

HEMS

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U. S. DEPARTMENT OF AGRICULTURE  
FOREST SERVICE

**FIELD NOTES**

OF

~~HOMESTEAD ENTRY~~ EXCHANGE SURVEY NO. 680

SITUATED IN THE TONTO NATIONAL FOREST

ADMINISTRATIVE DISTRICT NO.

In Section (Unsurveyed) 33 and 34 Township 11 N. , Range 10 E.

of the

Gila and Salt River Meridian.

State of Arizona

State of

Applicant for listing

Residence

Application No. , dated , 19

List No. , dated , 19

Applicant for survey Charles C. Doak

Residence

H. E. No. , dated , 19

Land Office

Survey executed by Charles C. Doak Cartographic Survey Aide  
(Forest Service Title)

Under special instructions dated August 31, 1956

Survey commenced September 26 , 1956

Survey completed September 30 , 1956

Under Acts of

OATH OF ASSISTANTS

We hereby certify that we assisted **Charles C. Doak**  
 Cartographic Survey Aide in surveying all those  
 [Forest Service Title.]  
 parts or portions of ~~Homestead Entry~~ <sup>Exchange</sup> Survey No. 680, in the State  
 of **Arizona** which are represented in the following field notes  
 as having been surveyed by him and under his direction; and that said  
 survey has been in all respects, to the best of our knowledge and  
 belief, well and faithfully surveyed, and the corner monuments estab-  
 lished, according to the instructions furnished by ~~the United States~~ Area 2,  
~~Surveyor General~~ for the survey of Exchange No. 680, dated August 31, 1956.  
 Bureau of Land Management

*Jose Benito Sanchez Jr.*  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Subscribed and sworn to before me this 18th day of  
 October, 19 56.

*Dorothy G. Hodges*  
 \_\_\_\_\_  
 Dorothy G. Hodges, Notary Public

OATH OF SURVEYOR **My commission expires Sept. 12, 1959.**

I, **C. C. Doak** Cartographic Survey Aide  
 [Forest Service Title.]

do solemnly swear that, in strict conformity with the special instruc-  
 tions of ~~the United States Surveyor General for~~ Area 2, Bureau of Land Management, dated  
 August 31, 19 56, and the laws of the United States, I have  
 well, faithfully, and truly, in my own proper person, surveyed a tract  
 of land in unsurveyed sections 33 and 34, T.11N., R.10E., Gila and Salt  
 River Meridian, Arizona.

, No. \_\_\_\_\_, dated \_\_\_\_\_, 19 \_\_\_\_\_, for \_\_\_\_\_, 19 \_\_\_\_\_,  
 the same to be known as ~~Homestead Entry~~ <sup>Exchange</sup> Survey No. 680  
 situated within the **Tonto** National Forest, in  
 unsurveyed Sections 33 and 34, Township 11N., Range 10E., and  
 surveyed Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_,

of the **Gila and Salt River** meridian, **Arizona**, and the  
 related retracements and resurveys and section subdivisions, which are  
 represented in the following field notes as having been surveyed by me;  
 and I further solemnly swear that all the corners of said survey have  
 been established and perpetuated in strict accordance with the stated  
 special instructions, and in the specific manner described in the field  
 notes, and that the following are the original field notes of such  
 survey.

*Charles C. Doak*  
 \_\_\_\_\_  
 Cartographic Survey Aide  
 [Forest Service Title.]

Subscribed and sworn to before me this 18th day of  
 October, 19 56

*Dorothy G. Hodges*  
 \_\_\_\_\_  
 Dorothy G. Hodges, Notary Public



EXCHANGE  
HOMESTEAD ENTRY SURVEY NO. 680

3

TONTON NATIONAL FOREST

STATE OF ARIZONA

Chains To establish true meridian for Exchange Survey No. 680, I set up Wild T-2 transit no. 58834 over U.S.G.&G.S. triangulation station HUSTON and orient on U.S.F.S. lookout tower which is centered over U.S.C.&G.S. triangulation station BAKER. The published azimuth from HUSTON to BAKER is  $160^{\circ}59'00.84''$ . With the plate vernier set on  $00^{\circ}00'16''$ , I turn clockwise to flag previously set above brush on small hill referred to as flag no. 1. I read  $203^{\circ}24'31''$  on vernier and compute bearing to flag no. 1 to be  $S.4^{\circ}23'15''W.$  I repeat this operation with telescope in reversed position and check this bearing and find it to be correct. With transit set up under flag no. 1, I orient on flag over station HUSTON and set vernier to read  $00^{\circ}00'25''$ . I turn  $182^{\circ}02'41''$  clockwise to flag set over API of Exchange Survey No. 680 and compute bearing from flag no.1 to API to be  $S.6^{\circ}25\frac{1}{2}''W.$  I repeat this operation with transit telescope in reversed position to check and find bearing to be correct. With transit under flag at API and over GLO corner monument I orient on flag no.1 and turn transit telescope to true north, the direction of my first course along the east boundary of Exchange Survey No. 680. I double center on line flag to check collimation and to check vernier settings and readings when measuring off bearing from flag no.1.

From API, Exchange Survey No. 680, a stone monument firmly set and properly marked for the corner of sections 34 and 35, T.11N., R.10E., and sections 2 and 3, T.10N., R.10E. of the Gila and Salt River Meridian, Arizona.

NORTH

Through scattered timber and dense underbrush over hilly land along the east boundary of Exchange Survey No. 680.

37.42 Top of small east and west ridge.  
Set a  $3/4''$  x 30" iron pipe 24" in ground with standard U.S.F.S. brass cap on top marked:

WP  
ES 680

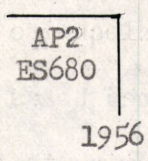
EXCHANGE  
HOMESTEAD ENTRY SURVEY NO. 680

TONTO NATIONAL FOREST

STATE OF ARIZONA

Chains A pinon tree 8" in diameter bears N.77°W. 23 lks. distance blazed  
and scribed WP ES680 BT.

80.00 Point for AP2  
Set a 3/4" x 30" iron pipe 24" in ground with standard U.S.F.S. brass  
cap on top marked:

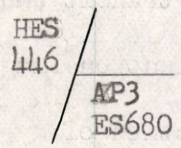


A pinon tree 10" in diameter bears S.15°W. 33 lks. distance blazed  
and scribed AP2 ES680 BT.

WEST

Over similar land along the north boundary of Exchange Survey No. 680

24.12 Intersect boundary of HES No. 446 between stone monuments firmly set  
under fence and properly marked for the corners 7 and 8 of HES No.  
446. Set a 3/4" x 30" iron pipe on line under fence between corners  
7 and 8 of HES 446 with standard U.S.F.S. brass cap on top marked:



1956

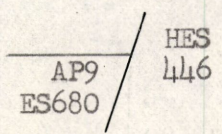
The stone monument marked 8-HES446 bears S.40°48'W. 20.94 chains  
distance.

A juniper tree 18" in diameter bears S.20°E. 12 lks. distance  
blazed and scribed AP3 ES680 BT.

Continue survey west on blank line across HES No. 446.

46.64 Intersect boundary of HES No. 446 between stone monuments firmly  
set under fence and properly marked for the corners 4 and 5 of  
HES No. 446.

Set a 3/4" x 30" iron pipe 24" in ground under fence on boundary be-  
tween corners 4 and 5 of HES No. 446 with standard U.S.F.S. brass  
cap on top marked:



1956

EXCHANGE  
HOMESTEAD SURVEY NO. 680

TONTO NATIONAL FOREST

STATE OF ARIZONA

Chains

The stone monument marked 4 HES 446 bears S.45°27'W. 9.32 chains distance. An oak tree 14" in diameter bears S.85°W. 14 lks. distance blazed and scribed AP9 ES680 BT

65.15 Center of Federal Highway No. 9, north to Pine and south to Payson.

79.55 Set a 3/4" x 30" iron pipe 24" in ground with standard U.S.F.S. brass cap on top marked:

WP  
ES680

1956

A stone monument marked 1 HES 123 for the corner API of HES No. 123 bears north 4.64 chains distance.

A pine tree 24" in diameter bears S.5°W. 29 lks. distance blazed and scribed WP ES680 BT

119.05 Ridge on top of Birch Mesa.

Set a 3/4" x 30" iron pipe 8" in ground with standard U.S.F.S. brass cap on top marked:

WP  
ES680  
1956

Erect a mound of stone around pipe 4' base 2' high. No suitable trees for bearing trees within limits.

160.00 Point for AP10

Set a 3/4" x 30" iron pipe 24" in ground with standard U.S.F.S. brass cap on top marked:

AP 10  
ES 680

1956

An oak tree 18" in diameter bears S.60°E. 139 lks. distance blazed and scribed AP10 ES680 BT

S.0°19'W.

Through juniper and pinion over gently rolling land.

41.56 Set a 3/4" x 30" iron pipe over "X" in stone on surface and erect mound 4' base 2 1/2' high to top. A standard U.S.F.S. brass cap on top of pipe marked:

WP  
ES680

1956

EXCHANGE  
~~HOMESTEAD~~ SURVEY NO. 680

TONTON NATIONAL FOREST

STATE OF ARIZONA

Chains

79.83 AP11. A G.L.O. stone monument in mound of stone at fence corner  
 (east and south). Two bearing trees found as recorded. Bearings  
 and distances for the corner of sections 32 and 33 T.11N., R.10E.  
 and sections 4 and 5 of T.10N., R.10E.

CERTIFICATE OF APPROVAL

Bureau of Land Management,

Washington, D.C., FEB 27 1957

The foregoing field notes of the survey of Exchange Survey No. 680, in the Tonto National Forest, in unsurveyed Sections 33 and 34, Township 11 North, Range 10 East, Gila and Salt River Meridian, Arizona, executed by Charles C. Doak, Cartographic Survey Aide of the Forest Service, having been critically examined and found correct are hereby approved.

*Carl G. Harrington*

Cadastral Engineering Staff Officer



UNITED STATES OF AMERICA

Bureau of Land Management

Washington, D.C. FEB 27 1954

The foregoing field notes of the survey of exchange survey No. 180, in the Tongue National Forest, administrative sections 33 and 34, Township 13 North, Range 10 East, 51st and 52nd Meridian, Arizona, executed by Charles C. Cook, Geographic Survey Aide of the Forest Service, have been critically examined and found correct and hereby approved.

*[Handwritten signature]*

Assistant Surveying Staff Officer



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
WASHINGTON, D.C. 20240

9185 (713a)  
E.S. 680, Arizona

RECEIVED  
LAND OFFICE  
BUREAU OF LAND MANAGEMENT

June 15, 1967

JUN 19 1967

Memorandum

To: SD, Arizona

10 00  
PHOENIX, ARIZONA

From: Director

Subject: Cancellation of Exchange Survey No. 680, Arizona

Exchange Survey No. 680, Arizona, was executed by the Forest Service to accommodate a land exchange with Daniel F. Norton, Jr. A plat of the survey was accepted on February 27, 1957, and shows the exchange survey located in unsurveyed secs. 33 and 34, T. 11 N., R. 10 E., Gila and Salt River Meridian, Arizona.

