

DAEN-REA-P

26 March 1973

Mr. Leonard A. Redecke
Acting Contracting Officer
National Science Foundation
Washington, D. C. 20550

Dear Mr. Redecke:

Thank you for your letter of 16 March 1973 inclosing proposed Amendment No. 1 to interagency agreement NSF-CA90.

On 22 March 1973 the Chief of Engineers executed the amendment, two copies of which are inclosed for your use. It is requested that the additional funds be made available as soon as possible.

With respect to the numbered items raised in your letter, the following information is supplied:

1. Rights of entry for survey and core boring have been obtained.
2. Necessary access will be acquired on or before 1 July 1973 by either right of entry or condemnation, if necessary.
3. Possession of the central site will be obtained prior to 1 September 1973.
4. and 5. The acquisition schedule as to these items will be met.
6. We await your requirements for this acquisition.
7. The District Office in Albuquerque will be requested to make this change.
8. This item does not appear to affect this office.
9. We will await your request for this item.
10. We have no objection to this item and the District office will be requested to make the change.

26 March 1973

Mr. Leonard A. Redecke

11. We believe the easement estate in the planning report is adequate so long as the observation stations are not contiguous.

12. We will be glad to discuss the matter of undertaking utility relocations at your convenience. This matter would have to be taken up with representatives of the District Engineer.

If any additional matters arise which you want to discuss, please feel free to contact me or members of my staff at any time.

Sincerely,

1 Incl (dup)
as stated

E. L. INGRAM, JR.
Chief, Acquisition Division
Directorate of Real Estate

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

Interagency Agreement
No. NSF-CA90
Amendment No. 1

Government Agencies: Department of the Army, Office of the Chief of Engineers, and the National Science Foundation

WHEREAS, the Corps has furnished to the Foundation a Real Estate Planning Report, dated 5 December 1972 regarding acquisition of land for the Very Large Array Project, and

WHEREAS, the Corps has indicated in a letter dated 22 February 1973 that it will require an estimated additional \$165,000 to acquire the necessary real estate for the Very Large Array Project, and

WHEREAS, the Foundation desires the Corps to take all necessary action to acquire the necessary real estate interests;

NOW, THEREFORE, pursuant to the mutual understandings of the agencies, Interagency Agreement No. CA90 is hereby amended as follows:

In SECTION V - FUNDING delete paragraph C and substitute in lieu thereof the following paragraph C.

Funds in the amount of \$32,200 are hereby provided by the Foundation under this agreement for Corps support.

Funds in the amount of \$152,800 are hereby provided by the Foundation for land acquisition for the Very Large Array Project.

APPROVED:

NATIONAL SCIENCE FOUNDATION

Leonard A. Redeker

LEONARD A. REDEKER
CONTRACTING OFFICER

MAR 16 1973

(DATE)

DEPARTMENT OF ARMY

[Signature]
CHIEF OF ENGINEERS

MAR 22 1973

(DATE)

ASSOCIATED UNIVERSITIES, INC.
SUITE 603
1717 MASSACHUSETTS AVENUE, N. W.
WASHINGTON, D. C. 20036

OFFICE OF THE PRESIDENT

462-1678

CABLES: UNIVASSOC

MEMORANDUM

TO: The File

FROM: V. Bremenkamp DATE: May 10, 1972

SUBJECT: VISIT TO SANTA FE AND SOCORRO MAY 3-5, 1972

On May 3, 1972, the persons listed on the attached met in the State Office Building in Santa Fe. The purpose of the meeting was to discuss land acquisition for the VLA site.

Mr. David King, Director of the State Planning Office, will be the primary contact point for State involvement. The State will assume responsibility for initial contact with regard to land acquisition.

The Corps of Engineers will handle the detailed negotiations and finally acquire the land for NSF.

The meeting resulted in the following priority list:

1. NRAO will prepare a detailed definition of needs, including precise location of headquarters and observatory stations. This should include statements regarding necessary fencing.
2. NSF will add on their requirements and prepare an environmental impact statement.
3. The Corps of Engineers will use this input to prepare a real estate acquisition plan.
4. The State of New Mexico can then determine how they wish to interact with the site acquisition.

The State Planning Office stated they would attempt to organize a meeting with the ranchers who will be affected within a week or ten days. They expressed a desire for Dr. Wade to attend this meeting also.

On May 4, Messrs. Anderson and Phillips of the NSF, and I drove to Socorro to look at the site. We looked at a portion of each of the three arms, up to Bruton's well on the southwest, to Taylor's irrigation project on the north, and to Major's well on the southeast. We also drove and walked to the center of the Array.

Following this we explored the AT & SF railroad in Magdalena. It is obvious that no trains have used the tracks in several years and that considerable repair will be necessary although the tracks look much better outside town. We also looked at the connection with the main line in Socorro. A careful evaluation of the need for the rail line should be made soon, as a decision will be taken which may be unacceptable. Factors which should be considered include the difficulty of unloading and trucking from Socorro, i.e. traffic, overhead lines, etc. Tunnels and underpasses will affect either method of transport and should be looked at as to how they will affect the size of components that can be transported.

Attachment

VLA PROJECT

State Planning Office Conference Room

May 3, 1972

Attendees

Morris T. Phillips	Contracts Manager	NSF
Bill Humphries	N.M. Game & Fish	Santa Fe
Bill Simms	Dept. of Development	Santa Fe
William P. Bannister	Corps of Engineers	Washington, D.C.
David L. Cohen	Corps of Engineers	Washington, D.C.
Lloyd A. Guenther	Corps of Engineers	Albuquerque
Chris Krahling	State Planning Office	Santa Fe
David W. King	State Planning Office	Santa Fe
W. J. Anderson	Bureau of Land Management	Santa Fe
Campbell M. Wade	National Radio Astronomy Observatory	Charlottesville, Va.
Gerald F. Anderson	National Science Foundation	Washington, D.C.
Wm. Oscar Jordan	State Land Office	Santa Fe
B. A. McKinley	Corps of Engineers	Dallas, Texas
Charles M. Blackard	Corps of Engineers	Dallas, Texas
Victor Bremenkamp	Associated Universities, Inc.	Washington, D.C.
Pete Pence	Governor's Office	Santa Fe

bcc: Hvatum, Riffe, Bremenkamp, VLA File

NATIONAL RADIO ASTRONOMY OBSERVATORY
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C/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-785-1191

May 19, 1972

Mr. Daniel Hunt, Head
National Centers and Facilities Operations
National Science Foundation
1800 G Street
Washington, D. C. 20550

Dear Dan:

Enclosed is information on the VLA land usage that is required by the Corps of Engineers for their planning documents. I assume you will now forward this on to the Corps in whatever form they require.

If further information is needed to expedite this matter, please do not hesitate to let me know.

Sincerely yours,



D. S. Heeschen

DSH/pj

cc: G. F. Tape
M. T. Phillips

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

May 19, 1972

VLA PROJECT

VLA Land Use Requirements

The National Science Foundation (NSF) has selected a site on the Plains of San Augustin, some 50 miles west of Socorro, New Mexico, for the location of a Very Large Array radio telescope. This site was chosen after years of careful study of several locations. The San Augustin site provides the necessary topographical and environmental requirements for this extremely large and unique basic research center. The reasonably high altitude, level terrain, low humidity and lack of high-density industrial activity in and around the site provides nearly ideal conditions for the type of research that will be undertaken with the VLA. The activities currently being carried out on the proposed site, namely ranching and farming, are compatible with VLA activities in that both require relatively large areas of low-density population and minimal heavy industrial activity. The National Radio Astronomy Observatory (NRAO), the organization who will manage the VLA, will encourage the types of activity currently being carried out on the site and surrounding areas and will cooperate in every reasonable way to maintain these kinds of activities.

The total land required for the VLA is about 3000 acres and may be generally described as follows: 1) At the center of the VLA will be an area of about one square mile. On this square mile will be constructed the necessary buildings and central utilities complex for the VLA. These facilities will comprise about 200 acres within the indicated square mile and will be enclosed in a stock fence. Free movement of cattle and other livestock will not be restricted outside the enclosed area. 2) Leading out from the center of the VLA will be three equiangular arms--each about 13 miles in length and each will be 200 yards wide. Running the length of each arm of the VLA will be two standard gauge railroad tracks over which the radio telescopes will move. When these radio telescopes are moved their maximum speed will be 5 mph.

Along each arm of the VLA will be a series of "observing stations". Each station will be enclosed in a stock fence--the enclosed area will be about 100'x100'. With the exception of these small enclosures, movement of live-stock across and on the railroad will not be restricted. Also running the length of each arm will be underground transmission cables and--as required--small equipment huts about 8'x8' will be spaced along the arms to provide access to the cable. Overhead telephone and power lines are currently planned along the arms; however, studies are now being conducted on the advisability of placing these lines underground. Movement of personnel and equipment will generally be by standard railroad motor car along the arms of the VLA. In constructing the arms of the VLA, every consideration will be given to retaining the natural features and drainage of the land and retention of natural vegetation.

Method of Acquisition

The National Radio Astronomy Observatory will not object to whatever method of acquisition is used in acquiring the needed real estate for the Very Large Array project so long as the following broad guideline is included in the acquisition document:

"Within the stated (acquired) boundaries, the rights of the National Science Foundation, its agents or assigns (now the National Radio Astronomy Observatory) must not be abridged or otherwise restricted in the conduct of radio astronomy research, development of research instruments, construction of facilities, movement of personnel, supplies and/or equipment, or any other activity related to the scope of work as specified in the contract between Associated Universities, Inc. and the National Science Foundation for the construction, operation and management of the National Radio Astronomy Observatory."

(The above statement would be necessary only if the land acquired is by a method other than direct purchase.)

It shall be the policy of the National Science Foundation and the National Radio Astronomy Observatory--so far as is practical and not inconsistent with the stated purposes of the land use--to not inhibit the movement of livestock or privately owned equipment across or through the lands so acquired; to avoid limiting the historical usage of adjacent lands; to retain, so far as practical, the natural features of the land; and cooperate in every reasonable way with neighboring landowners to promote, and protect, the mutual interests of the parties.

Schedule for Acquisition

August 1972	The NRAO will need free access and entry to all lands required for the VLA to do final surveys and siting of the various structures and facilities.
April 1973	The central sections (main site) to be acquired in its entirety in order to prepare the site for telescope assembly, building construction and facilities development.
June 1973	All lands for the VLA acquired.

[Note: See attached technical description of land required for the VLA site.]

TECHNICAL DESCRIPTION OF THE LAND REQUIRED FOR THE VLA SITE

1. The center of the array is at:

Latitude 34°04'44" N

Longitude 107°37'03" W.

From this point, the center lines of the three arms of the array extend on the true bearings shown in the table below. The table also gives the length of the arms.

Arm	Bearing from Center	Length
North	355°00'00"	19040 meters
Southeast	115°00'00"	21040 meters
Southwest	235°00'00"	21040 meters

Each arm will have a width of 200 yards, centered on the lines defined above.

2. The section which contains the array center (S.1 of T.3S, R.8W) should be acquired in its entirety. It will contain the laboratory and shop buildings, the dormitory, the sewage treatment area, and the "marshalling yard" at the array center.

