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OVERLAND

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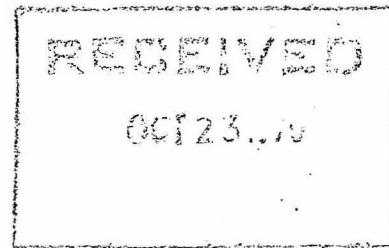
TELEPHONE
403 - 244-2191

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GRAVITY
MAGNETICS
I.P. SURVEYS
RADIO ACTIVE SURVEYS
DRILLING
LINE CLEAN UP
LINE CUTTING
GEOLOGY

October 21st, 1970

Mr. John Brock
Atlas Explorations Limited
355 Burrard Street
VANCOUVER 1, B.C.



Dear Mr. Brock:

We consider the causative mass that forms the large "hump" on Lines 8E, 8W, and 24W to be a ultra-basic intrusive. This intrusive angles across the base line to the southwest and forms a large scale gravity positive, which we have filtered out by incorporating it into the gravity gradient for the area. Mr. Chen thinks the intrusive to be a slab 900 to 1,000 feet wide, 6,000 feet long and having a varying depth to top from 150 feet deep to 300 feet deep.

The model that we have used for our investigation is a vertical slab having the above dimensions and a density of 3.40. The surrounding rock is assumed to be 2.7 giving a density contrast of 0.70. The mass required to cause this feature would be in excess of 200 million tons. This is a major feature and we cannot equate a mass of this size to an ore body, although anything can happen. Lines 24 and 32 West appear to have localized highs situated upon the main mass. This appearance, of course, is a personal selection. Another interpreter may not agree there is a separation, and call the residual high the apex of the deeper seated mass. However, I choose to point out the fact that there may be a separate high and if a hole is to be drilled Station 3N on Line 24W would likely be the best spot. I say this because it would test the isolated gravity high as well as the main mass.

.....Cont'd.....

If subsurface body

Mr. John Brock

October 21st, 1970

A review of the lines also shows that Line 8E is probably a number one place to locate a hole as well. My first impression of 8E was that we were only viewing the apex of the main body. However, last night I did some more work on this line and have to say that there is a possibility that we are viewing a separate gravity positive which could be a very good one. If you do drill on the Lorna Claims I would recommend a hole at 6N on the 8E line. One of my reasons for this statement is that the main body strikes northeast from Station 3N on Line 24W, to Station 11N on Line 8W and if continued, should be at about Station 20N on Line 8E. This apparent off-set from strike may mean that the Line 8E anomaly may be a local positive on the flanks of the main high caused by the suspected intrusive.

Line 32W contains another ambiguous feature. If the gravity regional was to have a sharp dipping gradient from Station 10 on south, then the feature as shown could be wiped out by having it become the apex of the major positive previously referred to.

On the other hand if there is only a gradual roll over to the gradient as I have marked in dashed tape on the section, we have an excellent local positive which again would be situated in a flank position.

If drilling is contemplated probably all three situations should be looked at.

TERRAIN CORRECTIONS

In the Lorna Group we did not apply terrain corrections. This was due to:

- (1) The outer ring corrections are all of a similar value.
- (2) There were only a few inner ring corrections and it was not relevant to apply the few to the map.

....Cont'd.....


Mr. John Brock

October 21st, 1970

I hope this letter helps your program.