The proposed land exchange did not materialize and no patent was issued. However, on May 15, 1967, Patent No. 02-67-0049 was issued to a portion of sec. 34 based on an aliquot part description. It is now proposed to survey secs. 33 and 34. And, to obviate any possibility of conflict between the subdivisional survey and the boundaries of Exchange Survey No. 680, it has been recommended that the exchange survey be cancelled.

In compliance with your request of June 1, 1967, the plat of Exchange Survey No. 680, Arizona, is hereby cancelled. The plat and field notes of this survey should be noted accordingly.

For the Director

C. E. Remington  
Chief, Division of Engineering

*Plat noted  
Field notes noted  
6/19/67  
CR*



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

State Office  
3022 Federal Building  
Phoenix, Arizona 85025

June 1, 1967

Memorandum

To : Director  
Attention: Mr. Charles E. Remington

From : State Director, Arizona

Subject: Forest Service Exchange Survey No. 680

Mr. Gumm, in a telephone conversation on 5-24-67, mentioned the possibility of cancelling Forest Service Exchange Survey No. 680. The survey is located in unsurveyed Sections 33 and 34, T. 11 N., R. 10 E., G. and S. R. M., Arizona.

The Forest Service, Southwestern Region, Albuquerque, New Mexico, has requested the survey of the subdivisional lines of the south two tiers of sections in this township.

Before starting the above survey, scheduled to begin June 19, 1967, we request F. S. Exchange Survey No. 680 be cancelled. The Forest Service concurred with this request by letter of May 25, 1967, copy attached.

Under separate cover we are sending all pertinent data for your consideration.

*Steve J. Wick*

Attachment

cc: separate cover

:abp

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SOUTHWESTERN REGION  
517 GOLD AVENUE, SW  
ALBUQUERQUE, NEW MEXICO

IN REPLY REFER TO  
7150 - Tonto  
May 25, 1967

Mr. Boyd Owens  
Bureau of Land Management  
3022 Federal Building  
Phoenix, Arizona

Dear Mr. Owens:

In 1956 C. C. Doak made Exchange Survey No. 680 in unsurveyed sections 33 and 34, (Sec. 3 & 4 on Plat), T. 11 N., R. 10 E., G&SRM. The proponent who had selected the lands included in Exchange Survey No. 680 failed to complete the exchange so the land did not go to patent as expected. However, a patent was issued to Bernard Swartwood and Preston Dooley, doing business under the firm name of Mesa del Caballo, a partnership on May 15, 1967, for the following described lands:

T. 11 N., R. 10 E., G&SRM  
Sec. 34, NE $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$   
containing 220.00 acres

The above patent falls within the boundaries of Exchange Survey No. 680. Although the Exchange Survey No. 680 approximated sections 33 and 34 it did not establish official corners for these sections. For this reason you have our approval to cancel Exchange Survey No. 680, and establish official corners for these two sections in the same manner that it is planned to establish corners for the remainder of the survey project in this area.

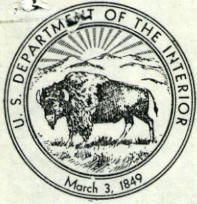
Our search of the closed files for the Survey Instructions covering Exchange Survey No. 680 was fruitless. We regret that it will not be possible for us to furnish you this record as you requested.

Sincerely yours,

*Wm. D. Hurst*

WM. D. HURST  
Regional Forester





IN REPLY REFER TO:

E:MTS

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Survey Office  
P.O.Box 148  
Phoenix, Arizona

May 22, 1957

Memorandum

To: Area Cadastral Engineer  
From: Office Cadastral Engineer  
Subject: Distribution plat and notes

The triplicate copy of the field notes and a copy of the plat of Exchange Survey No. 680 are enclosed.

*E.H. Kimmell*

E.H.Kimmell  
Office Cadastral Engineer

Enc.

Enclosures received and sent to Terminal Bldg., 5-24-57



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
WASHINGTON 25, D. C.

IN REPLY REFER TO:

INITIAL DATE

AA

Adm

DE

MS.04b 5/3/57  
5-3

April 29, 1957

R & F

Action..... Info.....

Filing..... Return to.....

Remarks: .....

Memorandum

To: State Supervisor, Phoenix, Arizona

From: Director

Subject: Plat distribution - Exchange Survey No. 680, Arizona

The original and triplicate original of the plat of Exchange Survey No. 680 in unsurveyed secs. 33 and 34, T. 11 N., R. 10 E., G. & S. R. M., Arizona, accepted February 27, 1957, together with the original, triplicate and quadruplicate field notes, are being transmitted to your office for mounting and filing, the original in the Survey files and the triplicate original in the Land Office files.

This survey was executed by the Forest Service to accommodate a land exchange with Daniel F. Norton, Jr.

The plat will be regarded as officially filed on the date of receipt of the triplicate original in the Land Office. An immediate report of such date will be made to the Director.

For the Director

(Sgd.) Donald B. Clement

cc: A.O. (Salt Lake City) ✓  
L.O. (Phoenix)  
F.S.C.P.  
Forest Service, Wash., D.C.

*M. Petersen*

E:GWJ

Area 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

February 4, 1957

Certified Mail

*47001*

Memorandum

To: Director  
From: Area Administrator, Area 2  
Subject: Transmittal of survey returns Exchange Survey  
No. 680, Arizona

Transmitted herewith by certified mail for examination and acceptance are the returns of Exchange Survey No. 680, in unsurveyed T. 11 N., R. 10 E., G. & S. R. M., Arizona, consisting of the original plat and field notes in quadruplicate. This exchange survey was executed by Charles C. Doak, Cartographic Survey Aide, of the U. S. Forest Service.

There is also attached sheet showing suggested memorandum to be placed by you upon the plat.

For the Area Administrator

*Leo M. Petersen*

Leo M. Petersen  
Cadastral Engineering Staff Officer

Attachments

Accepted: *2-27-57*

*(s) Earl B. Harrington*  
*Cad. Engr. Staff Officer*

Copies to: E. G. Harrington, Washington, D.C.  
SO-Arizona  
Area Drafting Office  
Area Administrator

GWJohnson: bgb

T. 11 N., R. 10 E., Gila & Salt River Meridian, Arizona

Exchange Survey No. 680

The south boundary was surveyed by Cambell and Oakes in 1904. Survey of H.E.S. No. 446 was executed by R. P. A. Johnson in 1916.

Exchange Survey No. 680 was executed by Charles C. Doak, surveyor of the Forest Service, September 26 to September 30, 1956 under special instructions approved August 31, 1956 by the Bureau of Land Management.





IN REPLY REFER TO:

E:EHK

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

January 4, 1957.

MEMORANDUM

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Exchange Survey No. 680

Enclosed are the field notes, in quadruplicate, and a diagram for preparing final plat of Exchange Survey No. 280, Arizona.

The field notes and tracing were received from the Forest Service on December 3, 1956, during my leave. A copy of their letter of transmittal is also enclosed.

The Forest Service is very anxious for an approval of this survey at the earliest possible date.

I believe the field notes are adequate in their present form.

*E. H. Kimmell*

E. H. Kimmell

Copy of memo and enclosures to Drafting Office 1-7-57

*w/our group file*

*1-7-57*

DEPT. OF THE INTERIOR  
BUR. OF LAND MGMT.

1957 JAN 7 PM 2 59

AREA OFFICE II  
SALT LAKE CITY, UTAH

L  
EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
7/31/56

November 28, 1956

Office Cadastral Engineer  
State Office  
B ureau of Land Management  
1305 N orth Central Avenue  
Phoenix, Arizona

Dear Mr. Kimmel:

Reference is made to Special Instructions, Exchange Survey No. 680 dated August 31, 1956 by Cadastral Engineering, Staff Officer Petersen and approved by Area Administrator Nelson.

Attached in quadruplicate are notarized Field Notes of Exchange Survey No. 680 by Cartographic Survey Aide Charles C. Doak. Attached is a single pen and ink copy of Tabling and Calculations of Exchange Survey No. 680. Under separate cover (mailing tube) we are sending you the original tracing of a Plat of Exchange Survey 680.

We have submitted this exchange case to Manager Britt for conditional approval. In order that such approval not be unduly delayed we would appreciate a reasonably early review of these Field Notes and Plat, and approval if appropriate.

Sincerely yours,

FRED H. KENNEDY, Regional Forester

By /s/ A. Allan McCutchen

Area II  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 31, 1956

Memorandum

To: Director

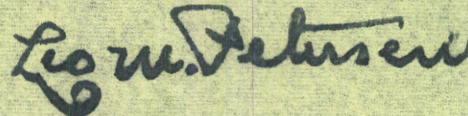
From: Area Administrator, Area II

Subject: Transmitting special instructions, Exchange Survey  
No. 680, Arizona

Transmitted herewith for the cadastral engineering files of your office is the duplicate copy of special instructions dated and approved August 31, 1956, providing for Exchange Survey No. 680 in unsurveyed Township 11 North, Range 10 East, G&SRM, Arizona. This survey is to be executed by a surveyor of the Forest Service to accomodate a Forest land exchange with Daniel F. Norton, Jr.

This survey was discussed by telephone August 10, 1956, between Mr. Harrington of your staff and Mr. Petersen of Area II, and pursuant to the agreements reached in this telephone conversation, Mr. Petersen forwarded a memorandum to Arizona Office Cadastral Engineer Kimmell dated August 10 on the subject, "Proposed Arizona Group 313". A copy of this memorandum was sent to Mr. Harrington. It set forth three alternate methods under which the survey could be executed. The Regional Forester has advised us that due to the urgency of completing the survey, he recommends following the third proposal. The attached special instructions were prepared on that basis.

For the Area Administrator



Leo M. Petersen  
Cadastral Engineering Staff Officer

Attachment

Copies to: SO-Arizona (w/orig. and 2 copies)  
E. G. Harrington, Washington, D. C.  
Area Drafting Office



IN REPLY REFER TO:

E:EHK

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 30, 1956

Airmail

Memorandum

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Special Instructions for Exchange Survey No. 680

Transmitted herewith are the special instructions, with four copies, for Exchange Survey No. 680, Arizona, for examination and approval. Also enclosed is a copy of the letter dated August 24, 1956, from the Forest Service.

We will bind the instructions in "blue-backs" after they are returned to us.

*E. H. Kimmell*

E.H.Kimmell  
Office Cadastral Engineer

Enclosures

DEPT OF THE INTERIOR  
BUR OF LAND MGMT

1956 AUG 31 AM 9 08

AREA OFFICE #  
SALT LAKE CITY, UTAH

UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SOUTHWESTERN REGION



ADDRESS REPLY TO  
REGIONAL FORESTER  
AND REFER TO

510 SECOND ST., NW  
ALBUQUERQUE, NEW MEXICO

L  
EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
7/31/56

August 24, 1956

Mr. E. H. Kimrell  
Office Cadastral Engineer  
233 A Main Post Office Bldg.  
Phoenix, Arizona

Dear Sir:

Reference is made to your memorandum (E:EHK Gr. 313, Ariz.) of August 11, concerning L-EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto), Norton, Daniel F. Jr. (Proposed), 7/31/56.

Due to the urgency of completing the necessary survey connected with this exchange we recommend proposal No. 3 of Mr. Peterson's letter be followed.

