

WALLET
No. A955V
FIVE-PIECE DOUBLE-FOLD BACK AND FRONT

OTTAWA CITIZEN
APRIL 30, 1974

By Bert Hill
Citizen staff writer

Sometime in June the last school child will take a peek through the old telescope in the dome of the Dominion Observatory at the Experimental Farm.

And that will be the end of almost 70 years of star-gazing for as many

as 12,000 adults and childrens who have visited the observatory annually.

The last evening program for adults was held last Saturday, a 12-inch telescope has gone into storage and the 15-inch telescope in the dome will follow it in June.

Dr. David Baird, director of the Museum of Science and Technology, said today he hopes to put the old telescopes on display as part of the museum's astronomy exhibit.

In a week or two Dr. Baird hopes to be able to announce a replacement program for public astronomy provided he can get the manpower and resources.

No more gazing Observatory 'scope closing down in June

The old Dominion Observatory at the Experimental Farm opened in 1905 but as the years passed the old telescope lost much of its value as a scientific instrument in the face of newer, more sophisticated equipment and because of the noise, vibrations and smog of encroaching city life.

Four years ago the astronomy function of the old observatory was transferred to the National Research Council and the building became the home of the earth physics branch of the Department of Energy, Mines and Resources.

EMR made the decision to close the observatory.

OTTAWA CITIZEN
APRIL 30, 1974

'Stars Canada' lens shutting in Ottawa: MP

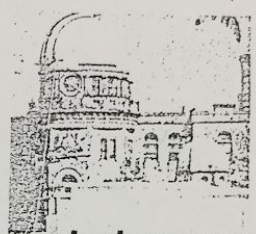
Stars Canada?

Ottawa West MP Peter Reilly sarcastically suggested that was the new name of the Dominion Observatory as he pressed home a complaint Monday about the telescope at the Experimental Farm.

He asked why the telescope was being shut down and moved, denying access to 10,000 students each year.

Prime Minister Trudeau said he didn't have the answer to the question but as for the new label "calling it Stars Canada shows how little regard that the honorable member has for bilingualism."

Both sides of the Commons roared in laughter at the remark and Mr. Reilly's reply that the "would be very happy to refer to the aforementioned installation as Etoile Canada."



Dominion Observatory
Star-gazing days over

Ottawa Citizen, Ontario

92,943

May 3, 1974

CANADIAN PRESS CLIPPING SERVICE

Bid to save 69-year-old observatory

A local heritage group has made an appeal to federal officials to change their minds about closing the Dominion Observatory at the Central Experimental Farm.

The energy, mines and resources department announced the last remaining telescope will be removed from the observatory in early June, and sent to a resting spot in the Museum of Science and Technology on St. Laurent Boulevard.

Mary Anne Phillips, secretary of a citizen group called Heritage Ottawa, said today her group wants the building retained either actively for stargazing or as an astronomy display.

Mrs. Phillips suggests in a letter to Dr. David Baird, director of the museum, that the 69-year-old observatory could become an extension of the museum.

She said the closing also raises fears the building will be phased out completely. Apart from the scientific context, Mrs. Phillips said the observatory has an important place in Ottawa's culture.

"Some concerned groups and citizens feel it sort of means the beginning of the end, which in turn may spell the beginning of the end for the Experimental Farm as well."

Mrs. Phillips said she has also written to Public Works Minister Dube urging that the observatory building not be closed but re-cycled.

Dr. Baird said today plans are so up in the air he is unable to give Heritage Ottawa any commitment on its suggestion.

He is expected to announce within a week or two plans for a replacement program of public astronomy if the funds are available.

Ottawa Journal, Ont.

83,271

April 30, 1974

CANADIAN PRESS CLIPPING SERVICE

Star-gazing program ends at Observatory

One of two public telescopes at the Dominion Observatory has been moved to the Museum of Science and Technology and the main telescope will soon follow it, the Journal has learned.

The move ends more than 50 years of public viewing of the stars at the landmark observatory on Carling Avenue but should in no way affect the public program itself.

Speculation is that both telescopes will be set up at the museum on Jones Road, but this has yet to be confirmed.

The observatory was closed to the public for the last time on Saturday, but schools may continue to visit until the end of June. More than 10,000 people visit each year.

Astronomers vacated the observatory four years ago and now work out of the National Research Council.