3. The attached table shows the planned locations of the observing stations. An area approximately 100 feet square will be fenced off at each station. The observing stations will lie on the center lines of the arms. Cable lines will be placed to one side of the center line, and the double-track railway for antenna transport will lie on the other side. The railways will be standard guage, with 18 feet center-to-center spacing. The mid-line of the railway will be 110 feet from the center line of the arm.

TABLE 3-2
 LOCATIONS OF OBSERVING STATIONS FOR THE VLA
 (All distances are in meters from the center of the eye)

1"	North Arm				South-East Arm				South-West Arm						
	3"	9"	27"	1"	3"	9"	27"	1"	3"	9"	27"	1"	3"	9"	27"
3500.00	1166.67	388.89	129.63	1500.00	500.00	166.67	55.56	2000.00	666.67	222.22	74.07	2000.00	666.67	222.22	74.07
4500.00	1500.00	500.00	166.67	6000.00	2000.00	666.67	222.22	4000.00	1333.33	444.44	148.15	4000.00	1333.33	444.44	148.15
8500.00	2833.33	944.44	314.81	8000.00	2666.67	888.89	296.30	7500.00	2500.00	833.33	277.78	7500.00	2500.00	833.33	277.78
9000.00	3000.00	1000.00	388.89	9500.00	3166.67	1055.56	340.00	12000.00	4000.00	1333.33	444.44	12000.00	4000.00	1333.33	444.44
10500.00	3500.00	1166.67	500.00	10000.00	3333.33	1111.11	370.37	13500.00	4500.00	1500.00	500.00	13500.00	4500.00	1500.00	500.00
17500.00	5833.33	1944.44	648.15	14500.00	4833.33	1611.11	537.04	15000.00	5000.00	1666.67	555.56	15000.00	5000.00	1666.67	555.56
19000.00	6333.33	2111.11	703.70	16000.00	5333.33	1777.78	592.59	16000.00	5333.33	1777.78	592.59	16000.00	5333.33	1777.78	592.59
				17000.00	5666.67	1888.89	629.63	19500.00	6500.00	2166.67	722.22	19500.00	6500.00	2166.67	722.22
				17500.00	5833.33	1944.44	666.67	21000.00	7000.00	2333.33	777.78	21000.00	7000.00	2333.33	777.78
				20000.00	6666.67	2222.22	740.74								
				21000.00	7000.00	2333.33	777.78								

Total number of observing stations = 100

A. H. ...

NATIONAL RADIO ASTRONOMY OBSERVATORY
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December 4, 1972

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C/O KITT PEAK NATIONAL OBSERVATORY
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TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

Mr. Daniel Hunt, Head
National Centers and Facilities Operations
National Science Foundation
1800 G Street
Washington, D. C. 20550

Dear Dan:

On Friday, December 1, at the Corps of Engineers Office in Albuquerque, Mr. Lloyd Gunther and his assistants, Mr. Holt and Mr. Davenport raised a number of questions concerning the land acquisition for the VLA. The two principal questions were:

1) How can the taking instrument be drafted to permit the initial exclusive use of the 100' x 100' instrument observing sites and still provide the necessary flexibility for NRAO to relocate these exclusive use areas anywhere along the arms of the Wye? One suggestion was to take exclusive use of a strip 100' wide all along the arms, but this cannot be done as we cannot cut the ranches in pieces. We talked about various alternatives but did not arrive at any good solution and so advised the Corps of Engineers that we would try to work out some language, talk with NSF and get back to them.

2) They do not believe the reference to the contract between NSF and AUI can be included in the formal document without appending a copy or placing it on file in the county courthouse or other location available to all parties. We agree with them and will try to work out alternate language.

There is attached a copy of the proposed COE Right-of-Way Easement for your review. We will be in touch with you shortly on this matter. I promised an answer within a week.

Other items concerning land acquisition by the COE which you might find of interest were:

1. Both the Division and District agreed to move the date for property access for surveys and foundation work up to January in lieu of May 1, 1973. I am to confirm this to them.

Mr. Daniel Hunt

- 2 -

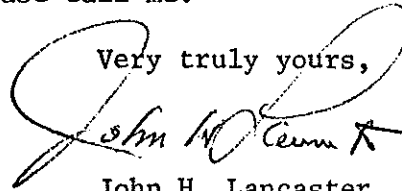
December 4, 1972

2. Acquisition of the land will be done in two steps: first, right-of-entry to start immediately and to be completed in January; and second, actual negotiation for the land use which will not be done until sometime later. This is excellent.

3. The COE will do any amount of surveying we require but, of course, will require supplemental authority.

Should you have any questions, please call me.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea

Enclosure

bcc: D. S. Heeschen ✓
H. Hvatum
T. R. Riffe

RIGHT-OF-WAY EASEMENT

A perpetual and assignable easement and right-of-way in, on, over and across Tracts Nos. _____ for the location, construction, operation, maintenance, alteration and replacement of a road, railroad, overhead and/or underground electric transmission and telephone lines, observation stations enclosed in a stock fence, measuring about 100' x 100', and equipment huts, measuring about 8' x 8', and appurtenances thereto; together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and other vegetation, structures, or obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns, the right to cross over the right-of-way as access to their adjoining land, except at observation stations, subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines; provided, however, that the rights of the grantee, its agents and assigns, must not be abridged or otherwise restricted in the conduct of radio astronomy research, development of research instruments, construction of facilities, movement of personnel, supplies and/or equipment, or any other activity related to the scope of work as specified in the contract between Associated Universities, Inc., and the National Science Foundation for the construction, operation and management of the National Radio Astronomy Observatory.

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December 5, 1972

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C/O KITT PEAK NATIONAL OBSERVATORY
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Mr. William C. Simms
Director, Department of Development
State of New Mexico
Santa Fe, New Mexico

Dear Mr. Simms:

It was a pleasure to meet with you last Thursday and to discuss the VLA and our mutual interests in seeing it successfully completed. I thought it might be well to confirm some of our discussion.

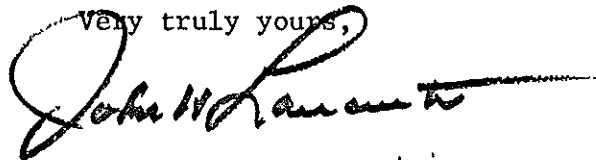
We would appreciate your having a representative, or representatives, at the January 23, 1972, pre-proposal meeting for the antenna procurement at NMIMT in Socorro to discuss briefly the topics of: New Mexico industrial resources; rules and regulations for out-of-state firms working in New Mexico; labor supply; and any other topics you think are pertinent.

We would be delighted if the Governor, or his representative, could be available to welcome the group.

I will send you a copy of the Request for Proposals for the antenna procurement early next week and the list of firms which will be receiving the RFP the following week.

Should you have any questions, please call or write me.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea

cc: Mr. Chris Crahling, N.M. S.P.O.

bcc: D. Hunt, NSF
D. S. Neeschen
H. Hvatum
T. Riffe

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December 5, 1972

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C/O KITT PEAK NATIONAL OBSERVATORY
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TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

Col. James L. Sutton, District Engineer
U. S. Army Corps of Engineers
Post Office Box 1580
Albuquerque, New Mexico 87103

Dear Col. Sutton:

It was a pleasure to meet last Friday with you and the members of your staff to discuss the VLA land acquisition and construction problems. I would like to confirm some of the points discussed.

1. It is requested that the date set forth in Mr. Wilbur W. Bolton, Jr.'s letter of October 24, 1972, for right-of-entry for survey and core boring purposes to the entire site be revised from May 1, 1973, to the earliest practical date during January, 1973.

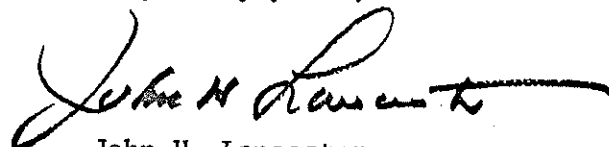
2. The acquisition program will be completed in two parts: First, obtaining the rights-of-entry which will start immediately; and, second, the actual acquisition.

3. We are working with the National Science Foundation to reply to Lloyd Guenther's questions concerning the phrasing of the right-of-way easement and should be in touch with him early next week.

4. Your offer to complete the survey and mapping work is greatly appreciated. I intend to discuss the selection of an engineering firm with the Foundation next week, and I will be in touch with you after a decision is made. Mr. Hill was extremely knowledgeable, and his offer to help prepare specifications and assist in negotiating the contract will most certainly be accepted.

5. Although it was not discussed at our meeting, it is our understanding that the Corps will also handle payment for relocating any water wells, corrals and other ground facilities which must be moved, as well as the relocation of existing utility lines.

Very truly yours,



John H. Lancaster
Manager, VLA Project

bcc: D. Hunt, NSF
D. S. Heeschen
H. Hvatum
T. Riffe

JHL:bea

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December 14, 1972

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VLA PROJECT

Information Statement to Ranchers, Federal and State Agencies

A number of questions have been raised concerning possible restrictions on the use of land on the Plains of San Augustine in the vicinity of the VLA Project. This subject is set forth on Page 2 of the FINAL ENVIRONMENTAL STATEMENT - VERY LARGE ARRAY dated October 6, 1972, prepared by the National Science Foundation as follows:

VLA operations require a low population density and the absence of nearby sources of electromagnetic interference. Certain types of industrial development on the Plains of San Augustine are undesirable unless measures are taken to properly shield local sources of electromagnetic radiation. Coordination between future developers and the NRAO would minimize potential interference with the radio astronomy program.

This statement is intended to discuss various types of possible radio interference and to set forth the position of the National Radio Astronomy Observatory.

Residential and Ranch type equipment, including all household appliances and ranch equipment such as automobiles, trucks, tractors, small welders, electric and gasoline driven pumps. This type of equipment should not cause any interference with the VLA and no attempt will be made to limit or restrict its use. Should some unforeseen piece of equipment cause unexpected interference, NRAO, with the permission and cooperation of the owner, will install suppression or shielding devices at NRAO's expense.

Light Industrial Equipment, including production arc welders, drill presses, lathes and similar equipment. This type of equipment, if located near the VLA, may cause some interference. NRAO will discuss any such problem

Information Statement to Ranchers, Federal and State Agencies

- 2 -

with the owner and, with his cooperation and permission, NRAO will install suppression or shielding devices on any troublesome existing or new equipment. This will be done without cost to the owner and at his convenience.

Miscellaneous Equipment. Certain types of equipment such as large neon signs and diathermy equipment, with unusual radiation characteristics, may be harmful to the operation of the VLA if located within three to four miles of the arms of the Wye. For this type of equipment NRAO will work with the owner and, with his permission, install at NRAO's expense any reasonable suppression devices in an attempt to reduce interference to acceptable levels.

Heavy Industrial Development. This would include major developments such as large industrial plants, major mining activities and oil refineries, etc. These activities could cause harmful interference, reduce the usefulness of the VLA and possibly make certain observations for which the VLA has been designed impossible. The closer to the VLA such interference sources operate, the more severe the problem will be. Generally speaking, no such facilities should operate within line of sight of any of the VLA antennas.

