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**DOME EXPLORATION (CANADA) LIMITED**

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September 4, 1979

Mr. Ray Gould  
Director, Special Projects  
Dome Petroleum Limited  
P.O. Box 200  
Calgary, Alberta  
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Dear Ray:

Re: Dome Petroleum's Mineral Exploration  
Joint Ventures

The following is a summary of my assessment of the merits of the various properties worked on under joint-venture agreements with Aquitane and Prism Resources. Also included are some recommendations with respect to continued participation in these joint ventures.

My remarks have to be qualified by stating that time did not permit a careful study of all the data you have on hand and that reports on the results of this year's activities are not yet available.

Andre Meunier of Aquitane was able to give us a good rundown on what has been accomplished this year and some suggestions for continued exploration.

I would suggest that final decisions be withheld until all the data have been presented but in the meantime, I will give you my preliminary thoughts.

Aquitane-Dome (Siebens) Joint Venture (Uranium)

1. Dismal Lakes, N.W.T.

Cominco has earned a 40% interest in this property (Aquitane 40%, Dome 20%). This year's programme was designed to expand and upgrade, by drilling, a mineralized zone indicated by previous

drilling and believed to be an extension of a zone located by Esso on the adjoining property. Esso are believed to have a deposit of some 5 million lbs.  $U_3O_8$  and it is quite possible that a similar amount will be found on the Aquitane-Dome ground.

The mineralization is not the unconformity-type as in the Athabaska Basin, but occurs within flat-lying, Upper Proterozoic sediments some distance above the basement. The exact controls of the mineralization are still not known unless Cominco has come up with some theory as a result of this year's work.

Meunier has indicated that other portions of the property have been tested with no success and that the apparent lack of pelitic sediments in the basement would rule out the possibility of there being an unconformity-type deposit.

A deposit of 5 million lbs.  $U_3O_8$  in this area, even if combined with the Esso deposit, is not likely to be economic. However, should someone else discover a larger or better-grade deposit in the area, the Aquitane-Dome mineralization may have some value.

Therefore, it is recommended that, subject to Cominco's findings this year, the property be held as long as it requires a minimum expenditure. Part of the 1979 programme was to survey the claims in preparation for taking them to lease which will mean that holding costs will be minimal.

2. Amer Lake, N.W.T.

To date, about 3 million lbs.  $U_3O_8$  (at a grade of 0.085%) have been found on this property in Lower Proterozoic sediments. Aquitane appear to feel that this deposit cannot be increased in size or grade and they will probably propose that the property be reduced in size and just held pending developments in the area. I agree.

It is believed that Western Mines has a similar-sized deposit nearby but that Urangesellschaft have a large, unconformity-type deposit similar to Key Lake (100 million lbs.  $U_3O_8$ ) within 50 km of the Aquitane-Dome group. This deposit is in Upper Proterozoic sediments.

3. Bonnet Lake, Y.T.

Uranium has been found in a pyritiferous breccia or conglomerate consisting of chert fragments in sandstone in a Mesozoic, restricted basin. From preliminary data, it appears that this occurrence is low grade and cannot be fitted into any of the better-known categories as yet, although the roll-front type is a possibility.

During 1979, geochemical and geophysical (I.P.) reconnaissance surveys were run mainly to outline the sulphide-bearing zone.

The property lies within a newly proclaimed Wilderness Area. Andre Meunier feels that as the ground is away from any sensitive areas, it may be possible to get special permission to do exploration. The question should be cleared up before any major expenditures are made.

At this stage, I would have to rate the property rather low.

4. Hell Claims, B.C.

The property is situated in the north part of the Bowser Basin. Uranium mineralization occurs in a narrow (1-2 m) band of sandstone associated with carbonaceous material near the top of a sequence of Cretaceous volcanic and sedimentary rocks. Overlying, and forming the top of Mt. Helvekeer, are Tertiary acid volcanics. The uraniferous band is poorly exposed along the side of the mountain and as a result, it has not been properly sampled. A non-representative grab sample assayed 1.5%  $U_3O_8$ .

The 1979 programme consisted of a geochemical survey and geological mapping. For 1980, Aquitane will probably recommend trenching and sampling. Such a programme seems to be warranted.

5. Thelon Basin, N.W.T.

In 1979, Aquitane examined, on a reconnaissance basis, the Proterozoic sediments of the south part of the Dubawnt Basin and the adjoining basement rocks. They found nothing that would suggest an environment considered necessary for the formation of unconformity-type uranium deposits.

Also examined was one Permit on which uraniumiferous volcanics occur. This type of occurrence was considered uneconomic and no further work is contemplated for the area.

I agree.

6. Cape Dorset, N.W.T.

Uranium-bearing pegmatites occur in gneisses and quartzite where grades up to 0.1%  $U_3O_8$  have been obtained.

Aquitane will probably recommend abandoning this property.

I agree.

7. Lutes Mountain, N.B.

This property was originally held by B.P. who did some drilling with negative results. Aquitane acquired the ground and were able to find disseminated uranium in Mississippian conglomerates but there was no continuity to the mineralization. The property was farmed out to Norcen who spent \$400,000 before dropping out.

There seems to be no reason to continue exploration on this property.

8. Millet Brook, N.S.

Two-mica, early Paleozoic granites, similar to the hosts of some French uranium deposits, occur on this large property. One small occurrence of pitchblende has been found but a drill hole beneath the showing intersected only one tiny, mineralized fracture.

Aquitane have done a thorough job of exploration using geochemistry and geophysics but have no drill targets.

Although the geological setting appears favourable, there isn't much else that can be done.

I suggest that the Joint Venture keep a small nucleus of claims as long as possible and await developments in the area. There is considerable uranium exploration in Nova Scotia at present.

9. General

The joint-venture agreement between Aquitane and Dome has terminated and Dome (Siebens) has fulfilled its obligations. Dome now has to decide whether or not it wishes to continue in uranium exploration and if so, whether it wants to do it in association with Aquitane.

It has been suggested that Aquitane will abandon its exploration technique of fast, mobile, helicopter-borne radiometrics covering large areas in favour of a more detailed examination of some of the Proterozoic basins.

Unfortunately dozens of companies have the same idea and have been working on it for several years so that one would have to pay a high premium to acquire an interest in favourable ground.

With regard to the properties already held by the Joint Venture, it appears that there is no agreement covering their exploration and development and it is recommended that such an agreement be drawn up. It is further recommended that the agreement

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provide that if Dome decides not to participate in future programmes on any property, its interest is reduced pro rata as money is spent. It might be useful to set down the amount of money spent on each property as of the end of 1979.

Prism Resources

At this time the data on the 1979 programme is incomplete, particularly with regard to hole locations and attitudes.

Since Dome is committed to this year's programme, I suggest that we review the data at the end of the season when you have all the reports and before you have to make a decision on next year.

In the meantime, we will try to arrange for a visit to the property by someone from Dome Exploration.

With regard to the results to date, about all that can be said is that they are encouraging. I hope that it will be possible for the Manager to concentrate enough drilling in one of the mineralized areas to give some indication of what kind of continuity one can expect from this type of deposit. By this I mean that it would be a shame if they drilled just a couple of holes on each zone without taking a good hard look at what appears to be the best zone.

I hope this interim assessment will be of some help to you and if you wish us to look over the 1979 reports when they are available, we will be pleased to do so.

Yours very truly,

DOMEXPLORATION (CANADA) LIMITED

for L. B. Halladay  
Chief Geologist

LBH:rn