\_\_\_\_~~

re: ~~FB Plan~~ Re-est. Mon. 85F & refer. 87F, 89F,

(Atlas sheet 4A) ~~with survey reports~~

*Engler and Robinson 1981.*

CANADA LANDS SURVEYS RECORDS  
F.B. 3 3 2 6 2





W.D. Usher & Associates Ltd.  
Land Surveyors Professional Engineers

Appendix "A"

FROM  
FB 33262

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CANADA LANDS SURVEYS RECORDS  
FB. 3 3 2 6 2

Your File

Our File 1743-2

August 27, 1981

Mr. E. McMinn, B.C.L.S.  
Alberta-British Columbia  
Boundary Commissioner  
Ministry of Environment  
Surveys and Mapping Branch  
Victoria, British Columbia

Dear Mr. McMinn:

Re: Alberta - British Columbia Boundary  
Monuments 81F to 89F

We have now completed the investigation and survey of the above noted section of the Alberta-British Columbia boundary. The following is a summary of the methods used to establish the computed location of monuments 87F and 89F.

First monuments 81F and 83F are in position and in good condition. Monuments 91F (good), 93F (poor) and 95F (poor) are in place.

Reference points for 85F as shown on a plan of survey by Mr. Mortimer, B.C.L.S. (1974) were used to re-establish the location of 85F. A small drill hole was found in the rock outcrop at the location of 85F, however, a new monument was constructed at the surveyed location.

Survey connections were then made to two (2) Coleman Collieries' points and 83F and 93F from 85F. The mine points were CC512 (added tag 302) and GR132 (marked 78-6 on their plan). All distances were reduced to mean sea level (sea level distance = measure distance X (R/E + R) where R = 6,372,149 metres and E is the mean line elevation.

By comparing plans by Mortimer, Asher & Cautley it was decided to proceed as follows:



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1. Reduce all distances to sea level (Mortimer distances at ground, Cautley unknown).
2. Check closures on Mortimer plan (very good).
3. Using data (angles and reduced distances) from Mortimer plan and calculated bearing (Cautley Plan) from 85F to 83F set points 89F and RPl-85F.
4. Using rotated bearing (Asher-RPl-85F to 89 F  $154^{\circ} 46' 53''$  - Mortimer  $154^{\circ} 48' 06''$  difference of  $0^{\circ} 01' 13''$ ) and distances from Ashers plan set calculated position of 95F.
5. Since 95F to 93F is a short course, used Cautley bearing and distance to set a calculated location for 93F.
6. Set 93F, GC512 and GR132 from calculated bearing 85F to 83F and our survey. Check closure at 93F showed an error of 0.22 metres or a ratio of 1/14,000, considered good.
7. Next using plan data (Cautley) calculated locations for 86F, 87F and 89F.
8. Compass rule adjusted this traverse to fit previously computed location of 89F.
9. Calculated ties from our survey to 87F and 89F.

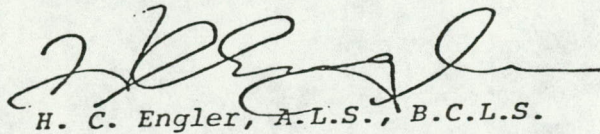
All in all the area seems to have been surveyed quite thoroughly. Monument 89F could easily be set from either 85F or from the local control points CC512 and 85F or GR132. It will fall on a level mined out area. However, 87F will fall in a deep hole, presently containing water.

A plan showing a compilation of the above was prepared and is enclosed, as are copies of the calculations and field notes.

To summarize then, the Alberta-British Columbia boundary from monuments 81F to 89F is either marked or can easily be re-established, other than 87F. It is worth noting here that monuments 91F, 93F and 95F could use repair work before they are totally destroyed. Number 93F stands very near a trail (used a fair amount) and is probably subject to some vandalism.

We trust that the foregoing covers the intent of the Commission.

Yours truly,



H. C. Engler, A.L.S., B.C.L.S.

HCE/cda  
Encls.



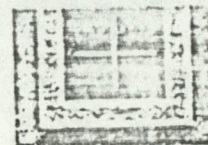
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OUR FILE: J-8401-1

YOUR FILE:

8th September, 1981

Ministry of Environment,  
Parliament Buildings,  
VICTORIA, B.C.  
V8V 1X5

Attention : Mr. E.R. McMinn

Dear Sirs,

re: BRITISH COLUMBIA-ALBERTA BORDER SURVEY : COLEMAN COLLIERIES AREA

The following is a report on the condition of the B.C.-Alberta border monumentation 81F to 95F as found during the course of our surveys in this area August, 1981.

An initial trip by helicopter was made to the site by W.G. Robinson and H.C. Engler on 6th August, 1981. On this reconnoitre we located and photographed 27F, 29F, 71F and 73F from the air. The condition of these monuments is typical of the general condition of all the monuments along the border. You will note the disintegration of the concrete as soon as it is exposed to the elements by destruction of the zinc cladding. Although weather in the area is severe over the year, much of the damage is caused by poor concrete mix, as evidenced by the large boulders used as filler pieces.

We arrived in the vicinity of Monument 85F noting tripods over 83F and 81F as we flew past. References 3-85F and 4-85F were located immediately because they had wooden tripods over them and still standing.

It was apparent without surveying that 8<sup>7</sup>5F was in a large mined out hollow and that 89F was probably destroyed because the next ridge to the southeast had been smoothed over and reseeded by the mining company.

While we hiked back along the ridge to inspect Monument 83F and 81F Mr. Engler took the helicopter into the valley to the east and located 91F, 93F and 95F.

We rejoined forces and consulted on what surveying was needed. We phoned Mr. McMinn at his home that evening to report conditions, and advise of our plan of action.

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F. B. 33262



Ministry of Environment,  
Victoria, B.C.

8th September, 1981

On 10th August, our whole survey team conducted a field survey as represented by the accompanying plan.

We decided first to re-establish Monument 85F with a new concrete monument and bolt from the existing references 3-85F and 4-85F. From this re-establishment Monument 93F was tied along with two control stations of Coleman Collieries. Old bolts GR 132 and GC 512.

Although the ground around 89F had been lowered approximately 15 metres, we decided not to re-establish the location and set a new monument. Future mining in the area would undoubtedly destroy this monument a second time. The area where Monument 85F had originally been placed had been mined out to considerable depth and it was impractical to reset a new monument.

It appears unlikely that Monument 85F and 81F will be distributed and 85F will be alright unless further mining is contemplated in this area. Monuments 93F and 95F are in poor condition, but their position is determinable from the remains.

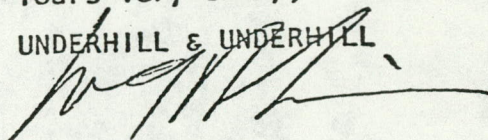
We are enclosing a technical report from Mr. Engler, Appendix "A", and prints of Coleman Collieries plans that you supplied to us as your file copies.

We are also enclosing our invoice for this work for your approval and forwarding to Coleman Collieries.

We were pleased to be able to do this work for your department. Our examination of these and other monuments at Crowsnest Pass and between indicate an urgent need to restore more boundary monuments before all trace is lost. We would be pleased to submit proposals for this type of work in the future.

Yours very truly,

UNDERHILL & UNDERHILL



Wm. G. Robinson

WGR/cn  
Enc.



F. B. 33242