The 15-inch telescope has been used for public education since the early 1900s. All scientific observation is done with a 72-inch telescope in Victoria, B.C.

AGRICULTURE

POSITION OF GOVERNMENT RESPECTING AMOUNT OF
RETURN TO GRAIN FARMERS

Mr. Gordon Towers (Red Deer): Mr. Speaker, my question is for the Minister of Agriculture. In light of recent statements made by the minister that grain farmers are receiving a little too much for their product, and noting that on April 25 the minister stated, "I believe that no one would be getting an unwarranted mark-up on the grain", can the minister tell us which statement is government policy?

Hon. E. F. Whelan (Minister of Agriculture): Mr. Speaker, I would advise the hon. member to get a replay of the program if he did not see it because in the press there is a slight misinterpretation of what I said. It is not reported word for word. I said that for what the grain farmers in Canada have contributed to this nation and the world they were not getting too much.

Mr. Towers: Inasmuch as farmers' input costs have risen by 19.5 per cent in the first quarter of this year, according to Statistics Canada, and some other input costs have risen by over 200 per cent in the last nine months, will grain producers be asked to subsidize the two-price system for feed grain to which the minister has referred?

Mr. Whelan: Again the hon. member is reading from the report in the *Globe and Mail*. He would have to see the complete text of the tape so as to be accurate. There are costs to which farmers have been subjected that have risen by 200 per cent in some instances, and more. The *Globe and Mail* report does an injustice; it is inflammatory and it is wrong.

Some hon. Members: Hear, hear!

Some hon. Members: Oh, oh!

Mr. Speaker: Order, please. The Chair will recognize the hon. member for Red Deer for a third question, but I think we have reached the point where I have to seek the co-operation of hon. members to limit the number of supplementaries.

Mr. Towers: I am just wondering if the Minister of Agriculture is suggesting it is a fact that the *Globe and Mail* does not print the truth.

An hon. Member: Right.

Mr. Speaker: Order, please. The hon. member for Battleford-Kindersley.

* * *

NATIONAL CAPITAL COMMISSION

ISSUE OF PUBLICATION IMPLYING THAT NAME OF CAPITAL
IS "OTTAWA-HULL"

Mr. Norval Horner (Battleford-Kindersley): Mr. Speaker, my question is supplementary and is directed to the Minister of State for Urban Affairs. Can he explain his complete reversal of his position from last week with

Oral Questions

regard to the pamphlet, "Canada's New Capital"? He said then that the wording in it was unfortunate and not representative of the policy of the government. Today, however, he seems to have changed his view. Perhaps the cabinet has met in the meantime and a lot of ambitious backbenchers—

Mr. Speaker: Order, please.

* * *

SCIENCE

ALLEGED DENIAL TO PUBLIC OF ACCESS TO TELESCOPE AT
OBSERVATORY AT EXPERIMENTAL FARM

Mr. Peter Reilly (Ottawa West): Mr. Speaker, this question should really be directed to the Minister of Energy, Mines and Resources but in his absence I will direct it to the right hon. Prime Minister. It has to do with the telescope at what used to be called the Dominion Observatory at the experimental farm, and for all I know may now be called Stars Canada. Why has the government decided to deny further access to this telescope by the general public, including as many as 10,000 students each year, by packing it up and getting rid of it?

Right Hon. P. E. Trudeau (Prime Minister): Mr. Speaker, calling it Stars Canada shows the little regard that the hon. member has for bilingualism in this country. As to the rest of the question, I am afraid I must refer it to the Minister of Energy, Mines and Resources who is addressing the Canadian Manufacturers Association in Montreal today, but his parliamentary secretary will be glad to refer this interesting question to him.

Mr. Reilly: Mr. Speaker, I rise on a point of order. I would be very happy to refer to the aforementioned installation as Étoiles Canada if it will please the right hon. gentleman.

* * *

AGRICULTURE

FERTILIZER PRICES—POSSIBILITY OF GOVERNMENT ACTION
TO ASSIST FARMERS

Mr. H. W. Danforth (Kent-Essex): Mr. Speaker, I should like to address my question to the Minister of Agriculture. In view of the fact the minister first assured the House that there would be no increase in the price of fertilizer and later modified this by saying that there might be a modest increase in the price because of increases in the cost of labour and materials, can the minister now say whether or not the tremendous increase that has been experienced by farmers will be allowed by the government, or will the government subsidize the producers or take some action to modify the prices that producers are being asked to pay?