We are prepared to execute this survey in compliance with the special instructions which you will issue. Mr. Charles C. Doak, Cartographic Aid, General, from Division of Engineering, will be assigned to the survey.

Attached are seven copies of a map showing the area involved, with approximate bearings and distance. Should you desire more information we will forward it to you.

Very truly yours,

E. A. SCHILLING  
Assistant Regional Forester  
Division of Lands

Enclosures

Area II  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 10, 1956

Memorandum

To: Office Cadastral Engineer E. H. Kimmell  
Through BLM State Supervisor for Arizona

From: Area Cadastral Engineer

Subject: Proposed Arizona Group 313

After we finished our telephone conversation this morning concerning the subject group, I contacted Mr. Harrington in Washington to obtain his views with respect to the matter. After discussing it at length the following represents my views.

1. The survey could be made by one of our field engineers under the same administrative and technical procedures followed in surveys of any other type for the Bureau of Land Management. Should this procedure be employed we could do the work not as an exchange survey but as a group survey. That is, our survey would consist of the identification of the boundaries of the two sections involved with the preparation of regular field notes and plats. As you know our field schedules are pretty well made up for Arizona this winter. The first work to be undertaken is on Group 312, also a Forest request, to be followed by surveys on Groups 307, 306, 297, 299, and 302.

2. This survey could be made by a crew supplied by the Forest Service if supervised by a BLM cadastral engineer. If this choice were selected, I plan on you being the BLM supervisor. Field notes of the survey would be certified by you stating substantially that you had supervised the work executed by engineering employees of the Forest Service with the names of such employees being listed as assistants on the reverse of the form. Included in this procedure would be the preparation of field notes and plats by the BLM.

3. The work could be done, returns submitted, including plats and field notes by an engineer of the Forest Service provided the work was not identified as an

extension of the public surveys. The Forest Service has no authority to take such action. What could be done is that the same lines could be run as provided for in the preliminary instructions you have prepared for the group but the areas enclosed not be designated as sections but instead as areas of Exchange Survey No. \_\_\_\_\_ with corners of the area marked in numerical sequence as corners of the exchange survey, for instance, 1-ES-999. Because no one but the BLM has authority to set its regulation iron posts, the Forest Service would have to supply some other type of monument.

In none of the above alternate proposals would the Forest Service be required to reimburse the BLM for costs.

You may notify the Forest Service officials of the foregoing opinions and obtain from them their desires as to which method they prefer to follow. When such information reaches us, you may then proceed with any revisions required in the proposed special instructions which reached me with your memorandum of August 8, 1956, and which are being returned herewith.

If we are to do the work with our own crew or if the Forest Service is to supply the crew and BLM the supervision, the only change in the instructions that I see necessary would be to revise the paragraph appearing under "Purpose of Survey." If because of urgency of time the Forest Service wishes to execute the survey with its own personnel, the instructions will have to be revised to the extent of removing the group number, inserting the proper exchange survey number or numbers, and eliminating all reference to sections in the area to be surveyed.

I am convinced the type of forest homestead surveys and an exchange survey discussed on page 519 of our survey manual and in GLO Circular 235 contemplate only surveys that are irregular in shape and not surveys extending the rectangular survey net on a section or a township basis.

If the Forest Service elects to make the survey with its own personnel as an exchange survey it seems to me that it could include the exact area in which it is concerned rather than square 640-acre tracts.

*Leo M. Petersen*

Leo M. Petersen  
Area Cadastral Engineer

In Triplicate  
Attachments

Copy to: E. G. Harrington, Washington, D. C. (via AIR MAIL)



DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MGMT

1956 AUG 10 AM 8  
AREA OFFICE II  
SALT LAKE CITY, UTAH

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

State Office  
233A Main Post Office Building  
Phoenix, Arizona

IN REPLY REFER TO:

E:EHK  
Gr. 313

August 8, 1956

Memorandum

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Special Instructions, Group 313, Arizona

Enclosed are the original and four copies of special instructions for the subject group for examination and approval.

Also enclosed is a copy of the letter from the Forest Service, dated July 31, 1956, requesting authority for making the survey, and a copy of my reply dated August 6, 1956.

I have made the instructions rather brief, with the idea that it would be better to wait until we know the actual conditions of the east four miles of the south boundary before setting up the method of surveying the subdivisional lines.

It is also my idea that we give no consideration to the east boundary, which is subject to rectification, as a controlling factor in making this survey.

Will you please advise me as to your opinion, and return the instructions for any changes or additions.

I am also uncertain as to whether the final plat should be prepared by the Forest Service. It seems to me that I should instruct the Forest Service, by letter, to furnish us final field notes in triplicate and a preliminary diagram showing courses, distances, and topography. The final plat to be prepared in your office.

I plan to have Charles Doak, mentioned in Mr. Shilling's letter, pick up iron posts in Phoenix.

*E.H. Kimmell*

E.H. Kimmell  
Office Cadastral Engineer

Enclosures



AM 8 40  
OFFICE #  
SALT LAKE CITY, UTAH

E:EMK  
Gr. 313, Ariz.

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 6, 1956

Regional Forester  
Forest Service  
510 Second St., NW  
Albuquerque, New Mexico

Attn: Mr. E. A. Schilling

My dear Mr. Schilling:

Your letter L Exchange-Coconino, Kaibab, Sitgreaves (Tonto) Norton, Daniel F. Jr. (Proposed) dated July 31, 1956, to the BLM State Supervisor, has been referred to this office.

In accordance with your request, special instructions will be prepared within a few days to provide for the survey of sections 33 and 35, T. 11 N., R. 10 E., G. & S.R. Meridian.

After the instructions have been approved by the Area Administrator, a copy will be mailed to you so that you may issue assignment instructions to one of your engineers to execute the survey.

Sincerely yours,

E.H.Kimmell  
Office Cadastral Engineer

L  
EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
(Proposed)

July 31, 1956

Mr. E. I. Rowland  
State Supervisor  
Bureau of Land Management  
Room 233-A, Main Post Office Bldg.  
Phoenix, Arizona

Dear Mr. Rowland:

Reference is made to Mr. Watkins' recent conversation with you regarding a cadastral survey of Sections 33 and 35, T. 11 N., R. 10 E., an unsurveyed township.

As you know we are processing a land exchange, as above designated, involving the selection of these lands. It was your opinion, relayed to Mr. Watkins, that a survey would be necessary before patent could be issued to these lands. Please, therefore, consider this a formal request for such a survey.

We are anxious to process this case to the point of Title-Accepted-and-Patent-to-Issue by January 1. We are prepared to assign an engineer from this office with help from local forest officers to do this job under BLM instructions. In this manner we could complete this work easily this fall.

We would appreciate advice from you as to whether you wish to schedule the job for BLM completion or Forest Service completion following BLM instructions.

Sincerely yours,

FRED H. KENNEDY, Regional Forester

By *E. A. Schilling*

P. S. We propose to assign Engineer Charles C. Doak to this job. Mr. Doak, a former BLM employee, was at one time assigned to this same type of work from the BLM Santa Fe office.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
AREA 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 31, 1956

SPECIAL INSTRUCTIONS

EXCHANGE SURVEY NO. 680

In Township 11 North, Range 10 East  
Gila and Salt River Meridian, Arizona

Purpose of Survey

A request for these special instructions was made by the Assistant Regional Forester, Division of Lands, Forest Service, Albuquerque, New Mexico, by letter dated August 24, 1956. The survey is to be executed by the Forest Service to accommodate a land exchange with Daniel F. Norton, Jr.

The chief of field party is authorized and directed to make the described survey and any necessary retracements and reestablishment of control points, and will be guided by the Manual of Surveying Instructions and the provisions of these special instructions.

History of Earlier Surveys

The south boundary of T. 11 N., R. 10 E., was surveyed by Campbell and Oakes in 1904. A corrective survey of the east half mile between sections 5 and 32, between 14 and 33, 3 and 34, and west half mile between sections 2 and 35, was made by Charles L. Campbell in 1907. These surveys are represented on the plat of T. 10 N., R. 10 E., approved December 11, 1908.

The boundaries of patented Homestead Entry Survey No. 446 were surveyed by R.P.A. Johnson, Forest Service, in 1917.

### Method and Order of Procedure

The tract to be surveyed will be designated as Exchange Survey No. 680 and the boundaries will be established substantially as delineated in red on the attached diagram which is made a part of these instructions.

The direction of lines will be referred to the true meridian, to be established by one of the methods described in Chapter II of the Manual of Surveying Instructions, or the bearings may be based on azimuth carried by sustained angulation from U.S. Coast and Geodetic Survey triangulation station "Huston".

Measurements will be made in chain units reduced to horizontal distances, in accordance with sections 15 and 16 of the Manual.

### Monumentation

All angle points on the boundaries which have not previously been monumented will be monumented with Forest Service brass tablets, or iron posts with brass caps, or with stones, as provided for in Section 244 of the Manual, appropriately marked. For example, a stone monument at Angle Point No. 2 should be marked with a chisel: 2-ES-680. A brass capped monument at Angle Point No. 3 should be marked

HES / AP3  
446 / ES 680  
1956

Intermediate stations will be monumented as witness points on the east, north, and west boundaries so that distances between monuments will not exceed 45.00 chains, as provided for in section 472 of the Manual.

All corners will be referenced by bearing trees, mound of stones, or bearing objects, as outlined in Sections 316 to 347 of the Manual.

The survey will be initiated at the corner of secs. 2, 3, 34, and 35, on the south boundary of T. 11 N., R. 10 E., which will be designated as Angle Point No. 1, without any additional marking on the original monument.

From Angle Point No. 2 the boundary will be surveyed West to an intersection with the boundary of Homestead Entry Survey No. 446, which point will be monumented as Angle Point No. 3. The line will be extended on a blank line across the H.E.S. to an intersection with the opposite boundary of the H.E.S. where a monument will be established for Angle Point No. 9. The true bearings and distances will be determined from Angle Points 3 and 9 to the H.E.S. corners on either side of the line.

It will not be necessary to retrace or resurvey other portions of the boundary of H.E.S. No. 446 unless it is required due to error in closure or to reestablish lost corners.

The survey of the boundary of the Exchange Survey will then be resumed West to the point for Angle Point No. 10, 160.00 chains west of Angle Point No. 2, thence southerly to an intersection with the corner of sections 4, 5, 32, and 33, which will be designated as Angle Point No. 11, without additional markings on the original monument.

A retracement or resurvey of the south boundaries of sections 33 and 34 will not be required unless it is necessary on account of an excessive closing error, or to reestablish lost corners.

A connection should be made from the first witness point west of Angle Point 9 to Corner No. 1 of H.E.S. No. 123, to make certain that there be no conflict with this claim. From previous records this corner is calculated to be approximately 4 chains north and 79 chains west of the point for Angle Point No. 2 of the Exchange Survey. This connection should be entered in the final returns.

#### General

The allowable limit in closing error for either latitude or departure is expressed by the ratio of 1:640, and before leaving the field the engineer should make certain, by computation, that this limit is not exceeded.

The engineer will also prepare a topographic sketch during the progress of the field work, to be used in the preparation of the final plat, unless aerial photography is available for this purpose.

A connection will be made, if feasible, to U.S.Coast and Geodetic Survey triangulation station "Huston" which is located approximately one mile NNE of the point for Angle Point No. 2 of this survey; also to any other government triangulation stations, or bench marks, that may be found in the vicinity of the work.