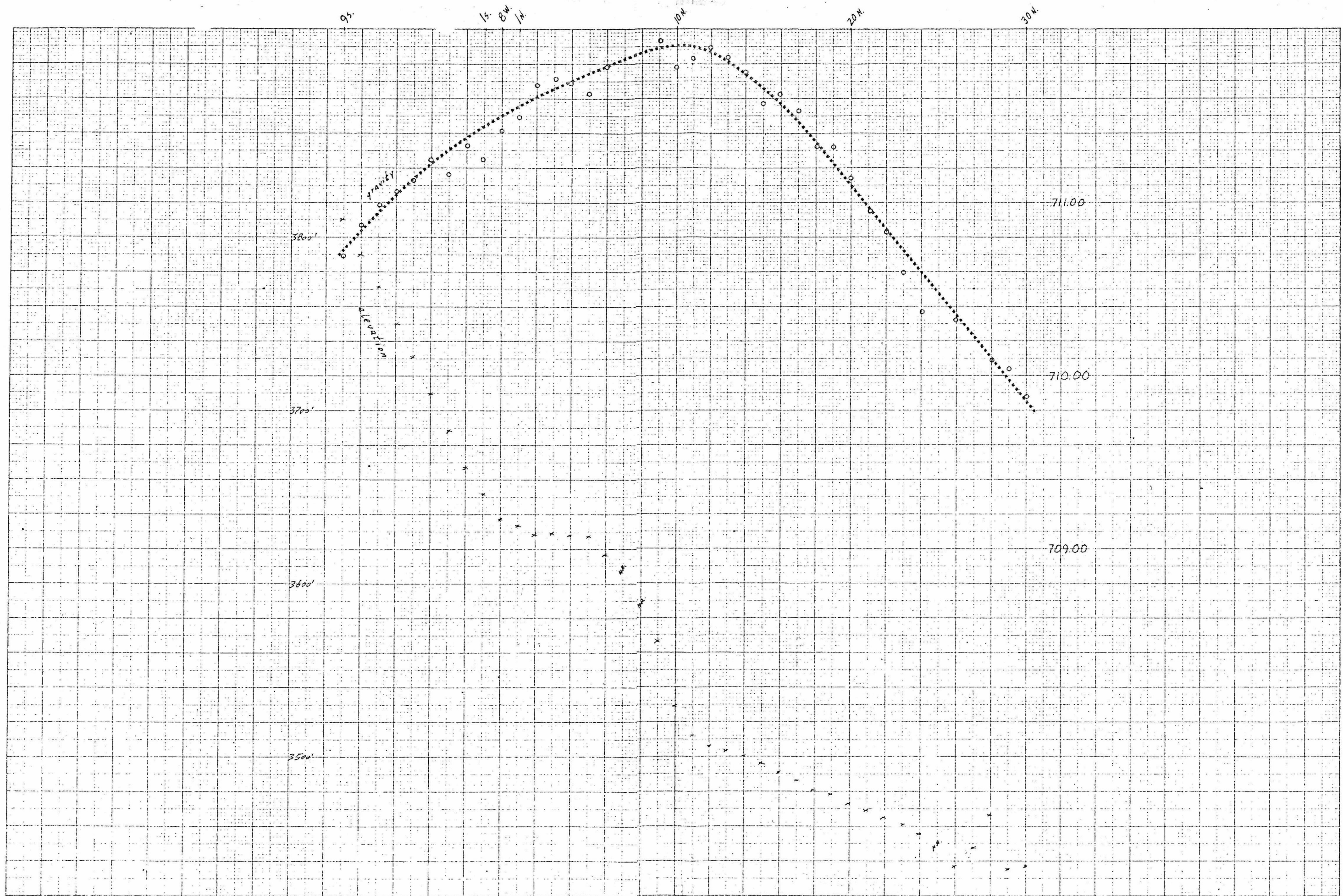
Yours very truly,

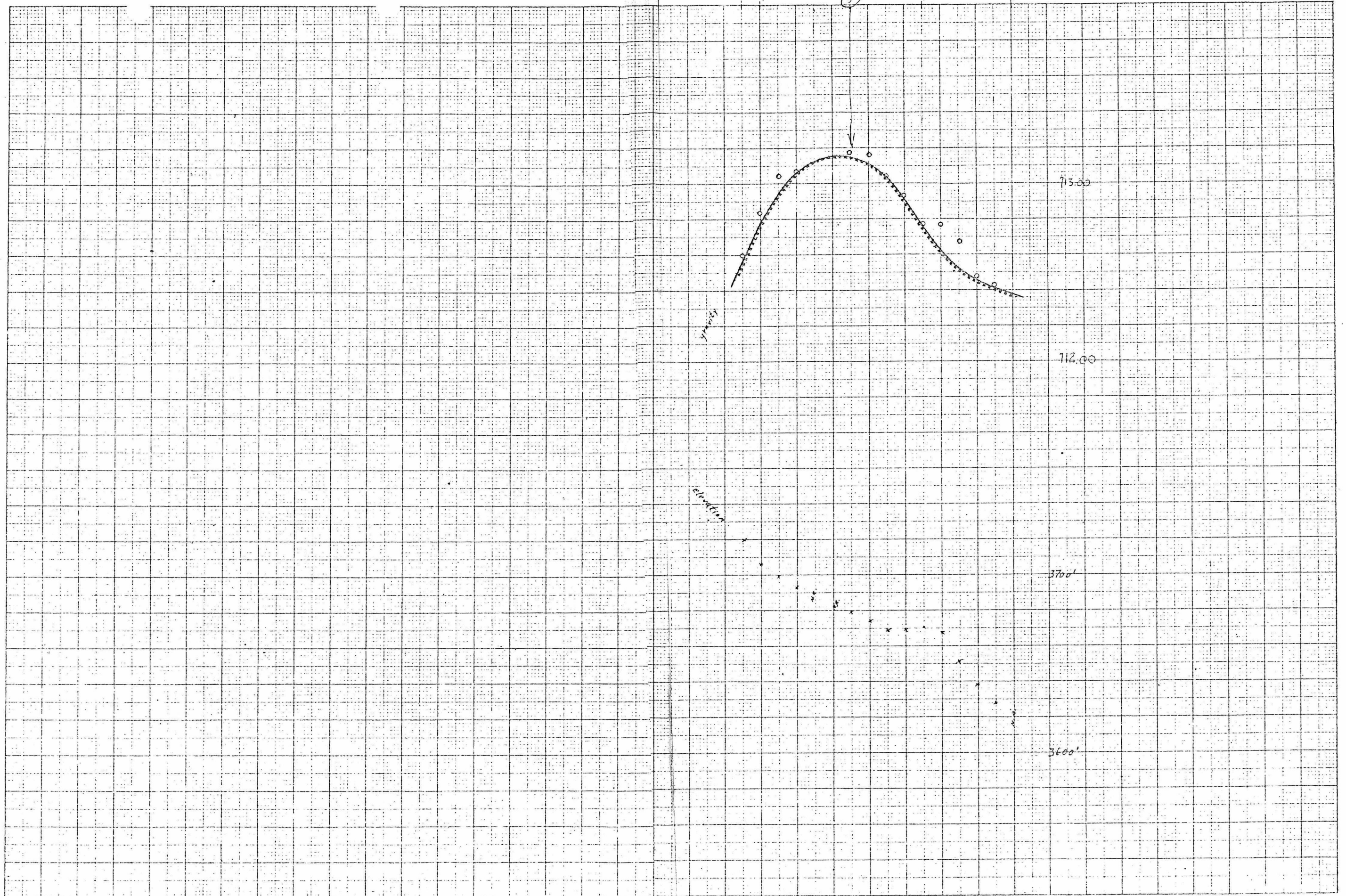
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