

# **Faosimile** TRANSMISSION

ROYAL OAK MINES INC., ENVIRONMENTAL SERVICES

FAX (867) 873 2914 PHONE (867) 669 3729

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**to:** Kent Morton

**from:** Stephen Schultz

**date:** July 19, 1998

**subject:** New stack ports for SO<sub>2</sub> CEMS system

**pages:** two

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Kent,

I've marked the locations of the two new stack ports. We were advised that the pitot tube port (marked as port #2) and the sample probe port (marked as port #1) should be in line vertically and that port #1 should be above port #2. Also, ideally, port #2 should be a foot or so above the elevation of the existing stack testing ports.

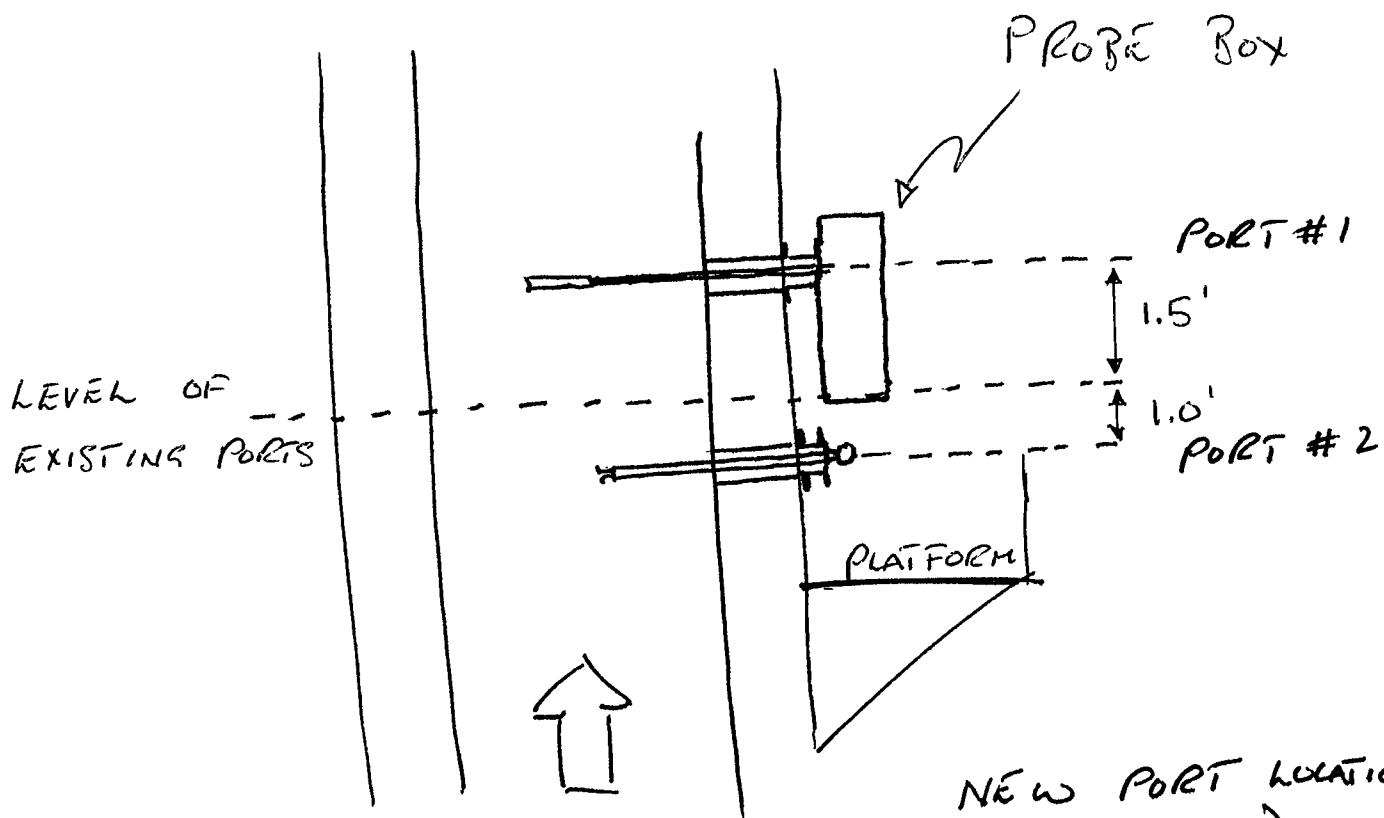
When I got up on the stack, I realised that there are some heavy straps around the stack, above the platform, that support a hoisting beam and the rail used for the stack testing probes. Given the height of the probe box, there will not be room to put the pitot tube one foot above the existing ports and the sample probe two-and-a-half feet above that (required by the dimensions of the probe box). I decided to put the pitot tube port one foot below the level of the existing ports and to put the sample probe port 1.5 feet above the existing port level. I decided to do this because the pitot tube assembly is only 50" in length from the inside face of it's flange plate. That puts the end of the pitot tube well in from the centre point of the stack and I don't think it will influence the flow near the manual sampling probe when they do their two traverses (which are 90° apart).


The locations for the two new ports are 2.5 feet apart, vertically, which leaves plenty of room for our 4" i.d. sleeves and flange plates. I have also located the new ports as close to the mid-point between the existing ports as possible (approx. 45° from each existing port), so that the new probes do not interfere with manual stack tests. Note that this puts the probe box outside the shack.

We should try to make the distance from the stack wall to the outside face of our flange as short as possible, so that the end of the pitot tube is as far from the stack wall as possible, where there is likely to be turbulence. Also, the sample probe and pitot tube have 3" i.d. flanges which we can't change, so we will have to put a 3" flange plate on the outside end of our sleeves.

I'm at Colomac for the week (July 20-24). Call me at 669-3869 if there are problems. The stack file you gave me is on my desk if you need it.

# SECTION



NEW PORT LOCATIONS  
ARE MARKED WITH  
A  SHOWING  
THE CENTRE POINT  
OF THE PORT.

## PLAN