There are no mineral surveys within the area to be surveyed.

The Forest Service will prepare and submit the final returns consisting of a plat, the outside dimensions to be 16 7/8 x 21 inches, and the field notes in quadruplicate.

Modification of Instructions:

Should conditions arise that seem to require additional instructions, an interpretation of these instructions, or make these instructions inapplicable as prepared, the chief of party will submit a report of the situation at once, with appropriate recommendations for office consideration, to the Survey Office in Phoenix.

Accompanying data

Copy of records of earlier cadastral surveys.

Description and position data for U.S.Coast and Geodetic Survey triangulation station "Huston".

*Leon Peterson*

Cadastral Engineering Staff Officer

Approved: August 31, 1956

*Neal D. Nelson*

Neal D. Nelson  
Area Administrator



Area 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

February 4, 1957

Certified Mail

Memorandum

To: Director  
From: Area Administrator, Area 2  
Subject: Transmittal of survey returns Exchange Survey  
No. 680, Arizona

Transmitted herewith by certified mail for examination and acceptance are the returns of Exchange Survey No. 680, in unsurveyed T. 11 N., R. 10 E., G. & S. R. M., Arizona, consisting of the original plat and field notes in quadruplicate. This exchange survey was executed by Charles C. Doak, Cartographic Survey Aide, of the U. S. Forest Service.

There is also attached sheet showing suggested memorandum to be placed by you upon the plat.

For the Area Administrator

*Leo M. Petersen*

Leo M. Petersen  
Cadastral Engineering Staff Officer

Attachments

Accepted: FEB 27 1957

(Sgd.) Earl G. Harrington

Cadastral Engineering Staff Officer

Copies to: E. G. Harrington, Washington, D.C.  
SO-Arizona  
Area Drafting Office  
Area Administrator

After plat is accepted, mail to:  
State Supervisor, BLM, Post Office  
Box 148, Phoenix, Arizona



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SOUTHWESTERN REGION



ADDRESS REPLY TO  
REGIONAL FORESTER  
AND REFER TO

510 SECOND ST., NW  
ALBUQUERQUE, NEW MEXICO

L

EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
7/31/56

November 28, 1956

Office Cadastral Engineer  
State Office  
B ureau of Land Management  
1305 N orth Central Avenue  
Phoenix, Arizona

Dear Mr. Kimmel:

Reference is made to Special Instructions, Exchange Survey No. 680 dated August 31, 1956 by Cadastral Engineering Staff Officer Petersen and approved by Area Administrator Nelson.

Attached in quadruplicate are notarized Field Notes of Exchange Survey No. 680 by Cartographic Survey Aide Charles C. Doak. Attached is a single pen and ink copy of Tabling and Calculations of Exchange Survey No. 680. Under separate cover (mailing tube) we are sending you the original tracing of a Plat of Exchange Survey 680.

We have submitted this exchange case to Manager Britt for conditional approval. In order that such approval not be unduly delayed we would appreciate a reasonably early review of these Field Notes and Plat, and approval if appropriate.

Sincerely yours,

FRED H. KENNEDY, Regional Forester

By

*C. Allen Kennedy*

E:EHK

State Office  
233A Main Post Office Building  
Phoenix, Arizona

September 4, 1956

Regional Forester  
Forest Service  
510 Second St., NW.,  
Albuquerque, New Mexico

Attn.: Mr. E.A.Schilling

My dear Mr. Schilling:

Reference is to your letter L EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto) Norton, Daniel F. Jr., dated August 24, 1956, which was received August 28, 1956.

The original and one copy of the special instructions for Exchange Survey No. 680 are enclosed.

I am also enclosing a copy of the field notes of the survey of the north boundary of T. 10 N., R. 10 E., executed by Campbell and Oakes in 1904 and 1907.

Your engineer should also be furnished copies of the following plats:

T. 10 N., R. 10 E.,  
H.E.S. 123  
H.E.S. 446

also field notes for H.E.S. 446 and description of Corner No. 1 of H.E.S. 123, and complete data for U.S.Coast and Geodetic Survey triangulation station "Huston".

Please advise me if there are any of these items which you do not have and we will send the originals out for reproduction. We do not have a photostat machine in the office.

I would be very glad to have Mr. Doak visit the office to discuss the work at any time.

Sincerely yours,

E.H.Kimmell  
Office Cadastral Engineer

Enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
AREA 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 31, 1956

SPECIAL INSTRUCTIONS

EXCHANGE SURVEY NO. 680

In Township 11 North, Range 10 East  
Gila and Salt River Meridian, Arizona

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The boundaries of patented Homestead Entry Survey No. 446 were surveyed by R.P.A. Johnson, Forest Service, in 1917.

### Method and Order of Procedure

The tract to be surveyed will be designated as Exchange Survey No. 680 and the boundaries will be established substantially as delineated in red on the attached diagram which is made a part of these instructions.

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### Monumentation

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HES / AP3  
446 / ES 680  
1956

Intermediate stations will be monumented as witness points on the east, north, and west boundaries so that distances between monuments will not exceed 45.00 chains, as provided for in section 472 of the Manual.

All corners will be referenced by bearing trees, mound of stones, or bearing objects, as outlined in Sections 316 to 347 of the Manual.

The survey will be initiated at the corner of secs. 2, 3, 34, and 35, on the south boundary of T. 11 N., R. 10 E., which will be designated as Angle Point No. 1, without any additional marking on the original monument.

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The engineer will also prepare a topographic sketch during the progress of the field work, to be used in the preparation of the final plat, unless aerial photography is available for this purpose.

A connection will be made, if feasible, to U.S.Coast and Geodetic Survey triangulation station "Huston" which is located approximately one mile NNE of the point for Angle Point No. 2 of this survey; also to any other government triangulation stations, or bench marks, that may be found in the vicinity of the work.

There are no mineral surveys within the area to be surveyed.

The Forest Service will prepare and submit the final returns consisting of a plat, the outside dimensions to be 16 7/8 x 21 inches, and the field notes in quadruplicate.

Modification of Instructions:

Should conditions arise that seem to require additional instructions, an interpretation of these instructions, or make these instructions inapplicable as prepared, the chief of party will submit a report of the situation at once, with appropriate recommendations for office consideration, to the Survey Office in Phoenix.

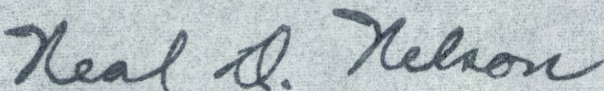
Accompanying data

Copy of records of earlier cadastral surveys.

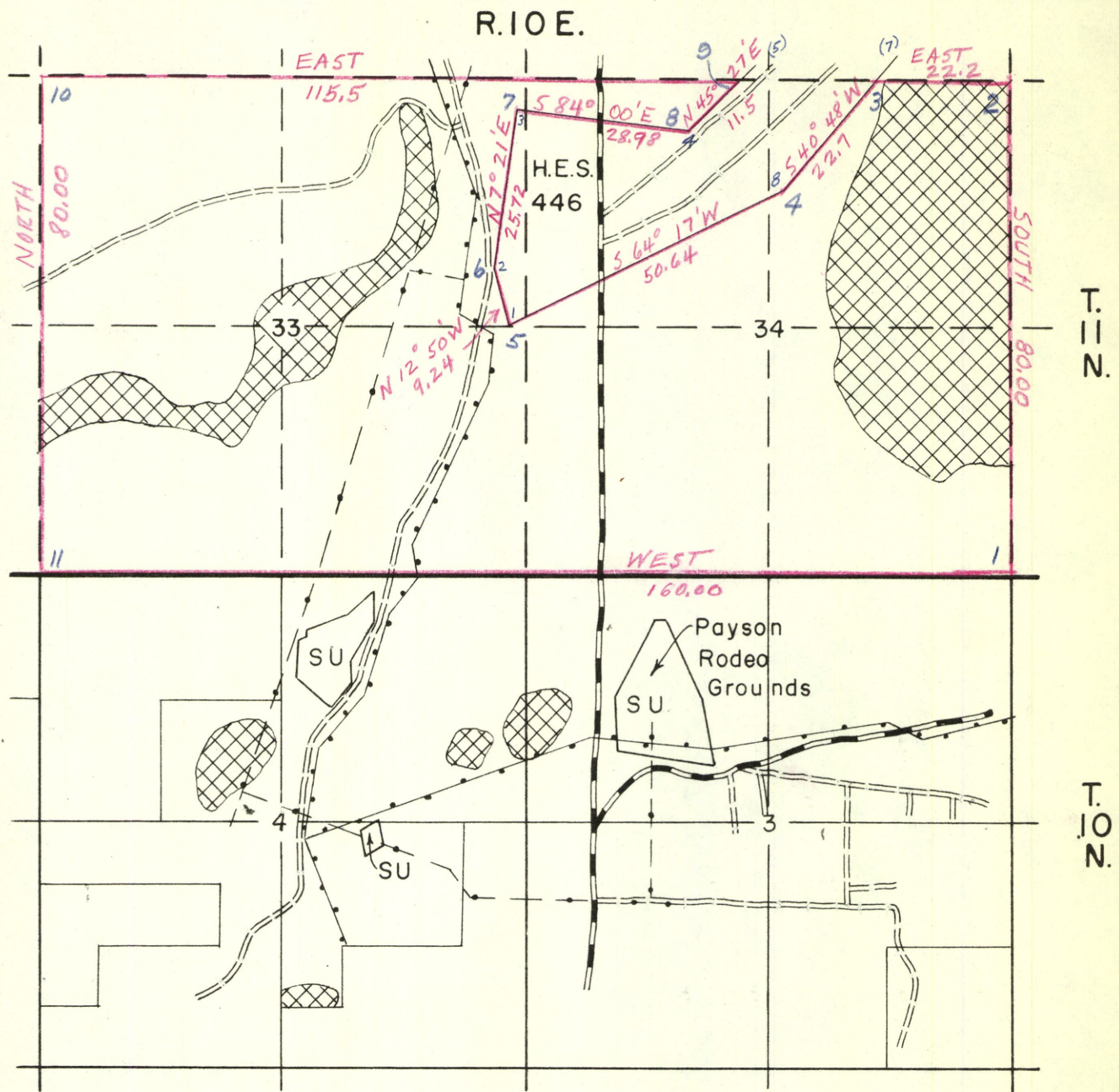
Description and position data for U.S.Coast and Geodetic Survey triangulation station "Huston".

  
Cadastral Engineering Staff Officer

Approved: August 31, 1956



Neal D. Nelson  
Area Administrator



### L-EXCHANGE, TONTO

(Sitgreaves, Coconino, Kaibab)

Norton, Daniel F. Jr. (7/31/56)

Scale: 3" = 1 Mile

#### LEGEND

- Selected land
- Wasteland
- Power line
- Telephone line

North Boundary T. 10 N., R. 10 E.  
Campbell and Oakes in 1904 - 1907

1.