Hon. E. F. Whelan (Minister of Agriculture): Mr. Speaker, the record speaks for itself with regard to what I said about the price of fertilizer. I am sure the hon. member would not want to give that impression to the

As an example I have some financial figures for the war years. In 1939-40 the total budget for the Dominion Observatory was \$117,000 of which \$93,000 went to salaries. This left less than \$14,000 for all supplies, travel, field work, everything. The equivalent figure for Victoria was \$2,600; one wouldn't have thought it enough to pay for their photographic plates.

Nevertheless, a lot of work got done during the 25 years of the Stewart Administration. I shall confine myself to geophysics. I'm sure that Dr. Millman will make up for my omissions.

As we saw earlier, A.H. Miller was established in the gravity division; an assistant, Hughson, joined him briefly, but was let go during the depression cuts.

In the years 1924-1926 Miller established 48 pendulum stations in western and northern Canada. Hayfort anomalies and the depth of isostatic compensation were computed. A letter survives from Bowie, congratulating the Observatory on this work.

Miller turned his attention to Eastern Canada; 31 pendulum stations were installed in the next 3 years. In 1928 Miller took his pendulums to Europe, swinging them at Potsdam, Greenwich and, on his return, at Washington and Ottawa. The data were carefully reduced, and resulted in a slight change for the value of g at Ottawa.

In Europe he had consulted the Germans about the torsion balance, and on his return he entered into a fruitful period of collaboration with the Geological Survey, using the torsion balance and the magnetometer to investigate a number of geological features in Ontario and the Maritimes. The results were very carefully published.

Before Miller's career ended, he began to make surveys with one of the early gravity meters, which of course essentially killed the torsion balance as an exploration tool. For a man who had lugged the pendulums all over Canada the gravity meter was a delight.

Before the Stewart administration ended, Morris Innes had joined Miller in the gravity work. Innes initially was recruited for seismology, working there for about a year. He enlisted in the Air Force at the start of hostilities, and on his return took a higher paying position in Gravity. Seismology's loss and Gravity's gain.

Magnetic work went ahead steadily, with French and Madill sharing the work until 1940, when French was put on early retirement as an economy measure. The field work covered all areas of Canada and, increasingly, stations were reoccupied to provide data on secular variations. I'm sure we'll hear the details of this from Dr. Serson.

In 1936 there was a major governmental reorganization, and the magnetic stations at Meanook and Agincourt were transferred to the Observatory, along with their staff. But Madill was alone as far as field work was concerned until the end of the war, when he had a substantial staff build up which included (I think) Paul Serson.

In seismology, the principal efforts of the two seismologists, Hodgson and Doxsee, were directed to the maintenance and expansion of the network, and the field investigation of earthquakes. The two went together. The 1925 St. Lawrence earthquake magnitude 7., alarmed the Shawinigan Water and Power Company about possible danger to their dams and power houses from earthquakes, and they paid for the installation and maintenance of seismograph stations at Shawinigan Falls and Seven Falls. These stations were equipped with the first short-period seismographs in Canada - Wood Andersons.

Then in 1929 there was the Grand Banks earthquake (magnitude 7) which caused a tsunami which killed 27 people on the south coast of Newfoundland. In 1935 the Temiskaming earthquake (magnitude 6) showed, to everyone's surprise, that earthquakes could occur within the boundary of the Shield. Also, it resulted in a new seismograph for Ottawa, a shiny new Benioff vertical, short- and long-period.

At about the same time, in 1936, the reorganization already noted, resulted in the transfer of the Meteorological Department seismographs at Victoria and Toronto to Observatory management.

Next in order was the Cornwall Earthquake (Magnitude 5.9) of 1944, followed by the British Columbia Earthquake of 1946 (magnitude 7.2). As a result of that earthquake, a Benioff vertical seismograph was purchased for Victoria. At the start of the Beals' administration then the network consisted of stations at Victoria, Saskatoon, Toronto(?), Ottawa, Shawinigan Falls, Seven Falls, and Halifax.

E.A. Hodgson made field studies of most of these earthquakes and, to an increasing degree, lobbied for the institution of earthquake proof building standards. His career ended however in a different project.