It is not possible to make general statements regarding size of development or activity, distance from the array, or degree of curtailment necessary that would cover all possible situations because the problem of interference is so complex. In many cases it may be possible to work with a developer to minimize the harmful effects of his proposed activity.



D. S. Heeschen
Director

D. Heeschen

NATIONAL RADIO ASTRONOMY OBSERVATORY
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CHARLOTTESVILLE, VIRGINIA 22901
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December 15, 1972

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O/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

Col. James L. Sutton
District Engineer
U. S. Army Corps of Engineers
P. O. Box 1580
Albuquerque, New Mexico 87103

Dear Col. Sutton:

At our December 1 meeting Lloyd Guenther asked if our position on land acquisition had changed and if so, in what regards. At that same meeting Herbert Holt requested assistance on the wording of the right-of-way easement. This letter will attempt to answer both of these requests.

1. Land acquisition - Our position on the quantity of land involved and our use of the land has not changed. The statements contained in Enclosure 2 to the National Science Foundation's letter of October 24, 1972, to the Office of the Chief of Engineers, are still valid. Since the science of radio astronomy is so young, techniques are changing very rapidly, and no one can foresee all the future requirements which will improve the effectiveness of the VLA. For this reason, no restrictions should be placed upon the Government's use of the 600 foot wide right-of-way. We do not believe that it is possible to describe a 100 foot band of exclusive use, set forth a range of possible future antenna sites, or otherwise restrict use of the right-of-way.

2. Right-of-way document - I have discussed the proposed document with the Foundation people and they have instructed me to work out the details with you. There are attached four copies of a suggested draft for discussion purposes.

3. Restriction on equipment producing radiation - This matter is of great concern to the ranchers on the Plains and we understand that your field people have encountered it. To more closely define the NRAO position, we have prepared the attached statement dated December 14, 1972. There are twelve copies enclosed which might be helpful to your people.

4. Timing of land acquisition - Since the dates set forth in the October 24 letter to the Chief of Engineers were established, considerable planning and scheduling have been done which indicate

December 15, 1972

that the dates should be modified. As we discussed, the southwest arm either strikes or comes very close to two very important ranch wells, and the southeast arm strikes one well, comes very close to a corral, enters a deep gully and runs on top of what appears to be a major waterway. We need to run the centerline, obtain first class maps and complete sufficient engineering to determine where these arms can most advantageously be placed. This was behind my request to move the right-of-entry date up to January, 1973. We will have a surveying concern under contract early in January ready to move ahead with the necessary survey and mapping work. However, it is doubtful that the exact orientation of the two southern arms will be fixed until May - June, 1973. Our present plans do not call for any construction along the arms of the Wye until April, 1974, and then only for a short section of the southwest arm.

The central section of land is definitely fixed in location and acquisition can begin at once. We must install a 200 meter test section of multi-channel waveguide in this central section sometime in the spring, 1973. This test section has been ordered from a Japanese firm and delivery date is not definite. Land required for this installation is rather small, and probably other arrangements can be made if the section is not available.

5. Location of Observing Stations - Mr. Blackard of your Division Office requested a set of the 1966 aerial photos and the position of the initial observing stations. We sent the aerial photos to him on December 8, 1972, and I am enclosing for your use four sets of a tabulation setting forth the preliminary locations of these stations. If the orientation of the southern arms changes, the locations of these stations will change somewhat. Also attached are four copies of a map showing the locations of these stations and our best information showing whose land or leasehold they fall upon.

6. Miscellaneous - For your information, I am enclosing two copies of a letter from R. O. Buffington, Acting State Director of the Bureau of Land Management concerning right-of-entry on BLM lands.

Also enclosed are two copies of some notes received from Mr. Jack Bruton during our visit to his ranch on November 28, 1972. These notes represent his thinking on land acquisition and were given to us in the spirit of cooperation. No comments or commitments were given to him on the matter and these notes should not in any way be used against him. From the enclosed map, you can see how important Mr. Bruton's good will is to our project.

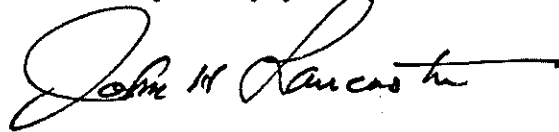
Col. James L. Sutton

- 3 -

December 15, 1972

It seemed best to set these items down in a somewhat rambling fashion, which might be used as an agenda for our next meeting. Should you or Mr. Guenther have any questions, please get in touch with me.

Very truly yours,



John H. Lancaster
Manager, VLA Project
Assistant Director, NRAO

JHL:bea

Enclosures

cc: Chris Krahling, NMSPO
Dan Hunt, NSF, w/enc.

bcc: D. Heeschen
H. Hvatum
T. Riffe

A. Hoatum

NATIONAL RADIO ASTRONOMY OBSERVATORY
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February 27, 1973

C/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

Mr. Daniel Hunt, Head
Office of National Centers
and Facilities Operations
National Science Foundation
1800 G Street, N. W.
Washington, D. C. 20550

Dear Dan:

This will acknowledge receipt of the Corps of Engineers Real Estate Planning Report for the VLA Project, dated December 5, 1972, which was received on February 26, 1973.

The report is a good one and is acceptable to the National Radio Astronomy Observatory. We request that every effort be made to expedite the securing of the land and land rights. It is our understanding that the National Science Foundation wishes to handle the transfer of the funds and that you will do so immediately.

We would like to make the following comments concerning the report for your, and the Corps' information. These concern the details of the report and not its main thrust.

Acquisition Schedule, Paragraph 17, Possession Date. It is noted that the date given for possession of the headquarters site is April or May, 1973. This would be fine. If we cannot obtain use of a portion of the headquarters site before July 1, 1973, other arrangements will have to be made so that we can conduct some very important tests using the prototype wave guide which is now enroute from Japan. This is a key item on our critical path schedule. If necessary, this work will fit on tract No. 101E8 or No. 106E2.

Our next key date is to begin minor temporary construction on the central site September 1, 1973.

The first major construction is scheduled for April, 1974, and consists of the buildings, utilities, central section of the wye

trackage and a short section of wye construction along the southwest arm. In addition to the center section, we will need tract 106E1 and 106E3 before this date.

The 1 July, 1974, date set forth in the report is satisfactory for the balance of the three arms.

Airstrip Land Acquisition. The report is silent concerning the acquisition of land for the airstrip. This is proper as the exact site of the airstrip has not been fixed. It is expected that the Engineer-Architect will be able to determine its location by August, 1973, when we will request acquisition.

Orientation of Wye Arms. To miss the wells and other improvements along the southwest arm, its bearing has been changed to 236° and the survey work has proceeded on this basis. Consideration will also be given to moving the southeast arm to miss the improvements on the Major ranch. It is suggested that the funds included within the cost estimate of the report for improvements be left and used for procurement of land for the airstrip or for utility relocation.

Utility Relocation, Paragraph 6, Relocation. We had previously requested that the Corps handle the utility relocation for the Observatory. In addition to the 25 KV power line, there is an aerial telephone cable and several other lower voltage power lines. We will discuss this in detail with the Corps when the final maps are received.

Borrow Areas. The report mentions borrow areas on Page 26. No estimated costs are included, and we do not know at this time whether the Project should ask the Corps to assist in obtaining rights over borrow areas.

Observing Stations, Paragraph 11, Recommended, Page 16, discusses the possibility of "moving" observation stations. Undoubtedly, through the years additional stations will be constructed. Our understanding of the Right-of-Way Easement is that it permits observation stations to be added at the discretion of the Observatory.

Area of Buildings, Paragraph 13, Proposed Construction. The initial building program provides for the construction of about 40,000 SF of permanent building space, plus about 15,000 SF of construction and warehouse buildings.

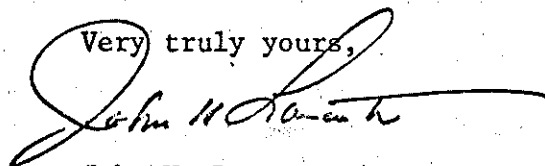
Right-of-Way Easement, Exhibit "D". It is suggested that the words "observing stations" be added in line 6 after the words "coaxial

February 27, 1973

cabling." It would seem that the right to construct, maintain, etc., the observing stations is omitted even though we have rights for exclusive use and to fence them.

We appreciate the receipt of the report and again request that you do everything you can to expedite the obtaining of the land.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea

cc: Col. James L. Sutton - (CoK, Albuquerque)
Mr. Charles Blackard - (CoE, Dallas)

bcc: D. Keeschen
H. Hyatus ✓
T. Riffe
G. Stanton
F. Walls

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March 12, 1973

C/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

Mr. Lloyd Guenther
Chief of Real Estate Division
U. S. Corps of Engineers
P. O. Box 1580
Albuquerque, New Mexico 87103

Dear Lloyd:

Confirming our discussions today there is attached a marked up copy of your drawing entitled "Real Estate - Very Large Array Project," dated 1 December, 1972, on which we have marked the various plats of land on which we apparently have Right-of-Entry for survey and sub-surface explorations. I have the following problems with the data which we have on the Rights-of-Entry:

1. There are large areas of each arm over which we do not seem to have Right-of-Entry.
2. We do not have Right-of-Entry to tract 101E-8, the SE quarter of the center section, which is the most important land area and the one which we need access to by July 1, 1973, for the Wave Guide tests.
3. Mr. Jay Taylor has restricted our Right-of-Entry to "surveys only," which seems to include sub-surface exploration. I don't think he did this deliberately as it would seem that his main thrust was to keep construction south of his irrigated land.
4. The penciled figures on the SW and SE arms refer to "lots," not "quarter sections." We don't know what this means.

We are still planning in accordance with the clear statements of the Office of the Chief of Engineers that we will have access to at least tract 101-E8 on or before July 1, 1973.

I would appreciate hearing from you concerning the above.

bcc: D. Heeschen
D. Hunt
H. Hvatum
C. Kellett
M. Phillips
O. Stanton

With best personal regards,

Very truly yours,

John H. Lancaster
Manager, VLA Project

JHL:bea

Attachment

NATIONAL RADIO ASTRONOMY OBSERVATORY
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March 13, 1973

C/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

Major General Harold R. Parfitt
Division Engineer
U. S. Army Corps of Engineers
1114 Commerce
Dallas, Texas 75202

Dear General Parfitt:

This will confirm my telephone conversation on March 12, 1973, with your Mr. Charles M. Blackard concerning the land acquisition for the Very Large Array Radiotelescope Project which we are constructing for the National Science Foundation on the Plains of San Augustine, fifty miles west of Socorro, New Mexico.

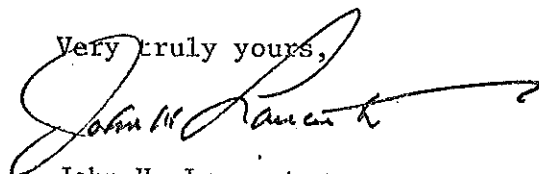
This land acquisition program is set forth in the Real Estate Planning Report, dated 5 December, 1972, which was received by the Foundation on 23 February, 1973. We have discussed at some length with Corps personnel our need to have possession of a portion of the central 640 acre section of land by 1 July, 1973, and full possession of all the central section by 1 September, 1973. In July we need to perform burial tests of about 400 meters of 90 mm, broad band prototype wave guide which is now enroute to us from the manufacturer in Japan. The swing in installation cost between direct burial of the wave guide and burial within an outer steel pipe sheath approaches two million dollars, and we must get the wave guide into the soils of the Plains at the earliest possible moment and begin to measure alignment deflections to fractions of inches.