Chains

Book 2080

Set a sandstone 28x14x10 ins., struck rock, raised mound of stone around, for cor. Ts. 10 and 11 N., Rs. 9 and 10 E., marked with 6 notches on all four edges, from which

A scrubby juniper, 3 ins. diam., bears N. 30° E., 84 lks. dist. mkd. T 11 N R 10 E S 31 BT

A scrubby pinon, 4 ins. diam., bears S. 63° E., 85 lks. dist. mkd. T 10 N R 10 E S 6 B T

A pine, 9 ins. diam., bears S. 9° W., 54 lks. dist., mkd. T 10 N R 9 E S 1 B T.

A scrubby juniper, 6 ins. diam., bears N. 60° W., 120 lks. mkd. T 11 N R 9 E S 36 B T.

-----  
East on true line bet. secs. 6 and 31

Over mountainous land, through scattering timber and dense undergrowth.

7.25 Spur, 250 ft. high, slopes toward the SW.

26.75 Draw 200 ft. deep, course SW.

39.25 The true point for  $\frac{1}{4}$  sec. cor. falls on a stone in place, 15x10x3 ft. above ground. At exact point, cut a cross for  $\frac{1}{4}$  sec. cor. and mark  $\frac{1}{4}$  on N. side of cross, from which

A fir, 12 ins. diam., bears N. 30  $\frac{3}{4}$ ° E., 234 lks. dist., marked  $\frac{1}{4}$  S 31 BT.

No other tree in limits, raised mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, N. of cor., pits impracticable.

54.25 Ridge, 300 ft. high, bears NW and SE. Desc.

79.25 Set a sandstone 20x12x8 ins., 15 ins. in the ground, for cor. secs. 5, 6, 31 and 32, mkd. with 5 notches on E. and 1 notch on W. edges, from which

Cedar, 10 ins. diam., bears S. 10° E., 201 lks. dist., mkd. T 10 N R 10 E S 5 B T

Cedar, 12 ins. diam., bears S. 20 $\frac{1}{2}$ ° W., 305 lks. dist., mkd. T 10 N R 10 E S 6 B T

No other trees in limits; raised mound of stone, 2 ft. base,  $1\frac{1}{2}$  ft. high, W. of cor., pits impracticable.

-----  
East, true line bet. secs. 5 and 32

Desc. over mountainous land through scattering timber and dense undergrowth.

3. Stock trail, bears NW and SE.

17.50 Draw, 100 ft. deep, course SW.

25. Spur, 100 ft. high, slopes toward the SW.

40. Set a granite stone 15x8x6 ins., 10 ins. in the ground for  $\frac{1}{4}$  sec. cor. mkd.  $\frac{1}{4}$  on N. face, from which

cc to Forest Service 9/4/56



Chains

A pine, 8 ins. diam., bears N. 20° E., 100 lks. dist., mkd.  $\frac{1}{4}$  S 32 BT.

A pine, 10 ins. diam., bears S. 75° E., 69 lks. dist., mkd.  $\frac{1}{4}$  S 5 BT.

From orig.  $\frac{1}{4}$  sec. cor. on the line bet. secs. 5 and 32 on the N. Bdy. of Tp.,

East, bet. secs. 5 and 32

Desc. over mountainous land, through scattering timber and undergrowth.

Draw, 25 ft. below cor., course S.W.

Spur, 100 ft. high, slopes SW.

Draw, 25 ft. deep, course SW.

Spur, 50 ft. high, course SW.

Draw, 75 ft. deep, course SW.

Spur, 150 ft. high, slopes SW.

Draw, 50 ft. deep, course SW.

Spur, 75 ft. high, slopes SW.

Set a granite stone 20x14 x 6 ins., 15 ins. in the ground, for cor. secs. 4, 5, 32 and 33, mkd. with 4 notches on the E. and 2 notches on the W. edges, from which

Oak, 10 ins. diam., bears N. 54° E., 103 lks. mkd. T 11 N R 10 E S 33 BT.

Oak, 12 ins. diam., bears S. 60° E., 86 lks. mkd. T 10 N R 10 E S 4 BT.

Oak, 10 ins. diam., bears S. 50° W., 73 lks. mkd. T 10 N R 10 E S 5 B T.

Oak, 10 ins. diam., bears N. 20° W., 70 lks. dist., mkd. T 11 N R 10 E S 32 BT.

East, bet. secs. 4 and 33

Desc. over mtns. land, through scattering timber and scattering undergrowth.

Enter dense undergrowth, bears N. and S.

Set a granite stone 15 x 6 x 6 ins., 10 ins. in the ground, for  $\frac{1}{4}$  sec. cor. mkd.  $\frac{1}{4}$  on N. face, from which

Oak, 10 ins. diam., bears N. 69° W., 54 lks. dist., mkd.  $\frac{1}{4}$  S 33 BT.

Cedar, 6 ins. diam., bears S. 27 $\frac{1}{2}$ ° E., 46 lks. dist., mkd.  $\frac{1}{4}$  S 4 BT.

Dry bed of stream, 25 lks. wide, in canyon, 300 ft. deep, course S.

Wagon road, bears NE and SW.

Set a granite stone 15x6x6 ins., 10 ins. in the ground, for cor. secs. 3, 4, 33 and 34, with 3 notches on E. and 2 on S. face, from

Chains

80. Set a granite stone 15 x 10 x 6 ins., 10 ins. in the ground, for cor. secs. 3, 4, 33 and 34, mkd. with 3 notches on E. and W. edges, from which

Pine, 12 ins. diam., bears N. 24° E., 78 lks. dist., mkd.  
T 11 N R 10 E S 34 BT

Juniper, 18 ins. diam., bears S. 32° E., 60 lks. dist., mkd.  
T 10 N R 10 E S 3 BT.

Juniper, 16 ins. diam., bears S. 89° W., 112 lks. dist., mkd.  
T 10 N R 10 E S 4 BT.

Oak, 8 ins. diam., bears N. 31° W., 138 lks. dist., mkd.  
T 11 N R 10 E S 33 BT.

This cor. stands 200 ft. above dry bed of stream.

-----

East, bet. secs. 3 and 34

Over mountainous land, through scattering timber and dense undergrowth.

8. Spur, 75 ft. above corner, slopes SE.

26.50 Draw, 50 ft. deep, course S,

26.80 Wagon road, bears N. and S.

40. Set a granite stone 15x8x8 ins., 10 ins. in the ground, for  $\frac{1}{4}$  sec. cor. mkd.  $\frac{1}{4}$  on N. face, from which

Fir, 10 ins. diam., bears N. 37 $\frac{1}{2}$ ° E., 50 lks. dist., mkd.  
 $\frac{1}{4}$  S34 BT.

Oak, 8 ins. diam., bears S. 60 $\frac{1}{2}$ ° E., 83 lks. dist., mkd.  
 $\frac{1}{4}$  S3 BT.

40.50 Spur, 50 ft. high, slopes S.

65.50 Draw, 100 ft. deep, course S.

80. Set sandstone 15x12x10 ins., 10 ins. in the ground, for cor. secs. 2, 3, 34 and 35, mkd. with 2 notches on E. and 4 notches on W. edges, from which

Pine, 8 ins. diam., bears N. 4° E., 11 lks. dist., mkd.  
T11N R10E S35 BT.

Oak, 8 ins. diam., bears S. 24° E., 106 lks. dist., mkd.  
T 10 N R 10 E S2 BT.

Pine, 9 ins. diam., bears S. 30° W., 79 lks. dist., mkd.  
T 10 N R 10 E S 3 BT.

Pine, 10 ins. diam., bears N. 50° W., 93 lks. dist., mkd.  
T 11 N R 10 E S 34 BT.

This cor. stands 125 ft. above draw.

-----

Chains East, on true line bet. secs. 2 and 35

Over rolling land, through scattering timber and dense undergrowth.

8.

Draw, 100 ft. deep, course SE.

Set a granite stone 15x6 ins., 10 ins. in the ground, for cor. mcd.  $\frac{1}{4}$  on N. face, from which

Pine, 10 ins. diam., bears S.  $15\frac{1}{2}^{\circ}$  W., 125 lks. dist., mcd.  $\frac{1}{4}$  S 2 BT.

Oak, 8 ins. diam., bears N.  $14^{\circ}$  W., 64 lks. dist., mcd.  $\frac{1}{4}$  S35 BT.

50.75

Spur, 150 ft. high, slopes S. Desc.

Payson-Flagstaff wagon road bears NE and SW.

58.60

Set a sandstone 15 x 8 x 6 ins., 10 ins. in the ground, for cor. secs. 1, 2, 35 and 36, mcd. with 1 notch on the E. and 5 notches on the W. edges, from which

Oak, 6 ins. diam., bears N.  $45\frac{1}{2}^{\circ}$  E., 49 lks., mcd. TLIN R10E S36 BT.

Oak, 12 ins. diam., bears S.  $30^{\circ}$  E., 150 lks. dist., mcd. TLON R10E S1 BT.

Oak, 6 ins. diam., bears S.  $70\frac{1}{2}^{\circ}$  W., 54 lks. dist., mcd. TLON R10E S2 BT.

Oak, 6 ins. diam., bears N.  $71\frac{1}{2}^{\circ}$  W., 104 lks. dist., mcd. TLIN R10E S35 BT.

East, true line bet. secs. 1 and 36

Over rolling land, through scattering timber and dense undergrowth.

4.

Draw, 50 ft. deep, course N.

Spur, 100 ft. high, slopes towards the N.

9.75

Over draws and spurs.

Set granite stone 15x10x8 ins., 10 ins. in the ground, for  $\frac{1}{4}$  sec. cor. mcd.  $\frac{1}{4}$  on N. face, from which

Oak, 6 ins. diam., bears N.  $75^{\circ}$  E., 90 lks. dist., mcd.  $\frac{1}{4}$  S36 BT.

Oak, 14 ins. diam., bears S.  $69^{\circ}$  W., 108 lks. dist., mcd.  $\frac{1}{4}$  S1 BT.

62.

Draw, 50 ft. deep, course S.  $70^{\circ}$  E.

Spur, 150 ft. high, slopes toward the NE.

80.

Intersect the cor. of T. 10 and 11 N., Rs. 10 and 11 E., which is a sandstone 18x6 ins., 12 ins. in the ground, for cor. of Tps. 10 and 11 N., Rs. 10 and 11 E., mcd. with 6 notches on the N., S., E. and W. edges, from which

North Bdy. T. 10 N., R. 10 E.