In 1938 a large rock burst occurred in Lake Shore Mines, Kirkland Lake, and recorded at Ottawa. Hodgson recognized a potential source of energy for a crustal study and arranged to install a seismograph in the mine to time the bursts at their source. But he also got involved in the problem of forecasting rockbursts and from 1938 until 1945 he spent more than half his time at Kirkland Lake. It was left for me to carry out the crustal profile.

Mr. Stewart retired in 1946 and was succeeded by Dr. C.S. Beals. I would like to say something about the working conditions and atmosphere in the Observatory in the period straddling this water-shed. I saw the Observatory at that time partly through my father's eyes and partly as a summer employee. I think it's fair to say that the staff was tired and discouraged. Career development had suffered one knock after the other during the previous two decades. There was little or no money for new equipment or for field work. New staff began to arrive just before the change -- Millman in astronomy, Innes in gravity, Serson in geomagnetism and Milne in seismology, but the general atmosphere was one of gloom. Beals had a lot to turn around!

There was also a very negative attitude toward the Observatory in the Departmental administration. Some very strong figures in the Geological Survey or promoted from it, wanted to transfer Astronomy to the NRC and absorb the geophysics into the Survey. They opposed any increase of budget or any expansion of the Observatory work.

I have mentioned the rockbursts at Kirkland Lake. I analysed records from these and proposed a crustal profile using rockbursts as an energy source. The Department refused to fund the programme. Tuzo Wilson, who was my boss at Toronto, sold the idea to the N.R.C. When the Department found that they were going to lose geophysics to the Council, they quickly found the

money for the Observatory. Aside from whatever importance the work had, Dr. Beals always credited it with having established our right to expand into major field surveys.

I came to the Observatory during the summers to organize the program. Some of my problems will interest you. The Seismological Division's laboratory equipment consisted of a pair of inadequate needle-nosed pliers, a screw driver with a bit too large to be useful for most purposes, and a jeweller's screw driver. It was proposed to send me into the field so equipped. I managed to get some tools of my own. But I also wanted a volt-ohm meter and a hand calculator. It was suggested that I borrow these from the Time Service which would, presumably, do without them for four or five months. This was at the end of the Stewart administration when a Simpson-like Administrative Officer was firmly in control. Shortly afterwards Dr. Beals arrived, the villians were cast out, and things began to improve.

Beals got a good Administrative Officer and established the fact that Administration existed to serve the scientists rather than the other way around. He built up the staff steadily but with great care until he had the building bulging. He made the basement of Observatory House available, fought through the funding for the Geophysics Building which was occupied in 1955, and arranged for the Geodetic Building to revert to the Observatory in 1962. He exercised close control over programs, pushing people, including me, when they needed it. He read every

paper that came out, critically both as to science and to composition and refused to approve publication of those that didn't come up to his standards, and he initiated the crater programme and played a major role in it. Much of what you will hear in the rest of today would not have been possible without Dr. Beals. He retired in 1964; I succeeded and oversaw the 1970 reorganization.

These remarks were intended to be my peroration, but Henry has asked me to say something about the work in seismology during the 1950's. I shall do so very quickly. It started with my work with rockbursts, which resulted in the first crustal profile in Canada. It continued with crustal work in British Columbia by Bill Milne who was later joined by Hugh White. Pat Willmore joined the staff in 1953, developed portable instrumentation and made crustal studies in British Columbia, Manicouagan, and the Gulf of St. Lawrence. In this latter work he developed the Time-Term technique.

The most northerly seismograph station in the world was established at Resolute in 1950 and was rebuilt in 1958. In 1958 Willmore, fresh from the Test-Ban Conference in Geneva, proposed the Canadian Standard Network and sold it to Dr. Van Steenburgh and Treasury Board. He didn't stay with us long enough to get it established but he deserves credit for its implementation.

I began the so-called fault-plane project, aimed at exploiting Byerly's method for determining the direction of faulting. In those pre-WWSS days it was almost impossible to collect the original records and dependence had to be on station readings of first motion. I have recently reviewed those years as part of "the book" and I am amazed to find how much work was done. The necessary tables of extended distance were produced without the aid of computers. Solutions were made for something over 200 earthquakes. If the results were interpreted in terms of a single couple they showed a preponderance of transcurrent faulting; which was difficult to accept, but interpreted in terms of a double couple they showed pressure normal to the tectonic features, and this is the aspect that was stressed in our later papers.