Originally, we were assured that the 1 July date could be met and the Chief's Office has confirmed this to the Foundation. It now appears that the 1 July date may slip three to five months, which would severely hurt our schedule, delay many important design decisions, and damage our Project.

I would greatly appreciate your looking into the matter to ensure that everything possible is being done to prevent the 1 July date from slipping.

We have enjoyed excellent relationships with Col. Sutton, Mr. Blackard and Mr. Guenther and wish to express our thanks for the fine co-operation of personnel in the Corps of Engineers.

bcc: D. Heeschen
H. Hvatum
D. Hunt/C. Kellett/M. Phillips
O. Stanton

Very truly yours,

John H. Lancaster
Manager, VLA Project

JHL:bea

3/23/73 CC
JHL

file
VLA

MAR 16 1973

Mr. K. L. Ingram, Jr.
Chief, Acquisition Division
Directorate of Real Estate
Department of the Army
Office of the Chief of Engineers
Washington, D. C. 20314

Dear Mr. Ingram:

This is in reply to your letter dated February 22, 1973 which forwarded to the National Science Foundation, the Corps of Engineers Real Estate Planning Report for the VLA site land acquisition in New Mexico.

We would like to express our appreciation concerning the timely manner in which the Office of the Chief of Engineers has compiled this excellent Planning Report.

Since our October 24, 1972 letter requesting the Office of the Chief of Engineers to proceed with the Very Large Array Project (VLA) site acquisition, more recent pertinent information now is available. Consequently, we are hereby providing this information for your further guidance during the VLA site acquisition.

1. Right of entry, for survey and core boring purposes to the site, is required by May 1, 1973.
2. Access to at least Tract No. 106E-3 or No. 106E-2 is required on or before July 1, 1973 for purposes of waveguide testing. These tests require that the waveguide be placed underground.
3. Temporary minor construction on the central site will begin by September 1, 1973.
4. Major construction of buildings, utilities, central section of the wye trackage and a short section of wye construction along the southwest arm (requiring Tract Nos. 106E-1 and 106E-3 in addition to center section) will commence by April 1, 1974.

5. Easement acquisition for the remainder of the three areas will be required by July 1, 1974.

6. Approximately 30 acres of land will be required for an aircraft landing area. The exact site for the aircraft landing area will be determined by August 1, 1973. We will advise the Office of the Chief of Engineers of this location as soon as the site has been determined and residual funds, if any, may be utilized to acquire this selected site.

7. It is requested that the 236° direction for the southwest area be changed to 235° . Mr. Jack Lancaster, AUI, has explained this required change to Mr. Lloyd Guenther of your Albuquerque Office. Also, if so indicated by preliminary mapping activities, the southeast area may be subject to a similar shift. However, it is our understanding that the acquisition schedule can tolerate such shift.

8. Concerning proposed construction as set forth in paragraph 13, page 17 of your planning report, 15,000 square feet of construction and warehouse buildings will be required on the site as soon as permitted by the acquisition schedule. Subsequently, an additional 40,000 square feet of permanent building space, with utility facilities, will be constructed at the central site.

9. Potential borrow areas, particularly for the southeast arm, will be investigated during July 1973. Upon the completion of this investigation, a supplemental request for the acquisition of the selected areas will be forwarded the Office of the Chief of Engineers.

10. Please add the words "observing stations" in line 6 of Exhibit "D" after the words "coaxial cabling."

11. We would like to reconfirm our understanding that the right-of-way easements will permit observation stations to be discretionarily added by the Observatory.

12. Upon receipt and review of the final maps, we would like to request the Office of the Chief of Engineers to undertake the utility relocations. This request, together with the required additional funding, will be transmitted to the Office of the Chief of Engineers by a proposed separate amendment to Interagency Agreement HSP-CA90. At your convenience and prior to our written request, we will arrange for a meeting to discuss the proposed utility relocations.

There are enclosed three copies of proposed Amendment Number One to Interagency Agreement HSP-CA90 which makes available to your

organization an additional \$165,000 for the VLA site land acquisition.

I have signed the enclosed copies of this proposed amendment before mailing them to you in order to expedite execution of this amendment. If acceptable to you, please execute these three copies and return two of them to the National Science Foundation.

Sincerely yours,

/s/ Leonard A. Rebecke

LEONARD A. REBECKE
CONTRACTING OFFICER

Enclosures

- cc: Mr. Kellett NCF 706
- Orville Stanton
- Dr. Heoschen, NRAO
- Mr. Bolton, G40

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

Interagency Agreement
No. NSF-CA90
Amendment No. 1

Government Agencies: Department of the Army, Office of the Chief of Engineers, and the National Science Foundation

WHEREAS, the Corps has furnished to the Foundation a Real Estate Planning Report, dated 5 December 1972 regarding acquisition of land for the Very Large Array Project, and

WHEREAS, the Corps has indicated in a letter dated 22 February 1973 that it will require an estimated additional \$165,000 to acquire the necessary real estate for the Very Large Array Project, and

WHEREAS, the Foundation desires the Corps to take all necessary action to acquire the necessary real estate interests;

NOW, THEREFORE, pursuant to the mutual understandings of the agencies, Interagency Agreement No. CA90 is hereby amended as follows:

In SECTION V - FUNDING delete paragraph C and substitute in lieu thereof the following paragraph C.

Funds in the amount of \$32,200 are hereby provided by the Foundation under this agreement for Corps support.

Funds in the amount of \$152,800 are hereby provided by the Foundation for land acquisition for the Very Large Array Project.

APPROVED:

NATIONAL SCIENCE FOUNDATION

/s/ Leonard A. Redecke

LEONARD A. REDECKE
CONTRACTING OFFICER

MAR 16 1973

(DATE)

DEPARTMENT OF ARMY

(DATE)

CHIEF OF ENGINEERS

D. Heeschen

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C/O KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4189
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

March 26, 1973

Mr. Daniel Hunt, Head
Office of National Centers and
Facilities Operations
National Science Foundation
1800 G Street, N.W.
Washington, D. C. 20550

Dear Dan:

There is attached a copy of a letter received from Major General Parfitt of the Southwestern Division, Corps of Engineers, in response to my letter of March 13, a copy of which is attached for your information.

Very truly yours,

John H. Lancaster

John H. Lancaster
Manager, VLA Project

JHL:bea

Enclosures

cc: D. Heeschen
H. Hvatum
W. Bolton
O. Stanton



SWDRE

DEPARTMENT OF THE ARMY
SOUTHWESTERN DIVISION, CORPS OF ENGINEERS
1114 COMMERCE STREET
DALLAS, TEXAS 75202

RECEIVED

MAR 26 1973

VLA PROJECT.

22 MARCH 1973

Mr. John H. Lancaster
Manager, VLA Project
National Radio Astronomy Observatory
Edgemont Road
Charlottesville, Virginia 22901

Dear Mr. Lancaster:

This is in response to your letter of 13 March 1973 pertaining to the acquisition of real estate interests on behalf of the National Science Foundation for the Very Large Array Project west of Socorro, New Mexico.

The schedule which we have established for completion of this project contemplates the following major milestones:

- a. Possession of all land required for the project, for purposes of survey and core drill work, by 1 May 1973.
- b. Possession of a sufficient portion of the south half of Section 1, T.3 S., R.8 W., to permit installation of the underground wave guide, by 1 July 1973.
- c. Possession of the remainder of Section 1 (the headquarters site) to permit construction activity by 1 September 1973.
- d. Possession of the right-of-way for the three arms of the wye, to permit construction by 1 April 1974.

As you know, item a. has already been completed.

This schedule is expected to be maintained. Some difficulty has been encountered in obtaining the services of a contract appraiser who can complete the first stage of the appraisal work within this time frame. However, we have the capability of performing this work with our existing staff. We do not intend to let the schedule slip for this reason.

SWDRE

Mr. John H. Lancaster

I wish to extend my thanks for the excellent cooperation which you and the other representatives of the National Radio Astronomy Observatory have furnished in the planning for this project. We will keep you advised of any unforeseen problems which may arise in connection with the completion of the above schedule.

Sincerely yours,

H. R. Parlett
H. R. PARLETT
Major General, USA
Division Engineer

National Radio Astronomy Observatory
Charlottesville, Virginia

April 12, 1973

To: VLA Land Acquisition File

From: J. H. Lancaster JHL

Subject: MEETING WITH DEPARTMENT OF INTERIOR - BUREAU OF LAND MANAGEMENT
VLA ENVIRONMENTAL IMPACT STATEMENT

On April 6, 1973, John Lancaster and Forrest Wells met with the following officials of the Bureau of Land Management to discuss the December 6, 1972 BLM memo, Subject "Final Environmental Statement" - Very Large Array (VLA):

Donald Waite - Chief, Planning Coordination Staff
Dennis D. Erhart - State Environmental Coordinator
Arlen P. Kennedy - District Manager, Socorro District
Jerry Townsend - Chief, Division of Resources Management
Socorro District

Mr. R. O. Buffington, Acting State Director, who arranged the meeting was unable to be present. He has replaced Mr. W. J. Anderson, who has been transferred to Denver as National Environmental Coordinator.

The BLM representatives opened the meeting by asking what we intended to do to revise the Final Environmental Statement (FES) to meet their comments. I replied that NRAO and the National Science Foundation believed that the FES was fully approved and final and that we had no intention of modifying it. We wished to furnish all possible information concerning the Project to the BLM people and would fully cooperate with them in every reasonable way to make the Project acceptable to them from an Environmental viewpoint. There followed about an hours discussion among the BLM people concerning the desirability and possibility of overturning the existing FES which ended with the conclusion that the FES was final and that no further attempt would be made to modify it.

The discussion then centered on the Environmental Analysis Record (EAR) which BLM must prepare internally prior to any major action. The issuance of permanent right-of-ways across BLM lands for VLA construction was clearly considered a major action by the group present. The content of the EAR will result in a number of conclusions which will be included as stipulations within the text of the right-of-way document. These may cover such things as scope of drainage structures, fencing, side slopes, dust control, revegetation, etc. I promised our full cooperation in furnishing all

necessary data and in meeting all reasonable standards. Forrest Wells is to keep in touch with the local BLM people.

The timing of the issuance of the R-O-W document is in question as BLM may not have sufficient data to prepare their EAR until our design is completed in about June 1974. In accordance with our present schedule, we don't begin work on BLM land until 1975. There was considerable discussion concerning the legal authority which would be used to back the ROW document. This seemed to center on some law or BLM regulation No. 44LD513. I said that I would ask the Corps of Engineers what authority they intended to utilize.