Chains

Oak, 6 ins. diam., bears N.  $45\frac{3}{4}^{\circ}$  E., 49 lks. mkd.  
T11N R11E S31 BT

Oak, 12 ins. diam., bears S.  $30^{\circ}$  E., 156 lks. mkd.  
T10N R11E S6 BT

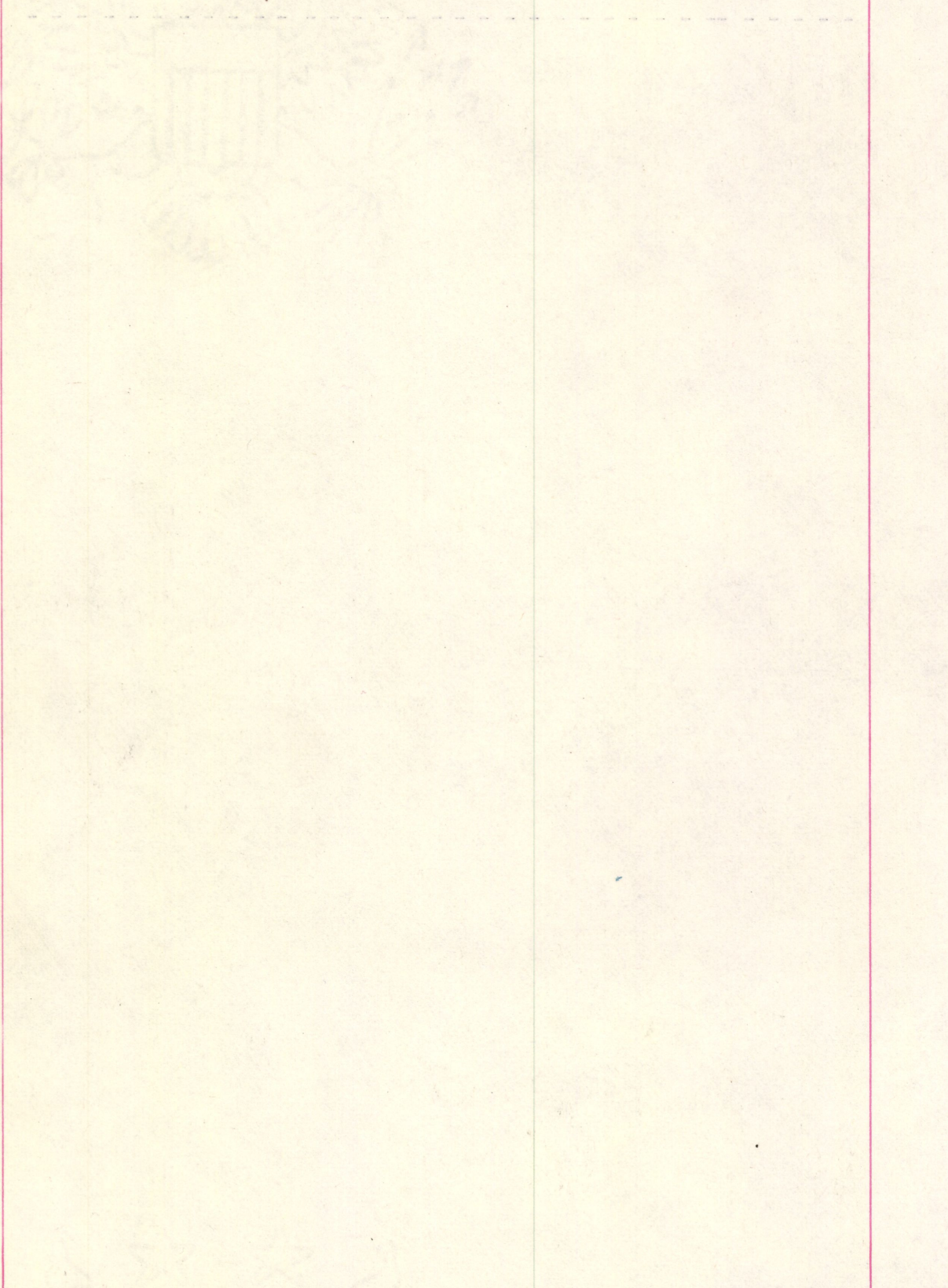
Oak, 6 ins. diam., bears S.  $70\frac{1}{2}^{\circ}$  W., 54 lks. mkd.  
T10N R10E S1 BT

Oak, 5 ins. diam., bears N.  $71^{\circ}$  W., 104 lks. mkd.  
T11N R10E S36 BT.

This township cor. stands on rolling slope, 75 ft. above foot  
of draw.

-----

Faint, illegible text, possibly bleed-through from the reverse side of the page.



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SOUTHWESTERN REGION



ADDRESS REPLY TO  
REGIONAL FORESTER  
AND REFER TO

510 SECOND ST., NW  
ALBUQUERQUE, NEW MEXICO

L  
EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
7/31/56

August 24, 1956



DATE ROUTED 8-28 INIT'S FOR:

1	STATE SUPV.	<i>E.H.K.</i>	ACTION
	ADM. ASST.		
	RGE. & FOR.		
	LANDS & MIN.		
	LAND OFFICE		COMMENTS
2	CAD. ENGR.		
	GRAZ. DIST.		INFORM.
	RETURN TO		

Mr. E. H. Kimmell  
Office Cadastral Engineer  
233 A Main Post Office Bldg.  
Phoenix, Arizona

Dear Sir:

Reference is made to your memorandum (E:EHK Gr. 313, Ariz.) of August 14, concerning L-EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto), Norton, Daniel F. Jr. (Proposed), 7/31/56.

Due to the urgency of completing the necessary survey connected with this exchange we recommend proposal No. 3 of Mr. Peterson's letter be followed.

We are prepared to execute this survey in compliance with the special instructions which you will issue. Mr. Charles C. Doak, Cartographic Aid, General, from Division of Engineering, will be assigned to the survey.

Attached are seven copies of a map showing the area involved, with approximate bearings and distance. Should you desire more information we will forward it to you.

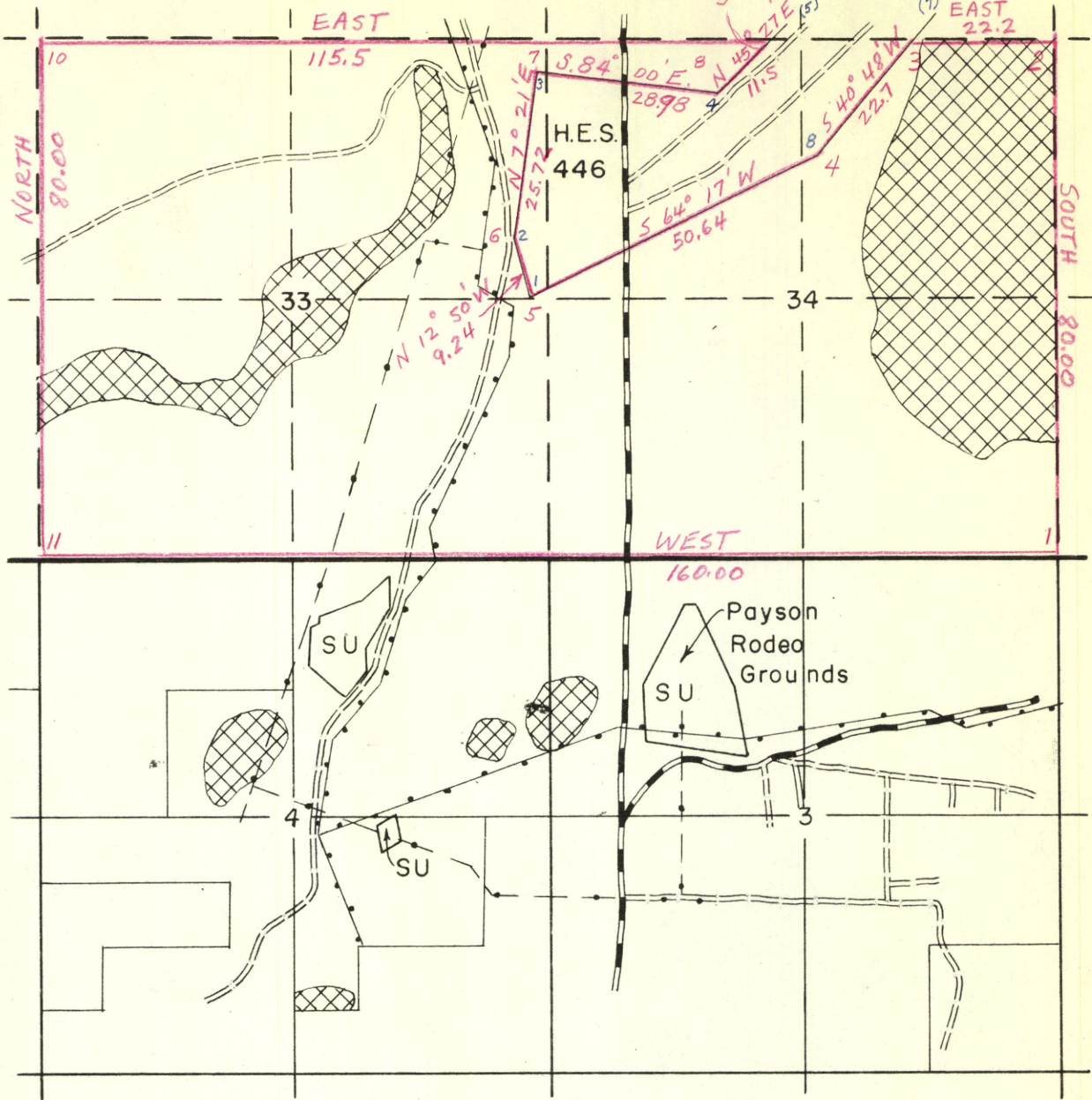
Very truly yours,

*E.A. Schilling*  
E. A. SCHILLING  
Assistant Regional Forester  
Division of Lands

Enclosures

Extra Office copy

R. 10 E.



### L-EXCHANGE, TONTO

(Sitgreaves, Coconino, Kaibab)

Norton, Daniel F. Jr. (7/31/56)

Scale : 3" = 1 Mile

#### LEGEND

- Selected land
- X Wasteland
- - - - - Power line
- . - . - Telephone line



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

State Office  
233A Main Post Office Building  
Phoenix, Arizona

IN REPLY REFER TO:

E:EHK  
Gr. 313, Ariz.

August 14, 1956

Regional Forester  
Forest Service  
510 Second St., NW.  
Albuquerque, New Mexico

Attn: Mr. E. A. Schilling

My dear Mr. Schilling:

Reference is to L Exchange-Coconino, Kaibab, Sitgreaves  
(Tonto) Norton, Daniel F. Jr. (Proposed).

I am enclosing a copy of a memorandum from the Area  
Cadastral Engineer, dated August 10, 1956, in regard to the proposed  
survey to accommodate the subject exchange, and listing three differ-  
ent methods by which a survey may be accomplished.

Under the first method it does not appear that the survey  
could be executed this winter, due to prior commitments. Our first  
priority being given to a resurvey of T. 17 N., R. 5 E., by request  
of the Forest Service.

Method No. 2, as would also apply to No. 1, will require  
a retracement and possible resurvey of the east four miles of the  
south boundary of T. 11 N., R. 10 E., before any interior section  
lines could be surveyed.

Mr. Perl Charles advised me yesterday afternoon that you  
desire a survey of secs. 33 and 34 of T. 11 N., R. 10 E., instead  
of secs. 33 and 35 as requested in your letter dated July 31, 1956.

If you should elect to make an exchange survey, as proposed  
under No. 3, you might furnish me a diagram, preferably a tracing so  
that we may prepare several copies, showing the approximate position,  
with bearings and lengths of lines, to accompany the instructions  
which I will prepare for approval by the Area Administrator.

Sincerely yours,

E.H. Kimmell  
Office Cadastral Engineer

Enc.