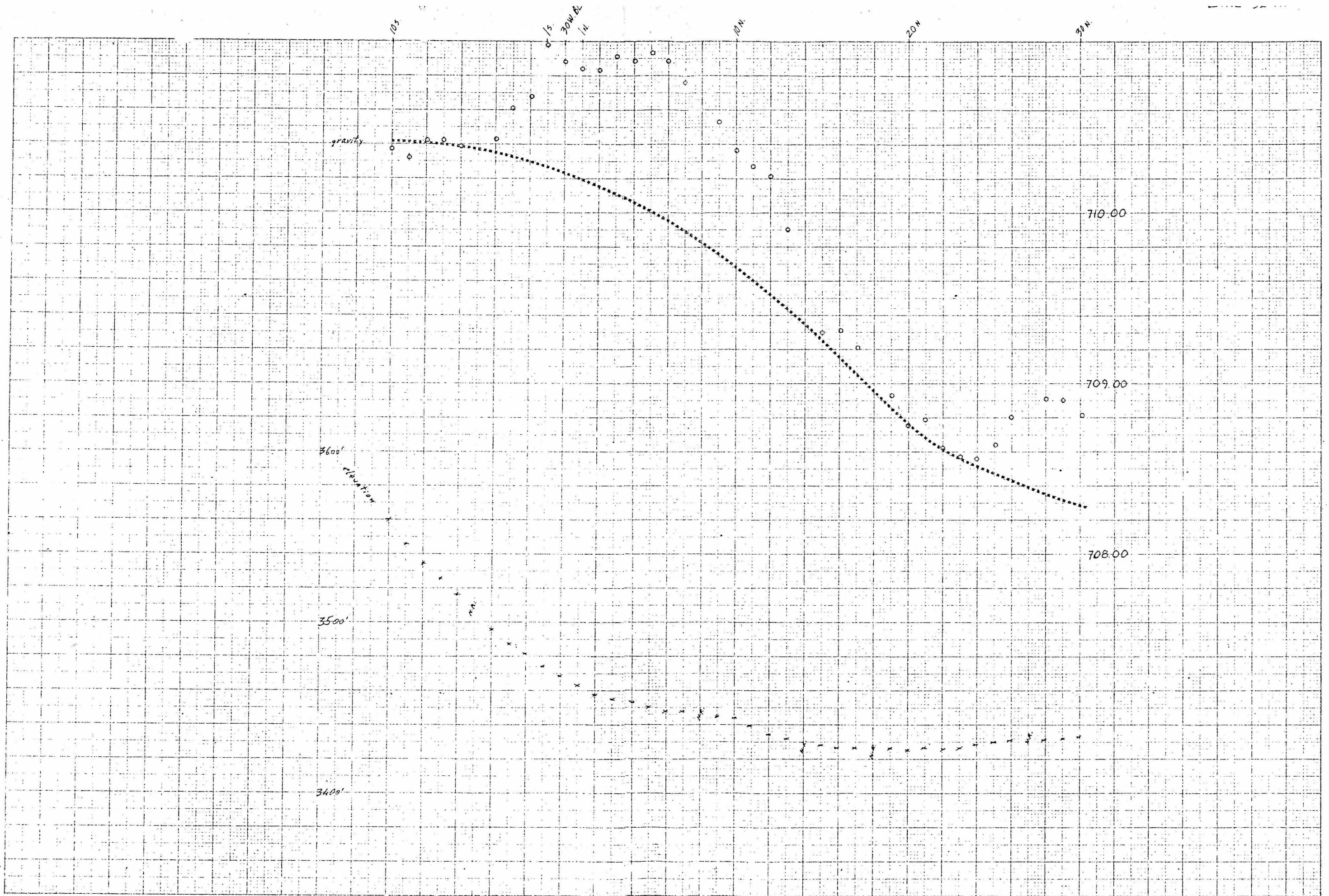


W.T. Salt

WTS/jp
Encls.







U.S. GEOLOGICAL SURVEY 47-1512