I was well satisfied with the meeting as it now seems we are past any major questions by BLM such as visual pollution of the Plains, use of the historic Magdalena Stock Driveway, moving the VLA to another site or why build it at all. We are now into relatively minor details which Forrest Wells can handle on a local level.

cc Dr. Heeschen
Dr. Hvatum ✓
Dan Hunt, NSF
O. Stanton, NSF
F. Wells
Col. J. Sutton, COE

Interoffice

National Radio Astronomy Observatory

Charlottesville, Virginia

May 30, 1973

To: F. Wells

From: J. Lancaster

JW

Subject: TOPOGRAPHICAL MAPS - S.E. ARM OF WYE

There are attached two copies of the topographical maps of the Southeast arm of the Wye. We will send you the original tracings as soon as the north arm maps are received and we can make permanent mylar copies of the originals.

Please take a good look at the topography near the end of the arm, from station 620 + 00 (18.9 km), where we enter and run along the bottom of Monica Canyon onward to the end of the drawing at station 712 + 80 (21.7 km). Our 600-foot wide right-of-way covers the whole bottom width of the Canyon. I am afraid that the track and the last one or two antenna stations may get washed away during flood conditions. As time permits talk to Buddy Major, his people, the Soils Conservation people or the BLM people to determine rates of flow or flood heights in the Canyon. It looks to me as if we must seriously begin to think about a bend at the end of the arm, probably to the south.

As you know Limbaugh took two extra runs of aerial pictures of this area in case we needed an enlarged topographical map. As it will take some time to have the maps compiled we need to make up our minds relatively soon as to their need. Let me know your thoughts as soon as possible as to whether we should extend the mapping.

cc: H. Hvatum
D. Heeschen ✓
C. Wade

Interoffice

D. Aeschchen

National Radio Astronomy Observatory

Charlottesville, Virginia

June 29, 1973

To: Memo to File

From: J. Lancaster

JW

Subject: Meeting with Bureau of Land Management 6/7/73

On June 7, 1973, Forrest Wells and the writer met with the following BLM personnel at their office in Socorro, New Mexico.

Mr. Arlen Kennedy - Socorro District Manager
Mr. David Cathman - Magdalena Area Manager
Mr. Jerry Townsend - Chief, Division of Resources Management,
Socorro District
Mr. Robert Anderson - Natural Resource Specialist

A general discussion was held concerning our future program.

The local office has granted the Corps of Engineers permission to complete surveys and explorations on the BLM land. They didn't understand that the "explorations" phrase meant seismic and core borings. We promised that prior to the start of any exploratory work, we would give them copies of the written program and the approximate timing when it would take place. Forrest Wells will do this.

cc: L. Guenther

Interoffice

National Radio Astronomy Observatory

Charlottesville, Virginia

June 29, 1973

To: Memo to File

From: J. Lancaster

JLc

Subject: Status of VLA Land Acquisition - June 26, 1973

The following information concerning the VLA Land Acquisition Program was obtained from Mr. Lloyd Guenther, Chief of Real Estate, Corps of Engineers, Albuquerque District on June 26, 1973.

1. Entire program is proceeding on schedule.
2. Initial fund allocation of \$90,000 has been received at the local level. They understand that the balance will be made available shortly after July 1, 1973.
3. Jack Bruton will not negotiate for the purchase of his one-half fee interest in the central site. States that he will not negotiate piecemeal but only for all his holdings that the VLA is interested in. The CoE is proceeding on a condemnation basis.
4. The Contact Appraiser has completed his work which is in good agreement with the CoE appraisal.
5. The Declaration of Taking and the Condemnation Assembly is nearly complete. It is to be forwarded to the Office, Chief of Engineers by July 20, 1973, and when approved, to the Department of Justice for filing with a federal court in New Mexico. Estimated filing date is 8/15/73 with the land to be available 9/1/73.
6. The Albuquerque District and Southwest Division in Dallas are concerned about adverse public reaction should the Government take possession of the central site and then have no funds to proceed with construction. I promised Guenther that I would keep him fully informed, and we would advise him as to what to do prior to the July 20th date.
7. The CoE has received all property meets-and-bounds data from Limbaugh Engineers.

cc: H. Hvatum ✓
T. Riffe
O. Stanton
D. Hunt
F. Wells

NATIONAL RADIO ASTRONOMY OBSERVATORY
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TWX 710-938-1530

c/o KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4186
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

June 29, 1973

Mr. Lloyd Guenther
Chief, Real Estate Division
U. S. Army Corps of Engineers
P. O. Box 1580
Albuquerque, New Mexico 87103

Dear Lloyd:

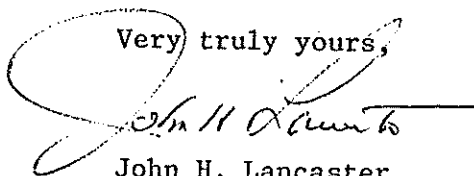
We are proceeding to develop our plans for the core boring and other sub-surface exploratory work required for the VLA Project and expect to have this work underway about July 10, 1973. The first portion will be seismic runs followed by about 100 core borings.

As you remember, Jay Taylor wrote a note on his Right-of-Entry for Survey and Exploration form that his permission applied only to survey purposes. I would like your assurances that this matter has been cleared up and that we may proceed with the exploratory program on his leased and fee land.

We are also proceeding to monument the centerline of the Wye in the belief that this is a portion of the survey work.

Please give my regards to Colonel Sutton.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea

cc: F. Wells

Col. J. Sutton
CoE

bcc: D. Heeschen ✓
D. Hunt
O. Stanton

Interoffice

National Radio Astronomy Observatory

Charlottesville, Virginia

July 26, 1973

To: The File

From: J. Lancaster *J144*

Subject: Status of VLA Site Acquisition

On July 20, 1973, F. Wells and the writer met with Lloyd Guenther, Chief of the Real Estate Division, Albuquerque District Corps of Engineers, to discuss the acquisition of the site for the VLA.

Mr. Guenther advised that the acquisition program was on schedule and that the central site would be available for our use on September 1, 1973.

Mr. Jack Bruton has come to terms with the CoE for his fee land in the central section. Previously he had been adamant that he would not deal piecemeal for his fee land and land rights, but he negotiated and accepted the second offer. At that point the CoE intended to eliminate Bruton's 320 acres of fee land from the condemnation action. However on July 23, Bruton's attorney, Botts, advised Bruton not to sign the "Offer of Sale" as he did not have a clear title to the land. As Bruton cannot transfer a clear title, it is necessary that this land be put back into the condemnation action to obtain possession within our time frame. To proceed otherwise might take many months. It is now a friendly condemnation against both the State and Bruton and has the concurrence of Bruton's attorney. I said we were in complete agreement with this procedure.

I requested Mr. Guenther to forward the Condemnation Assembly through his channels to the Chief of Engineers office with a note to check with the National Science Foundation prior to release to the Department of Justice. He said that he would do so.

NRAO has agreed to shorten the north arm another 268 feet to keep the last antenna south of Jay Taylor's irrigated field. The station will now be 62,070 feet from the centerpoint.

The contract appraiser, Mr. Holmes, should be through with his appraisal of the wye arms on September 1, after which negotiations will begin. I again emphasized our need for the first two parcels on the southwest arm.

cc: W. Bolton/M. Phillips
D. Heeschen ✓
H. Hvatum
T. Riffe
F. Wells
Dan Hunt/C. Kellett
O. Stanton

Mr. Lancaster

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

Send cc *D.S. Heischen*
W.H. Hrachom

NOV 2 1973

RECEIVED

NOV 5 - 1973

VLA PROJECT

Honorable Joseph M. Montoya
United States Senate
Washington, D. C. 20510

Dear Senator Montoya:

Dr. Gerald F. Tape, President of Associated Universities, Inc., has indicated your desire to be briefed on the land acquisition for the Very Large Array (VLA) Radio Telescope to be constructed on the Plains of San Augustin near Socorro, New Mexico.

The total VLA site requirement is approximately 3300 acres divided between a central headquarters area of approximately 650 acres and three 600-foot wide by 13-mile long strips that comprise the wye arms.

On October 10, 1973, the Director of the National Science Foundation, Dr. H. Guyford Stever, signed a condemnation assembly prepared by the Corps of Engineers to acquire the central headquarters section. Three tracts of land are involved. Two of these are owned by the State of New Mexico and one by private owners. Although the owners are willing to sell, there exists a title problem and the attendant negotiations have not resulted in an agreement as to price.

Not so →

(Price has been agreed to as far as I know)
So it seemed best to proceed with the condemnation proceedings

During the week of October 22, 1973, the Corps of Engineers forwarded the assembly to the Attorney General for the institution of condemnation proceedings.

The acquisition of land for the VLA is proceeding in accordance with Interagency Agreement No. NSF-CA90 between the Foundation and the Office of the Chief of Engineers, approved June 15, 1973, and a Real Estate Planning Report prepared by the Albuquerque District Corps of Engineers, dated December 5, 1972.

Since the land outside of the central headquarters sections is mainly needed for railroad tracks which do not interfere with grazing, perpetual right-of-way easements are being sought for the wye arms. About 100 fenced 80-foot by 120-foot observing sites will be located within the strips.

Claude Kellitt

Told him about error in third TP

He said that this had not gone out and that he would correct

SKL

We will continue to keep you informed of progress on the VLA. Please let us know if you require additional information.

Sincerely yours,

Theodore W. Wirths, Director
Office of Government and
Public Programs

NATIONAL RADIO ASTRONOMY OBSERVATORY

EDGEMONT ROAD
CHARLOTTESVILLE, VIRGINIA 22901
TELEPHONE 804-296-0211
TWX 510-587-5482

POST OFFICE BOX 2
GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304-456-2011
TWX 710-938-1630

c/o KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

January 28, 1974

Mr. Lloyd Guenther
Chief, Real Estate Division
U. S. Army Corps of Engineers
P. O. Box 1580
Albuquerque, New Mexico 87103

Dear Lloyd:

Reference is made to our recent telephone conversations concerning acquisition of the right-of-way easements over the arms of the VLA Project.

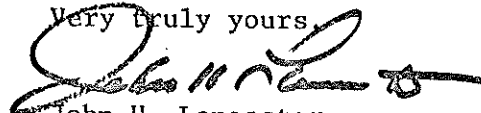
We are presently designing the work for the first construction contract, which will involve earth work and drainage over the first 14,400 lineal feet of the southwest arm and approximately 4,000 lineal feet of double track railroad. We expect to be out for bid about March 15, 1974 and have a contractor signed up by April 15, 1974. The reason for the difference in the length of earth work when compared to the length of trackage is that we must obtain a considerable quantity of backfill material from the first hill to use in the very low areas near the center of the wye.

We have previously advised you that we needed tract 106E-1 and tract 106E-3 prior to April 1, 1974. The way the design has gone we must also include tract 101E-13 within this first group so that the necessary backfill for the low areas near the center of the wye can be obtained. It is not practical to obtain the backfill from a borrow pit on the central section due to considerable extra cost and the difficulty of disposing of the cut material when the railway goes through the hill.

Please do whatever is necessary to obtain the right-of-way over these three tracts prior to April 15, 1974.