IN REPLY REFER TO:

E:LMP

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

Area II  
Post Office Box No. 659  
Salt Lake City 10, Utah



August 10, 1956

DATE ROUTED <u>8-13</u>	INITIALS FOR
1 STATE SUPV.	EJC
ADM. ASST.	
LANDS & FOR.	ACTION.....
LANDS & M. N.	COMMENTS.....
2 CAD. ENGR.	INFORM.....
GRAZ. DIST.	
RETURN TO	

To: Office Cadastral Engineer E. H. Kimmel  
Through BLM State Supervisor for Arizona

From: Area Cadastral Engineer

Subject: Proposed Arizona Group 313

After we finished our telephone conversation this morning concerning the subject group, I contacted Mr. Harrington in Washington to obtain his views with respect to the matter. After discussing it at length the following represents my views.

1. The survey could be made by one of our field engineers under the same administrative and technical procedures followed in surveys of any other type for the Bureau of Land Management. Should this procedure be employed we could do the work not as an exchange survey but as a group survey. That is, our survey would consist of the identification of the boundaries of the two sections involved with the preparation of regular field notes and plats. As you know our field schedules are pretty well made up for Arizona this winter. The first work to be undertaken is on Group 312, also a Forest request, to be followed by surveys on Groups 307, 306, 297, 299, and 302.

2. This survey could be made by a crew supplied by the Forest Service if supervised by a BIM cadastral engineer. If this choice were selected, I plan on you being the BIM supervisor. Field notes of the survey would be certified by you stating substantially that you had supervised the work executed by engineering employees of the Forest Service with the names of such employees being listed as assistants on the reverse of the form. Included in this procedure would be the preparation of field notes and plats by the BIM.

3. The work could be done, returns submitted, including plats and field notes by an engineer of the Forest Service provided the work was not identified as an

168x21

extension of the public surveys. The Forest Service has no authority to take such action. What could be done is that the same lines could be run as provided for in the preliminary instructions you have prepared for the group but the areas enclosed not be designated as sections but instead as areas of Exchange Survey No. \_\_\_\_\_ with corners of the area marked in numerical sequence as corners of the exchange survey, for instance, 1-ES-999. Because no one but the BLM has authority to set its regulation iron posts, the Forest Service would have to supply some other type of monument.

*also see sec. 472  
of Manual*


In none of the above alternate proposals would the Forest Service be required to reimburse the BLM for costs.

You may notify the Forest Service officials of the foregoing opinions and obtain from them their desires as to which method they prefer to follow. When such information reaches us, you may then proceed with any revisions required in the proposed special instructions which reached me with your memorandum of August 8, 1956, and which are being returned herewith.

If we are to do the work with our own crew or if the Forest Service is to supply the crew and BLM the supervision, the only change in the instructions that I see necessary would be to revise the paragraph appearing under "Purpose of Survey." If because of urgency of time the Forest Service wishes to execute the survey with its own personnel, the instructions will have to be revised to the extent of removing the group number, inserting the proper exchange survey number or numbers, and eliminating all reference to sections in the area to be surveyed.

I am convinced the type of forest homestead surveys and an exchange survey discussed on page 519 of our survey manual and in GLO Circular 235 contemplate only surveys that are irregular in shape and not surveys extending the rectangular survey net on a section or a township basis.

If the Forest Service elects to make the survey with its own personnel as an exchange survey it seems to me that it could include the exact area in which it is concerned rather than square 640-acre tracts.

  
Leo R. Petersen  
Area Cadastral Engineer

In Triplicate  
Attachments  
Copy to: E. G. Harrington, Washington, D. C. (via AIR MAIL)

E:EHK

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 30, 1956

Airmail

Memorandum

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Special Instructions for Exchange Survey No. 680

Transmitted herewith are the special instructions, with four copies, for Exchange Survey No. 680, Arizona, for examination and approval. Also enclosed is a copy of the letter dated August 24, 1956, from the Forest Service.

We will bind the instructions in "blue-backs" after they are returned to us.

E.H.Kimmell  
Office Cadastral Engineer

Enclosures

E:ENK

January 4, 1957.

MEMORANDUM

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Exchange Survey No. 680

Enclosed are the field notes, in quadruplicate, and a diagram for preparing final plat of Exchange Survey No. 280, Arizona.

The field notes and tracing were received from the Forest Service on December 3, 1956, during my leave. A copy of their letter of transmittal is also enclosed.

The Forest Service is very anxious for an approval of this survey at the earliest possible date.

I believe the field notes are adequate in their present form.

E. H. Kimmell

E:MTS

Survey Office  
P.O.Box 148  
Phoenix, Arizona

L EXCHANGE-Coconino, Kaibab,  
Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
7/31/56

December 3, 1956

Regional Forester,  
510 Second St., NW.  
Albuquerque, New Mexico

My dear Mr. Kennedy:

We are today in receipt of field notes of Exchange  
Survey No. 680.

Mr. Kimmell is on annual leave and will not return  
to the office until January 2nd. The notes will be checked as  
soon as possible after his return.

Sincerely yours,

for E.H.Kimmell  
Office Cadastral Engineer

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 8, 1956

Memorandum

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Special Instructions, Group 313, Arizona

Enclosed are the original and four copies of special instructions for the subject group for examination and approval.

Also enclosed is a copy of the letter from the Forest Service, dated July 31, 1956, requesting authority for making the survey, and a copy of my reply dated August 6, 1956.

I have made the instructions rather brief, with the idea that it would be better to wait until we know the actual conditions of the east four miles of the south boundary before setting up the method of surveying the subdivisational lines.

It is also my idea that we give no consideration to the east boundary, which is subject to rectification, as a controlling factor in making this survey.

Will you please advise me as to your opinion, and return the instructions for any changes or additions.

I am also uncertain as to whether the final plat should be prepared by the Forest Service. It seems to me that I should instruct the Forest Service, by letter, to furnish us final field notes in triplicate and a preliminary diagram showing courses, distances, and topography. The final plat to be prepared in your office.

I plan to have Charles Doak, mentioned in Mr. Shilling's letter, pick up iron posts in Phoenix.

E.H.Kimmell  
Office Cadastral Engineer

Enclosures

DEPT. OF THE INTERIOR  
BUR. OF LAND MGMT.

1956 AUG 10 AM 8 40

AREA OFFICE II  
SALT LAKE CITY, UTAH

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
AREA 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

*Cancelled*

SPECIAL INSTRUCTIONS

GROUP 313, ARIZONA

Providing for the survey of sections 33 and 35, T. 11 N., R. 10 E., Gila & Salt River Meridian, Arizona.

In the execution of the surveys included under this Group, the chief of field party is authorized and directed to make the described retracements, reestablishment of points of control, surveys, and resurveys hereinafter set out, and will be guided by the Manual of Surveying Instructions, the provisions of the following special instructions, and such supplemental instructions as may be issued pursuant to the report of any complication that may develop during the progress of the work or by reason of additional authorization.

Purpose of Survey

Authorization of this survey was requested by the Forest Service by letter dated July 31, 1956, to accommodate a proposed exchange of lands, and the survey is to be executed by the Forest Service.

History of Earlier Surveys

The south boundary of the township was surveyed by Campbell and Oakes in 1904. A corrective survey of the east half mile between sections 5 and 32, between sections 4 and 33, 3 and 34, and west half mile between sections 2 and 35, was made by Charles L. Campbell in 1907. These surveys are represented on the plat of T. 10 N., R. 10 E., approved December 11, 1908.

The east boundary of the township was surveyed by C. L. Campbell in 1904, and the east boundary of section 6 was retraced by Campbell in 1908.

The west boundary was surveyed by S. E. Blout in 1919.

The north boundary and subdivision of the township are unsurveyed.

The boundaries of patented Homestead Entry Survey No. 446 were surveyed by R.P.A. Johnson, Forest Service, in 1917.

#### Method and Order of Procedure

The south boundary of the township, which is not subject to rectification, may be defective in alinement or distances between corners and either condition will affect the method of establishing the boundaries of sections 33 and 35. A retracement of the east four miles of this line will therefore be made, before any subdivisional lines are surveyed, to verify the directions and lengths of lines throughout this portion of the boundary.

If any portion of these four miles is found to be defective in alinement or measurement, as defined in section 162 of the Manual of Surveying Instructions, the chief of party will contact the Survey Office in Phoenix for further instructions.

If the east four miles of the south boundary are found to be regular, the survey of sections 33 and 35 will be executed as shown on the attached diagram, and all corners will be of maximum control.

Records in this office indicate that Homestead Entry Survey No. 446 is partially located within section 33. Intersections of the line between sections 33 and 34 with the boundaries of this claim will be determined so that areas of adjoining lots may be calculated and shown on the final plat. If a calculation for closure of that portion of the claim located within section 33 shows an error of closure in excess of 1 to 640, retracements will be made of the boundary of the claim of such extent as may be required to obtain a closure within that limit.



All section and quarter-section corners will be monumented with appropriately marked regulation BLM iron posts.

GENERAL

The accuracy of the subdivisional survey will be tested by calculation for closures, and the errors must not exceed 1/640.

During the progress of the work, the engineer will prepare a course and distance sheet showing all bearings and lengths of lines and connections to any government triangulation stations or bench marks that may be made.

He will also prepare a topographic sketch, unless aerial photography is available for this purpose.

U. S. Coast and Geodetic Survey triangulation station "Huston" is located approximately one mile NNE of the NW. corner of section 35. If feasible, a connection will be made to this station.

There are no mineral surveys within the area to be surveyed.

MODIFICATIONS OF INSTRUCTIONS:

Should conditions arise that seem to require additional instructions, an interpretation of these instructions, or make these instructions inapplicable as prepared, the chief of party will submit a report of the situation at once with appropriate recommendations for office consideration.

ACCOMPANYING DATA

Copy of records of earlier cadastral surveys.

Description and position data for Coast and Geodetic Survey station "Huston".