A number of people, currently or recently on the staff, shared in the work, particularly Anne Stevens and Jack Wickens and Anne continued and extended the work as a Ph.D. Thesis. There was not much done after this. I think it is a pity that we stopped when we did, just as the WWSS data, and our own, were becoming available.

ADMINISTRATION, Continued

As usual, Klotz' travels were not limited to attending the meetings that were the excuse. On the way to Rome he spent an active four days in Britain and a week in Germany; after the meetings he attended the celebrations marking the 700th anniversary of the founding of the University of Padua, as a representative of the Royal Astronomical Society of Canada, visited Venice and Milan, spent an additional nine days in Germany, three days in Brussels and an energetic week in England, dining every night in his favorite restaurant, Frascatis. When he finally arrived home, seeing the Ziegfield Follies in New York on a three-day stay there ("Probably the best thing was a cowboy twirling a rope, sometimes two at a time, talking all the time making local hits, or hits at government measures")¹⁵⁸ he had been absent for an energetic and happy three months. As he embarked at Liverpool for the trip home he soliloquized on his happy state. Admitting that his needs were simple "I have not sought pleasure or amusement a good dinner, good music and genial surroundings are or were the extent of my modest desires",¹⁵⁹ he found his condition good. "I am in the pink of health I have not suffered one moments indisposition. Physical exercise I was told some years ago ... to avoid, and I have done so, but in this trip there were almost daily some unavoidable demands made in walking, in climbing stairs at stations, and etc. that seem to have been most satisfactory, so if anything I am fitter than when I left."¹⁵⁹ Yet within a week of his return he was reporting trouble with his heart.

This was not a new thing. Since mid-1918 his heart had been "in evidence more than he liked". His son Max, a distinguished local surgeon, examined him. "Max said there was nothing particularly serious, it was a case of

arterio-sclerosis, and said - eat less and don't smoke too much occasionally two ounces of rye or scotch".¹⁶⁰ Max re-examined him the following year and decided that he should be examined by a specialist.¹⁶¹ The specialist, Dr. Lyman, said that there was to be no more walking to or from work; when he wasn't satisfied with the progress in a month he prescribed bed rest for several weeks. This wasn't conducive to good cheer. "Perhaps as I write this Charon has already started paddling for my shore and will soon be awaiting me with his boat."¹⁶² But he survived this dismal period and the death of his son Max, served as President of the Seismological Society of America, Vice-President of the American Astronomical Society and President of Section III of the Royal Society and put in the hectic three month tour of Europe described above.

This time there was no such miraculous recovery. He had to remain in bed for fairly extensive periods; when he was able to go to the office he had to be driven there and back and could remain for limited periods only. By mid-October a nurse was in attendance each day, more to save his wife's strength than because his condition was critical. However at one point he got so weak that he had to dictate his diary to the nurse. Mr. Stewart, the Assistant Director, was in charge at the Observatory; he and the various Division Chiefs visited Klotz at his bedside, reported on their work and left major decisions to him. J.P. Henderson installed a \$100 wireless set for his listening pleasure.

This went on all winter. He had two doctors, a young one who wanted to get him up and about, an older one who insisted on complete bedrest. Between them they got him back on his feet by spring, and by mid-April, 1923, and for most of the summer, he was able to go to the office for half days, driven by one or other member of the staff. He maintained his interest in the

July 5 1974

Received from Mrs Mary Grey Hayes
for the doors in the Geophysical Assembly
Room as well as, Main door Geophysical
Building, Main door observatory and key to
the dome.

JJ Parks

Earth Physics Branch

IT ISN'T: Next time you're showing Ottawa off to a visitor, be very careful to avoid Carling Avenue in the area of that green-domed building to the south. If somebody asks what it is, you may be tempted to say "Dominion Observatory." Which it isn't . . . Of-

DUKE

ficially, the Dominion Observatory is now the **Earth Physics Branch**, Department of Energy, Mines and Resources, and has been for some time. The astronomer's dome doesn't mean much, because the astronomers have all been transferred to National Research Council. The building now houses administration and drafting types . . . Even the time service has been relocated . . . Best bet as you drive by is to say simply "See that? That's not the Dominion Observatory" And leave it at that.