Should you have any questions or encounter any difficulties, please let me know.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea

cc: Col. J. Sutton
D. Heeschen
H. Hvatum
D. Hunt, NSF

O. Stanton, NSF
L. Redecke, NSF
F. Wells

NATIONAL RADIO ASTRONOMY OBSERVATORY

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P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

January 28, 1974

Major General Parfitt
Division Engineer, Southwestern Division
Corps of Engineers, Department of the Army
1114 Commerce Street
Dallas, Texas 75202

Dear General Parfitt:

Last March 22, 1973, you were good enough to write to me concerning the land acquisition for the Very Large Array Project to be constructed on the Plains of San Augustin, fifty miles west of Socorro, New Mexico.

The letter advised that we would have possession of the central section by 1 September, 1973, and possession of the right-of-way for the three arms of the wye to permit construction by 1 April, 1974.

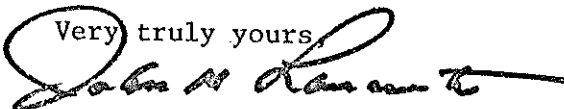
We have obtained possession of the central section and are indeed grateful to the District Office and to your office for this action. We have been actively using this land for some time.

I am concerned, however, about obtaining possession over the initial three tracts on the southwest arm by April 15, 1974, when we are scheduled to begin construction of the double track railway. These three tracts are Nos. 106E-1, 106E-3 and 101E-13 as set forth on a drawing prepared by the Albuquerque District, entitled "REAL ESTATE - VERY LARGE ARRAY PROJECT" and dated 1 December, 1972.

We will bid the job during March and expect to have the construction contractor signed up by April 15, 1974. Should we not have possession of these three tracts, which total only about two miles in length out of 38 miles of wye trackage, by May 1, 1974, at the latest, we will face costly delays in schedule and claims by the construction contractor.

I would greatly appreciate your looking into this matter to ensure that everything possible is being done to obtain these three tracts by our deadline.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea
bcc: Col. J. Sutton
D. Heeschen
H. Hvatum
L. Redecke
D. Hunt
O. Stanton

NATIONAL RADIO ASTRONOMY OBSERVATORY

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c/o KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

January 28, 1974

Mr. Leonard A. Redecke
Contracts Administrator
National Science Foundation
1800 G Street, N. W.
Washington, D. C. 20550

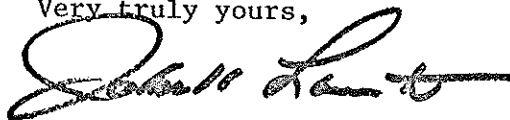
Dear Len:

There are attached copies of two letters that I have sent to the Division and District Corps of Engineers concerning land acquisition of the first three tracts of the southwest arm.

I do not have a completely clear picture as to the causes of the delay except that it seems to be over a philosophical difference of opinion, between the Division and the District, as to the proper way to estimate damages due to severance of the ranches by our right-of-way. I'd be glad to tell you or Morrie all I know but have been somewhat reluctant to put it down on paper.

I have not done anything with the Office of the Chief of Engineers. You may wish to do so. I do consider the potential delay of the Project and costly change orders to be quite serious.

Very truly yours,



John H. Lancaster
Manager, VLA Project

JHL:bea

Attachments

cc: D. Heeschen
H. Hvatum
D. Hunt
F. Wells
O. Stanton

NATIONAL RADIO ASTRONOMY OBSERVATORY

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c/o KITT PEAK NATIONAL OBSERVATORY
P. O. BOX 4130
TUCSON, ARIZONA 85717
TELEPHONE 602-795-1191

April 10, 1974

Mr. Daniel Hunt, Head
Office of National Centers and
Facilities Operations
National Science Foundation
1800 G Street, N. W.
Washington, D. C. 20550

Dear Dan:

Last week on Wednesday, April 3, 1974, I gave Messrs. M. Phillips and D. Frenzen copies of a letter which I received from Mr. L. A. Guenther of the Corps of Engineers, dated 27 March 1974 concerning the withdrawal of land from the public domain.

As the transfer and obtaining the easements is between the Foundation, the Corps of Engineers and the Bureau of Land Management of the Department of the Interior, it seems far best that members of the Foundation staff take the active initiative. The following actions are necessary:

1- Review the "Application of the National Science Foundation to the Secretary of the Interior for Withdrawal of 839.56 Acres of Public Domain Situate in Socorro and Catron Counties, New Mexico" and the nine tract exhibits. I have gone over these and they seem to be reasonable and proper. I have not checked the detailed descriptions but we must trust the CoE for this work. This application is to be signed by Mr. Lloyd Guenther of the CoE on behalf of the Foundation. Mr. Jerry Townsend, assistant to Mr. Arlen Kennedy, BLM, Socorro, (Tel. 505-835-0939) advises me that BLM regulations state that the application must contain full data on eleven different items of information. I am not sure that BLM would find the application sufficiently detailed. Mr. Richard May is the N. M. State BLM Land Officer stationed in Santa Fe. I think the regulation number is No. 1821.1.

2- Prepare a letter for Dr. Stever's signature to the Director of the Bureau of Land Management stating the authority for the Project, requesting that the transfer be made and designating the Corps of Engineers as the Foundation's agent. Townsend advised that a deputy could sign for Dr. Stever. I should think that the Washington office of BLM or CoE could assist in the exact terminology.

D. Hunt

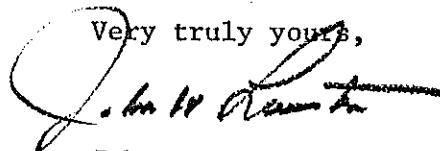
- 2 -

4/10/74

3- Send the letter and approval of the document to L. A. Guenther who will take the next step.

Please keep us advised of your progress in this matter. If we can be of any further assistance, call on us.

Very truly yours,

A handwritten signature in black ink, appearing to read "John H. Lancaster". The signature is written in a cursive style with a large initial "J" and a long horizontal flourish at the end.

John H. Lancaster
Manager, VLA Project

JHL: jmp

Enclosures

cc: D. Heeschen ✓
H. Hvatum
O. Stanton
L. Redecke

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

COPY

September 12, 1974

Mr. John S. Lancaster
Manager, VLA Project
National Radio Astronomy Observatory
Edgemont Road
Charlottesville, Virginia 22901

Via: Mr. Orville Stanton, VLA Field Project Officer

Dear Jack:

Your letter of August 27, 1974, with comments on the status of land acquisition for the Very Large Array, is appreciated.

We have initiated such action as is required to provide the concluding increment of funding, in accordance with requests to be received from the Corps of Engineers and from the VLA Project via the 1975 VLA Project Plan.

This is a good opportunity to emphasize a course of action to be followed if any archaeological sites are discovered on the land being acquired. Recently enacted legislation, a copy of which is enclosed, requires Federal agencies to give written notification to the Secretary of Interior in those cases where it finds that its activities may cause loss or destruction of significant archeological data (16 U.S.C. 469). Since the Foundation must make the determination of whether the site does or is likely to contain the type of data Congress is seeking to protect, your earliest advice concerning the outcome of archeological investigations presently underway would be appreciated. If the site is deemed to contain significant data, notice to the Secretary from the Director will be required.

Note that the statute also provides authority for a request to the Secretary "to undertake the recovery, protection, and preservation of such data ..." Sec. 3 (a). This is discretionary and the affected agency may conduct such activity itself.

Sincerely yours,

SIGNED

Daniel Hunt, Head
Office of National Centers
and Facilities Operations

Enclosure

Copy to: Dr. Gerald Tapp
President, ANS

Dr. David Reaschen
Director, NRAO



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 1580
ALBUQUERQUE, NEW MEXICO 87103

de F. Wells 10/10
Director's Office

SWARE-A

RECEIVED

13 October 1978

OCT 13 1978

VLA PROJECT

Mr. John Lancaster
National Radio Astronomy Observatory
P. O. Box 0
Socorro, NM 87801

Dear Jack:

Inclosed is a copy of the Bureau of Land Management letter of transmittal dated 22 May 1975 forwarding the draft Memorandum of Understanding to the National Science Foundation and a copy of the executed agreement which was the subject of our telephone conversation this date.

Also inclosed is a copy of the Easement Estate for the proposed right-of-way which we intend to use in lieu of withdrawal of Federal land. This easement estate was used in all land except that of the State of New Mexico, which has a reversionary clause. We cannot anticipate the attitude of BLM toward the easement; but if there are any additional specific rights which NSF wants to reserve, please advise us.

Hope we can wrap up this case with BLM faster than the withdrawal.

Please call if you have any questions.

Sincerely yours,

JESSE WOOD, Jr.
Chief, Acquisition Branch
Real Estate Division

2 Incl
As stated

2300(930)
NH 21791

STATE OFFICE
P. O. Box 1449
Santa Fe, New Mexico
87501

Handwritten:
M 5/11/75
W

MAY 22 1975

Mr. Morris T. Phillips
Contracts Manager
National Science Foundation
1800 "G" Street, NW.
Washington, DC 20550

Dear Mr. Phillips:

Enclosed is a draft of the Memorandum of Understanding you discussed by telephone with Mr. C. R. May of our staff.

We would appreciate it if you would insert appropriate references under the section on authority and review the agreement for any additions or deletions you feel necessary.

We are unable to proceed with publication of the Public Land Order in the Federal Register until the agreement has been executed. Therefore, your prompt attention to this matter will be appreciated.

Sincerely yours,

7s/ Arthur W. Zimmerman

State Director

Enclosure

cc: Socorro DO

CRMAY:jn:5/20/75

Handwritten: W

Handwritten: Encl. 1

NATIONAL SCIENCE FOUNDATION

WASHINGTON, D.C. 20550

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
NATIONAL SCIENCE FOUNDATION
AND THE
BUREAU OF LAND MANAGEMENT
NEW MEXICO STATE OFFICE

This is an agreement between the National Science Foundation hereinafter referred to as NSF, and the New Mexico State Office of the Bureau of Land Management, hereinafter referred to as BLM.

I. Purpose: To provide guidance and procedures which clarify responsibility for each agency's personnel in management of the lands identified in withdrawal application NM 21791.

II. Authority:

A. NSF Authority

1. This agreement is authorized by the National Science Foundation Act of 1950 as amended, 42 U.S.C. 1861, et seq.

B. BLM Authority

1. General Statutes

- a. Intergovernmental Cooperation Act (PL 91-648; 84 Stat. 1909; 5 U.S.C. 3371, 42 U.S.C. 4701).
- b. National Environmental Policy Act (PL 91-190; 83 Stat. 852; 42 U.S.C. 4321).

2. Public Land Statutes

- a. Pickett Act of June 25, 1910 (36 Stat. 487; 43 U.S.C. 141) as amended.
- b. Public Land Administration Act (PL 86-699; 74 Stat. 506; 43 U.S.C. 1361).

3. a. Executive Order No. 10355 of May 26, 1952.

- b. Bureau Order 701, as amended.

III. Criteria: Bureau regulations (43 CFR 2351.4) requires BLM to provide for maximum concurrent utilization of withdrawn national resource lands and to reach agreement with the withdrawing agency on the concurrent management of the lands and their resources.

1. Both parties must be guided by their respective statutes, regulations, and policies.
2. The primary objectives of BLM will be to enhance its multiple use management programs and maintain environmental quality and integrity. The primary objectives of the NSF is to maintain sufficient control of the land to protect facilities and operate the radio telescope project without undue influence from other land users.

IV. Responsibilities:

1. The NSF will act through its Director or his authorized delegate. The BLM will act through its State Director or his authorized delegate.
2. The National Radio Astronomy Observatory (NRAO) operated by Associated Universities, Inc. is under contract with the NSF to operate and maintain the Very Large Array (VLA) Radio Telescope project and its personnel, therefore, must be informed of the understandings reached under the terms of this agreement.
3. To insure recognition of local management needs and maintain the integrity of the BLM organization, the majority of the initial communications involving any problems which develop will involve the respective district manager and his staff in Socorro, the nearest BLM district office.
4. To accomplish the objectives of this agreement the NSF agrees to the following:
 - a. That lands will not be used for any purpose other than specified in the withdrawal order.
 - b. That the NSF, acting through the NRAO, will be responsible for fire control on the withdrawn lands when the fire originates from a VLA project activity. Also, the NSF, acting through the NRAO, will promptly report all fires to the BLM district office.

- c. The NSF will be responsible for maintaining the withdrawn lands in a clean and orderly manner. All refuse will be disposed of in a site which meets all State sanitary requirements.
 - d. The NSF agrees to notify BLM prior to fencing any of the withdrawn lands. It is understood that fencing will be restricted to the minimum area necessary to protect project facilities.
 - e. The NSF will be responsible for rehabilitation of withdrawn lands that are damaged or disturbed by the NSF or its contractors.
5. The BLM agrees to the following:
- a. BLM will not allow other uses inconsistent with the primary purpose of the project on the withdrawn lands.
 - b. Prior to issuance of right-of-way grants or other permits, the BLM will contact the NSF for concurrence and stipulations deemed necessary to avoid interference with the primary purpose of the withdrawal.

V. Implementation:

A. Meetings

Either party may initiate meetings or informal consultations as needed for implementing the agreement.

B. Amendments or Cancellation

Either party may propose revisions at any time deemed necessary. The agreement may be amended by mutual consent, and may be terminated by either party by sending a 30-day written notice of a desire to cancel. Termination of this agreement shall not affect the tenure of the National Science Foundation and its associated contractor or contractors respecting the use of the public lands that will be withdrawn for the VLA project.

- C. This memorandum of understanding is effective on the date of the last signature affixed below.

R.C. Atkinson (br)

H. Guyford Stever, Director
National Science Foundation

JUL 2 1975

Date

Arthur W. Zimmerman

Arthur W. Zimmerman, State Director
Bureau of Land Management

7/23/75

Date

NATIONAL RADIO ASTRONOMY OBSERVATORY

P. O. BOX O
SOCORRO, NEW MEXICO 87801
TELEPHONE 505-835-2924
VLA SITE 505-772-4011
TWX 910-988-1710

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CHARLOTTESVILLE, VIRGINIA 22901
TELEPHONE 804-296-0211
TWX 510-587-5482

SUITE 100
2010 NORTH FORBES BLVD.
TUCSON, ARIZONA 85705
TELEPHONE 602-882-8250

27 June 1980

Mr. Lloyd A. Guenther, Chief
Real Estate Division
U. S. Army Corps of Engineers
Albuquerque District
P. O. Box 1580
Albuquerque, New Mexico 87103

Dear Lloyd:

On 1 May 1980 I wrote to you requesting an up-to-date summary of the status of the land acquisition for the VLA.

I still believe such a report is necessary for us and request its prompt submission.

With my best regards.

Very truly yours,



John H. Lancaster
Assistant Director

JHL/dl

cc: Director's Office ✓
Dr. W. E. Howard III, NSF

NATIONAL RADIO ASTRONOMY OBSERVATORY

P. O. BOX O
SOCORRO, NEW MEXICO 87801
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SUITE 100
2010 NORTH FORBES BLVD.
TUCSON, ARIZONA 85705
TELEPHONE 602-882-8250

1 May 1980

U. S. Army Corps of Engineers
Albuquerque District
P. O. Box 1580
Albuquerque, New Mexico 87103

Attn: Mr. Lloyd A. Guenther, Chief
Real Estate Division

Dear Lloyd:

Yesterday I was surprised to find that the U. S. Government did not yet have final title to the 320 acres of State land which comprise half of the VLA central site.

Would you please give me a status rundown on all parcels or tracts listed on your drawing entitled REAL ESTATE - VERY LARGE ARRAY PROJECT. Perhaps it would be easier for you to complete the Remarks column on that drawing and reissue it.

With best wishes,



John H. Lancaster
Assistant Director

JHL/d1

cc: Director's Office ✓
Dr. W. E. Howard, III, NSF

Interoffice

National Radio Astronomy Observatory

Very Large Array

To: Memo to Land Procurement File

From: J. H. Lancaster JHL

Subject: Meeting with U. S. Attorney July 2, 1979

In response to my request, John Pound of the Montgomery law firm, and I visited R. E. Thompson, James Grant and Ruth Streeter to discuss the Taylor-Ake-Dunlap lawsuit. Thompson and Grant had been away all the previous week.

I had asked John Pound to review all pertinent documents to see if he could come up with some suggestions as to how to proceed. His conclusions were: that it was very late to do much good; he was very disappointed that there was so little effective cross-examination at the November 30th hearing; there were no rebuttal witnesses; and that the defense experts were not required to break down their single valuation figures of from \$4,000,000 to \$6,500,000, so they could be challenged. His only recommendation was that the Government move for a reopening of the evidentiary hearings. He had little hope of the Commission accepting such a motion, but thought that it might help on appeal.

We discussed this possibility but Thompson was very firm in that such a motion was out of the question. They intend to submit the best brief that they can and then await the Commission's recommendations. The only help they need from us are affidavits from Forrest Wells and the writer. There are attached copies of note sheets I used and the affidavits.

The next steps are to get copies of the U. S. Brief and the Commission's Report. We should also determine what action NRAO and the Foundation should take upon receipt of the Commission's Report which I would expect in about two weeks.

JHL/d1

Enclosure

cc: Director's Office ✓

W. E. Howard III

D. Frenzen

P. Rathvon

Land Acquisition - Condemnation Matter

Possible Points for Consideration

1. Lack of Full Disclosure

Can we claim less than full disclosure by the defense prior to the hearing presenting evidence? Taylor, at the 7/14/78 Deposition, stated that the VLA would not interfere with his irrigation plans (p. 18-7) but at the 11/30 hearing testified that he intended to irrigate right where the VLA tracks are (p. 24)

2. Preponderance of Evidence

Instruction No. 13 to the Commission states the burden of proof is on the owner to prove by a fair preponderance of the evidence. The unsupported statements by two real estate brokers cannot be considered a fair preponderance of evidence.

3. Lack of Comparable Sales Data (Instruction No. 19)

The defense experts had no comparable sales data, even though one of the ranches involved had been bought within 16 months of the date of taking. Stutz claims this ranch increased in value 47% in the 16 months since its purchase. Brown claims a 28% increase.

4. Change in Basis of Ranch Valuation

Heretofore ranches have been valued on conventional grounds such as carrying capacity, location, terrain, vegetation, deeded, State, BLM lease or forest permit lands, rainfall, highest use potential, growing season, etc. The defense witnesses are giving much more emphasis to esthetic values, privacy, desire to own large tracts of land, long range investment, hedge against inflation and pride of ownership. Is this not a drastic switch from proven values to opinions as to the worth of intangibles and future gains or profits? Is this not a dangerous precedent to establish?

5. Highest and Best Use of Land - Irrigation

Taylor and Ake have claimed the highest and best use of much of their land was for irrigation. Ake claimed 15,000 acres of potential irrigation land. Taylor did not set a specific number but stated he intended to irrigate the whole area where the VLA crosses his land.

Such claims are not credible under Instruction No. 10 which reads "Best use must be a use which the preponderance of the credible evidence shows was so probable at that time or in the reasonably near future as to affect the market value for it on the date of valuation. Mere possibility of the use is not enough." Reasons are:

a. At the time of taking, Ake had drilled one well and had less than 200 acres under irrigation, some 8½ miles from the VLA. He had not shown any indication of adding to his irrigated area. The San Augustin plain was made a controlled basin in July 1976. Ake has not made any applications for well permits, nor has he filed a "Declaration of Ownership of Under-ground Water Rights."

b. It is impossible that the State Engineer would issue permits for about 90 wells to Ake for 15,000 acres requiring 30,000 acre feet of water per year. Since control in July 1976, the State Engineer has only issued five permits for a total of 800 acres. The State studies each proposed well and its effect on the Rio Grande and Gila-San Francisco river watersheds. Withdrawals of the quantity required by Ake would undoubtedly effect the Gila watershed and not be allowable under a U. S. Supreme Court decree.

c. It would cost Ake the sum of about \$660 per acre to develop the 15,000 acres, or a total sum of over \$9,900,000. At prices applicable to April 1975, the cost would be \$6,900,000. Certainly not a credible expenditure. See attached estimate by the engineering firm of BWH-CVA Joint Venture, dated June 28, 1979.

d. Taylor had developed possibly four wells in 1975 and six wells by July 1976. He had clearly declared his intention of developing the North Lake area but nothing more. This is shown by his Deposition dated July 14, 1978, when he stated the VLA would not interfere with his irrigation.

e. The Ake land where the VLA enters is not suitable for irrigation. Ake calls it his "Sand Pasture" and placed his only irrigation well 8½ miles away.

f. The presence of the VLA should not diminish the value of irrigated or potentially irrigated lands.

6. Inclusion of U. S. Government Land

Ake ranch contains about 22% BLM land, while Dunlap contains about 16% BLM land, plus U. S. Forest Service permits. These values should be deducted from any settlement valuation.

7. Inclusion of State Leased Land in Valuation

It is understood that case law covering the inclusion of State leased land go both ways. The Judge was silent on this matter in his supplemental instruction order. Should the inclusion be challenged?

8. Harmful Effect of the VLA on Ranch Operations

All defense witnesses testified that they did not believe cattle would cross the tracks. Cattle do cross freely and so this testimony must be counteracted. We have many pictures which should be included.

9. Qualifications of Defense Experts

The defense experts were principally Real Estate Brokers and not licensed appraisers. Is this proper and can their qualifications be challenged at this late date?

10. Propriety of After Evaluation by Defense Witnesses:

One witness estimated a straight 20% devaluation because of VLA, and the other a straight 18% without regard to the ranch characteristics or location of the VLA. Is this method acceptable or should it be challenged?

11. Visit to VLA by Commission

The Commission only visited the three ranches and saw the tracks in a state of construction. This is an ugly condition and not at all like they will look after completion. Is there any way the Commission could revisit portions of the completed trackage or be shown photographs of it?