★ ★ ★

BUZZING: Not only brides are starting to talk about June . . . The possibility of another

election has kept many rumors alive, and the latest is that the coming budget debate is going to be so tough we can expect that election soon. Soon is June. And some "in" people say plans are already being made.

★ ★ ★

PARTING SHOT: "In case some people think other people don't take time and trouble," says **North Gower mother**, "here's a story about a teddy bear. My daughter forgot it on an airplane. It was important but not expensive. A young man telephoned later to inform her he had tracked her down, and had teddy in safe keeping. Air Canada is to be commended."

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February 1, 1974

February 1, 1974

Mr. P. Stumes, P. Eng.,

J.L. Kelly,
Chief,
Administration Division,
Earth Physics Branch,
Dept. of Energy Mines and Resources,
3 Observatory Cres.,
Ottawa, Ontario
K1A 0E4

Dear Larry:

The enclosed request from P. Stumes arrived while you were on leave from the office and I was preparing for the move to the Museum. This is the reason for the delay in passing this along to you.

Yours truly,

Mary W. Grey,
Scientific Officer

be
Encl.

February 1, 1974

Mr. P. Stumes, P. Eng.,
Secretary,
Canadian Engineering Heritage Record,
Department of Indian & Northern Affairs,
Ottawa, Ontario
K1A 0H4

Dear Paul:

Please accept my apology for the delay in replying to your letter of December 19, concerning the Canadian Engineering Heritage Record. When your letter arrived I was involved in moving my office to the National Museum of Science & Technology and did not have sufficient time to devote to the survey.

Personally I agree that some of the equipment of the Earth Physics Branch deserves to be recorded and registered with the Canadian Engineering Heritage Record. This applies to equipment of the Seismology, Gravity and Geomagnetic Divisions of the Branch, in addition to those astronomical instruments which continue to be housed in the Observatory Building since the consolidation of astronomy in the National Research Council on April, 1970.

Your letter has been passed for action to J.L. Kelly, Chief, Administration Division, Earth Physics Branch. I am sure you can count on Larry's co-operation in completing your survey.

Yours truly,

Mary W. Grey,
Scientific Officer,

be

c.c. J.L. Kelly



Indian and
Northern Affairs

Affaires indiennes
et du Nord

Ottawa, Ontario K1A 0H4
December 18, 1973

Ms M.W. Grey, P.Eng.,
Public Relations Officer,
Earth Physics,
3 Observatory Cres.,
Ottawa, Ontario.
K1A 0E4

Your file Votre référence

Our file Notre référence 000-6-804/0

Dear Colleague:

With reference to our previous discussions, I am enclosing
some information about the Canadian Engineering Heritage Record.

Probably some of the equipment in the Observatory should be
recorded and registered with the C.E.H.R., to preserve it for
posterity.

Yours sincerely,

Paul Stumes, P.Eng.,
Secretary,
Canadian Engineering Heritage Record.

Encl.



PERSONAL

Mrs. Mary Grey
Curator for Astronomy
National Museum for Science and Technology
St. Laurent Boulevard
OTTAWA, Ontario, Canada.

VIA AIR MAIL



UNITED NATIONS DEVELOPMENT PROGRAMME

REGIONAL SEISMOLOGICAL CENTRE
FOR SOUTHEAST ASIA

GEOPHYSICAL OBSERVATORY
PAGASA
DILIMAN, QUEZON CITY



MAIL : C/O UNDP, BOX 1864,
MANILA PHILIPPINES
CABLES: UNDEVPRO, MANILA
TELEPHONE:

February 1, 1974

Mrs. Mary Grey
Curator for Astronomy
National Museum for Science
and Technology
St. Laurent Boulevard
OTTAWA, Ontario, C a n a d a

Dear Mary:

Olga sent me a clipping from the Journal saying that I had gone to the Philippines, that Dr. Whitham had succeeded me and that Mrs. Mary W. Grey has joined the National Museums staff. Didn't take Ken long to settle David's hash, did it!

Well, congratulations and I hope things work out well for you in your new job. They are lucky to get someone with your experience and ability and I think you are lucky to move into something that is bound to expand. All good wishes!

Did David steal my dome too?

Sincerely,

A handwritten signature in cursive script, appearing to read "John".

John H. Hodgson
Chief Seismologist (Project Manager)