Lancaster's Office

NATIONAL RADIO ASTRONOMY OBSERVATORY

P. O. BOX O
SOCORRO, NEW MEXICO 87801

TELEPHONE 505-835-2924

VLA SITE 505-772-4011

TWX 910-988-1710

POST OFFICE BOX 2
GREEN BANK, WEST VIRGINIA 24944
TELEPHONE 304-456-2011
TWX 710-938-1530

EDGEMONT ROAD
CHARLOTTESVILLE, VIRGINIA 22901

TELEPHONE 804-296-0211

TWX 510-587-5482

SUITE 100
2010 NORTH FORBES BLVD.
TUCSON, ARIZONA 85705
TELEPHONE 602-882-8250

20 November 1979

U. S. Army Corps of Engineers
P. O. Box 1580
Albuquerque, NM 87103

Attn: Mr. William Davenport

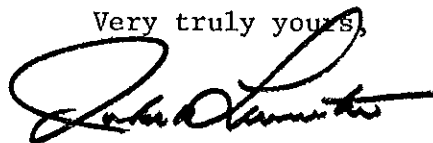
Dear Mr. Davenport:

There are attached the following AUI checks for final settlement of the land acquisition condemnation lawsuit brought against ranchers Taylor, Ake and Dunlap.

Mr. Taylor - \$51,150.11	Check No. 19132
Mr. Taylor - \$ 465.72	Check No. 19133
Mr. Ake - \$75,854.86	Check No. 19131
Mr. Dunlap - \$77,977.35	Check No. 19130

Mr. James Grant, Assistant United States Attorney, advises me that we will not know definitely for up to 60 days whether the Department of Justice will appeal Judge Bratton's FINAL JUDGEMENT which was filed November 14, 1979.. In the event that an appeal is taken which results in a reduction of the Judgement, we wish any monies that are returned to be delivered to Associated Universities, Inc. In this way they can be utilized for requirements of the Very Large Array Radio Telescope.

Very truly yours,



John H. Lancaster
Manager, VLA Program

JHL/d1
Attachments

Interoffice

National Radio Astronomy Observatory

Very Large Array

1 May 1980

To: VLA Land Acquisition File

From: John H. Lancaster *JHL*

Subject: Discussions with Rancher John Benton

On 30 April Forrest Wells and I talked to John Benton about the possibility of maintaining access roads over his ranch after completion of the VLA construction. We had previously talked to Jack Bruton. The reasons behind the proposal and the method of calculation were discussed. Benton was given copies of Attachments I, II and III to the attached document entitled ANALYSIS OF VLA WYE ROADS, dated 3 April 1980, but not the first page.

Benton was interested and suggested that it might be better if any sums were paid as salary because of the extra work and inconvenience the ranchers were put to when the telescopes were on their ranch. The amount of any payment was not discussed as Benton wanted to think the whole matter over.

Benton was highly disturbed by a legal document he had just received from the U. S. Attorney's office. It was a brief supported by affidavits filed with the U.S. District Court, which stated that the Bentons did not have a State grazing lease over 160 acres of the central site when it was condemned on 1 November 1973. Benton had the bill for the grazing leases issued by the State and two cancelled checks dated 30 September 1973 that he had made payment to the State prior to the 1 November 1973 condemnation filing. He also had a letter dated 29 November 1973 from the State Land Office advising him that the 160 acre parcel had been removed from his lease hold. The new lease excluding the 160 acres was apparently issued 10 December 1973.

This timing is important to him as under State law the U. S. must pay the fair market value of condemned land to the State and in addition pay the rancher a fair value for the loss of his grazing leases. Jack Bruton has hired a lawyer, Robert W. Botts, to argue his case for lease termination payment and perhaps other land acquisition matters. Apparently there is no problem concerning the Bruton grazing lease over the other 160 acres of central site land.

Benton feels that since he had made payment well before the 1 November date, he had a valid grazing lease and that the U. S. Government was trying to do him out of his rightful payment.

1 May 1980

I called William Davenport, Attorney for the Corps of Engineers, who said he had no information except a letter from the State Land Office stating that on 1 November John Benton did not have a valid lease.

I then called Ray Hamilton, Assistant to the U. S. Attorney, who prepared the brief. He took the position that even though Benton had made the necessary payments in September, the State had not actually issued him a lease and that therefore he was not entitled to consideration. Ranchers don't understand this type of reasoning.

All I could do was to suggest that Benton go to Santa Fe and discuss the problem with the State Land Office people and that if he couldn't obtain satisfaction, he would have to hire an attorney. He is reluctant to engage an attorney.

The surprising thing is that after six and one-half years, we still do not have clear title to one-half of the central section, even though I have been assured a number of times by the Corps that all acquisitions, except for the Bureau of Land Management land, had been settled. I intend to write the Corps to ask for a complete run-down on the acquisition of all parcels.

JHL/dl
Attachment

cc: Director's Office
Dr. W. E. Howard, III

NATIONAL RADIO ASTRONOMY OBSERVATORY
VLA PROGRAM

ANALYSIS OF VLA WYE ROADS

It has been conservatively estimated that a minimum of two man years of technician and engineer time will be saved if we could continue to utilize the existing wye road network for maintenance of the VLA. The average 1981 yearly salary and fringe benefits for the 30 technicians which would be used is \$19,650 per year. Engineers have not been included in this average cost to keep it again on the conservative side. This would indicate a minimum saving in manpower expense of \$39,000 per year. To save this sum and at the same time greatly increase the up-time of the instrument through faster and more effective maintenance, it seems proper to reinvest one half this potential saving in keeping the roads which would make it possible. The sum of \$19,500 would be divided \$5,000 per year for maintenance of the roads and \$14,500 to the ranchers for their permission for the VLA to maintain roads over their ranches.

One rationale is that we would only pay the ranchers for use of the roads when telescopes are actually on their land, and then only to the outer antenna. The payment would be for inconvenience to the rancher, cattle following trucks, required inspection of cattle guards at fence lines, possible straying of cattle, loss of grazing area, etc. Such a payment works out as set forth on Attachment II. Payment would be set up by the month so if the array was kept in one configuration longer than three months, payment would be adjusted accordingly.

Another rationale is that we would pay each rancher for the lineal footage of wye road actually on his ranch. This is unfair to the close-in ranchers where the traffic would be much heavier and the burden on the rancher more severe. Payment under this possibility is shown on Attachment III.

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4-3-80

NATIONAL RADIO ASTRONOMY OBSERVATORY
VLA PROGRAM

ANALYSIS OF VLA WYE ROADS

WEST ARM

Central Site	to Station 41+50	.79 miles	11 Antenna Stations
J. Benton	to Station 103+26	1.17 miles	4 Antenna Stations
J. Bruton	to Station 422+50	6.05 miles	6 Antenna Stations
M. Ake	to Station 689+22	5.05 miles	3 Antenna Stations
13.06 miles			24 Antenna Stations

NORTH ARM

Central Site	to Station 14+55	.28 miles	8 Antenna Stations
J. Bruton	to Station 226+40	4.01 miles	11 Antenna Stations
J. Taylor	to Station 621+70	7.49 miles	5 Antenna Stations
11.78 miles			24 Antenna Stations

EAST ARM

Central Site	to Station 21+80	.41 miles	9 Antenna Stations
J. Bruton	to Station 186+75	3.12 miles	9 Antenna Stations
Winter Bros.	to Station 398+20	4.00 miles	3 Antenna Stations
R. Dunlap	to Station 689+55	5.52 miles	3 Antenna Stations
13.05 miles			24 Antenna Stations

		<u>Benton</u>	<u>Bruton</u>	<u>Ake</u>	<u>Taylor</u>	<u>Winter</u>	<u>Dunlap</u>
<u>A ARRAY</u>	West	1.17	6.05	5.05	-	-	-
	North	-	4.01	-	7.49	-	-
	East	-	3.12	-	-	4.00	5.52
	Total	1.17	13.18	5.05	7.49	4.00	5.52
<u>B ARRAY</u>	West	1.17	2.01	-	-	-	-
	North	-	3.30	-	-	-	-
	East	-	3.12	-	-	.44	-
	Total	1.17	8.43	0	0	.44	0
<u>C ARRAY</u>	West	.42	-	-	-	-	-
	North	-	.81	-	-	-	-
	East	-	.80	-	-	-	-
	Total	.42	1.61	0	0	0	0
<u>D ARRAY</u>	West	-	-	-	-	-	-
	North	-	.05	-	-	-	-
	East	-	-	-	-	-	-
	Total	0	.05	0	0	0	0

NATIONAL RADIO ASTRONOMY OBSERVATORY
VLA PROGRAM

ANALYSIS OF VLA WYE ROADS

Based on \$100 per mile, per month of road when in use. Three months in each configuration.

TOTAL COST

A Array	36.41 miles x \$100/mile x 3 mos. =	\$10,923/yr.
B Array	10.04 miles x 100/mile x 3 mos. =	3,012
C Array	2.03 miles x 100/mile x 3 mos. =	609
D Array	.05 miles x 100/mile x 3 mos. =	15
Total	48.53	\$14,559/yr.

BENTON SHARE

A Array	1.17 miles x \$100/mile x 3 mos. =	\$ 351/yr.
B Array	1.17 miles x 100/mile x 3 mos. =	351
C Array	.42 miles x 100/mile x 3 mos. =	126
Total	2.76	\$ 828/yr.

BRUTON SHARE

A Array	13.18 miles x \$100/mile x 3 mos. =	\$ 3,954/yr.
B Array	8.43 miles x 100/mile x 3 mos. =	2,529
C Array	1.61 miles x 100/mile x 3 mos. =	483
D Array	.05 miles x 100/mile x 3 mos. =	15
Total	23.27	\$ 6,981/yr.

WINTERS SHARE

A Array	4.00 miles x \$100/mile x 3 mos. =	\$ 1,200/yr.
B Array	.44 miles x 100/mile x 3 mos. =	132
Total	4.44	\$ 1,332/yr.

AKE SHARE

A Array	5.05 miles x \$100/mile x 3 mos. =	\$ 1,515/yr.
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TAYLOR SHARE

A Array	7.49 miles x \$100/mile x 3 mos. =	\$ 2,247/yr.
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DUNLAP SHARE

A Array	5.52 miles x \$100/mile x 3 mos. =	\$ 1,656/yr.
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TOTALS	48.53 miles	\$14,559
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Initially, agreements would be reached only with J. Benton and J. Bruton, so the yearly cost would be only \$7,809. This, with the BLM land which underlays the entire Winter Bros. ranch, will give us road access to all antennas for 96.5 percent of all antenna operating time.

JHL/dl
4-3-80

NATIONAL RADIO ASTRONOMY OBSERVATORY
VLA PROGRAM

ANALYSIS OF VLA WYE ROADS

Based on a yearly total payment of \$15,000 per year for 36.41 miles of road or \$412 per mile, per year.

<u>Rancher</u>	<u>Miles of Road</u>	<u>Value</u>	<u>Cost</u>
Benton	1.17 miles	\$412/mile	\$ 482
Bruton	13.18 miles	412	5,430
Ake	5.05 miles	412	2,080
Taylor	7.49 miles	412	3,086
Winters	4.00 miles	412	1,648
Dunlap	5.52 miles	412	2,274
	<u>36.41 miles</u>		<u>\$15,000</u>

This is a very unfair method of calculation as the close-in ranchers, Benton and Bruton, on whose land we will have telescopes for nine months of each year, receive smaller payments and the outer ranchers receive larger payments even though we will be using their land only three months of each year, and then only for 3-5 antennas.

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4-3-80