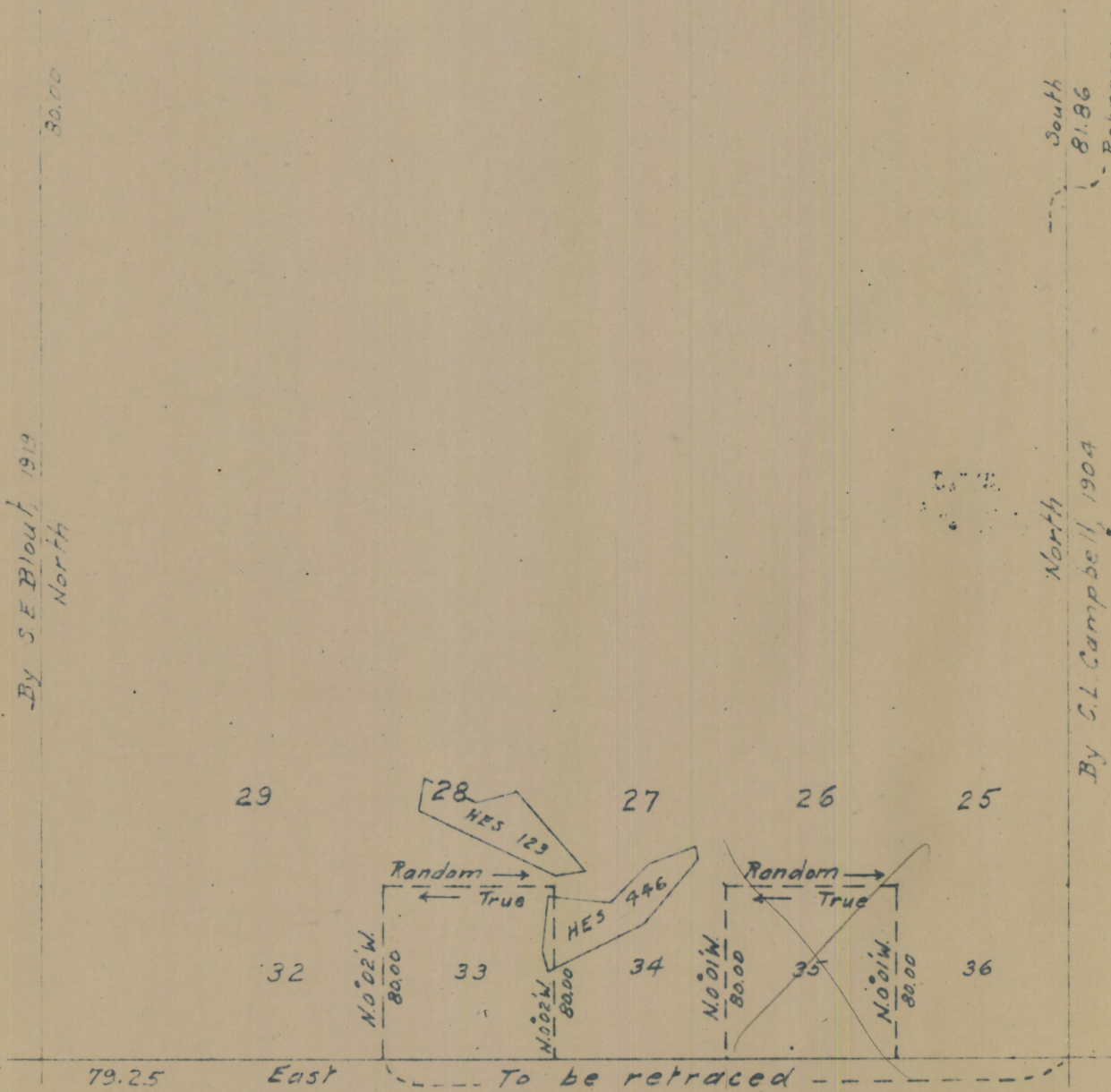
Cadastral Engineering Staff Officer

Approved:

DIAGRAM  
 TO ACCOMPANY SPECIAL INSTRUCTIONS  
 Group No. 313, Arizona

T. 11 N., R. 10 E., G. & S. R. Mer.

————— Previously surveyed  
 - - - - - To be surveyed



By S.E. Blount 1913  
North

South  
81.86  
Retracement by  
C.L. Campbell 1908

By C.L. Campbell 1904  
North

79.25

East

Surveyed by Campbell & Oakes, 1904-1907.

E:EMK  
Gr. 313, Ariz.

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 6, 1956

Regional Forester  
Forest Service  
510 Second St., NW  
Albuquerque, New Mexico

Attn: Mr. E. A. Schilling

My dear Mr. Schilling:

Your letter L Exchange-Coconino, Kaibab, Sitgreaves (Tonto) Norton, Daniel F. Jr. (Proposed) dated July 31, 1956, to the BLM State Supervisor, has been referred to this office.

In accordance with your request, special instructions will be prepared within a few days to provide for the survey of sections 33 and 35, T. 11 N., R. 10 E., G. & S.R. Meridian.

After the instructions have been approved by the Area Administrator, a copy will be mailed to you so that you may issue assignment instructions to one of your engineers to execute the survey.

Sincerely yours,

E.H. Kimmell  
Office Cadastral Engineer

Ev. 313



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SOUTHWESTERN REGION



510 SECOND ST., NW  
ALBUQUERQUE, NEW MEXICO

L  
EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
(Proposed)

DATE ROUTED 8-2 INITIALED July 31, 1956

1 STATE SUPV. ETZ

ADM. ASST. \_\_\_\_\_

RGE. & FOR. \_\_\_\_\_ ACTION \_\_\_\_\_

LANDS & M. N. \_\_\_\_\_

LAND OFFICE \_\_\_\_\_ COMMENTS \_\_\_\_\_

2 CAD. ENGR. \_\_\_\_\_

GRAZ. DIST. \_\_\_\_\_ INFORM \_\_\_\_\_

RETURN TO \_\_\_\_\_

Mr. E. I. Rowland  
State Supervisor  
Bureau of Land Management  
Room 233-A, Main Post Office Bldg.  
Phoenix, Arizona

Dear Mr. Rowland:

Reference is made to Mr. Watkins' recent conversation with you regarding a cadastral survey of Sections 33 and 35, T. 11 N., R. 10 E., an unsurveyed township.

*Change by Mr. Paul Charles, by telephone, 8/12/56*

As you know we are processing a land exchange, as above designated, involving the selection of these lands. It was your opinion, relayed to Mr. Watkins, that a survey would be necessary before patent could be issued to these lands. Please, therefore, consider this a formal request for such a survey.

We are anxious to process this case to the point of Title-Accepted-and-Patent-to-Issue by January 1. We are prepared to assign an engineer from this office with help from local forest officers to do this job under BIM instructions. In this manner we could complete this work easily this fall.

We would appreciate advice from you as to whether you wish to schedule the job for BIM completion or Forest Service completion following BIM instructions.

Sincerely yours,

FRED H. KENNEDY, Regional Forester

By *[Signature]*

P. S. We propose to assign Engineer Charles C. Doak to this job. Mr. Doak, a former BIM employee, was at one time assigned to this same type of work from the BIM Santa Fe office.

*[Signature]*

*Exchange Survey No. 680 Tonto National Forest  
Situating in Township 11 North, Range 10 East, Gila & Salt River Meridian*

DIRECTIONS.—1. Carry out the area in acres to three decimals, and all other calculations to two decimals only.  
2. In balancing the latitudes and departures do not obliterate or change the original figures, but put the corrections above in red ink. Do not change the footing of the original figures, but put the corrected footing below in red ink.  
3. See Chapter IX, Manual of 1930, for instructions relative to balancing the closing error, computation of areas, and use of total latitudes and departures.

TABLING AND CALCULATIONS OF *Exchange Survey No. 680*

No.	COURSE	DISTANCE		LATITUDES		DEPARTURES		DOUBLE MERIDIAN DISTANCE	NORTH AREAS	SOUTH AREAS	TOTALS	
		NORTH	SOUTH	EAST	WEST	LATITUDE	DEPARTURE					
AP#1	North	8000	7986					32038	2558554			
AP#2	West	2412	0000			2412		29628				
AP#3	S 40° 48' W	2094	1585			1368		25852	410271			
AP#4	S 64° 17' W	5064	2022			4564		19928	438814			
AP#5	N 12° 50' W	924	00			205		15166	136494			
AP#6	N 7° 21' E	2572	47			329		15294	389538			
AP#7	S 84° 00' E	2898	2551			2882		18511	56643			
AP#8	N 45° 27' E	932	654			664		22061	144058			
AP#9	West	11336				11336		11400				
AP#10	S 0° 19' W	7982	7982			37		37	2956			
AP#11	East	16000				16000		16019				
		60215	12106	19875	19927	19875			3228644	908684		
			12067	19875	19875	19875			908684			
			39		52				2319960 ÷ 2 =			
			12086	19901	19901				1159980 sq. ch. ÷ 10 =			
				19901	19901				115998			Aeres

*Error in Lat = 1:1544  
Error in Dep = 1:1158*

*Computed By C.C. Doak  
Checked By J.B. Sanchez jr.*



DIRECTIONS.—1. Carry out the area in acres to three decimals, and all other calculations to two decimals only.  
2. In balancing the latitudes and departures do not obliterate or change the original figures, but put the corrections above in red ink. Do not change the footing of the original figures, but put the corrected footing below in red ink.  
3. See Chapter IX, Manual of 1947, for instructions relative to balancing the closing error, computation of areas, and use of total latitudes and departures.

## TABLING AND CALCULATIONS OF

*Ex. Sur. No. 680*

No.	COURSE	DISTANCE		LATITUDES		DEPARTURES		DOUBLE MERIDIAN DISTANCE	NORTH AREAS	SOUTH AREAS	TOTALS	
		NORTH	SOUTH	EAST	WEST	LATITUDE	DEPARTURE					
		7995				07		32033	2561038			
			02			2410		29630		593		
			1586			1366		25854		410044		
			2200			4558		19930		438460		
		900				204		15168	136512			
		2549					331	15295	389870			
			305			2885		18511		56459		
		653				665		22061	144058			
			07				11326	11400		798		
			7987			37		37		2955		
			12010			16013		16013		1601		
		12097				19901			3231478			
			12097			19901			910910	910910		
									2320568			
									1160284			



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE  
SOUTHWESTERN REGION



510 SECOND ST., NW  
ALBUQUERQUE, NEW MEXICO

ADDRESS REPLY TO  
REGIONAL FORESTER  
AND REFER TO

E  
SURVEYS  
Cadastral

September 14, 1956

DATE ROUTED 9-19 INITIALED FOR: ETC

1 STATE SUPV. \_\_\_\_\_

ADM. ASST. \_\_\_\_\_

RGE. & FOR. \_\_\_\_\_ ACTION \_\_\_\_\_

LANDS & MIN. \_\_\_\_\_

LAND OFFICE \_\_\_\_\_ COMMENTS \_\_\_\_\_

2 CAD. ENGR. \_\_\_\_\_

GRAZ. DIST. \_\_\_\_\_ INFORM \_\_\_\_\_

RETURN TO \_\_\_\_\_

Mr. E.H. Kimmel  
Office Cadastral Engineer  
Bureau of Land Management  
233A Main Post Office Bldg.  
Phoenix, Arizona

Dear Mr. Kimmel:

Reference is made to your letter of September 4.

Mr. Doak plans to be in your office at 8:00 A.M., September 26,  
to discuss the work of Exchange Survey #680.

It will be appreciated if you could furnish Mr. Doak with copies  
of plat for H.E.S. #123, description of corner 1 of H.E.S. #123,  
plat and field notes for H.E.S. #446. This office will furnish  
him with complete data for C&GS station "HUSTON" and other mat-  
erial and information.

Very truly yours,

E. R. HUBER  
Assistant Regional Forester  
Division of Engineering

By L.H. LaFaver Acting



E:EHK

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 10, 1956

Mr. Wendell G. Hall  
Office Cadastral Engineer  
Santa Fe, New Mexico

My dear Wendell:

In the final field notes for the resurveys of Ts. 29 and 30 N., R. 9 W., N.M.P. Mer., I believe that I used some special statement to the effect that the surveys were performed by parties furnished by the El Paso Natural Gas Company, under my supervision.

This showing may appear on the cover sheet, on the first page, and on the final certificate, if such is the case will you please send me photostat copies in duplicate of the three sheets, from one book only. Reductions will suffice.

I will want to send one copy to our Area Engineer.

Am planning a job to be executed by the Forest Service, probably Charles Doak, and Mr. Petersen is in doubt as to how it might be handled. I think that I can supervise the work and make it official.

Sincerely yours,

E.H.Kimmell  
Office Cadastral Engineer

DIRECTIONS.—1. Carry out the area in acres to three decimals, and all other calculations to two decimals only.  
 2. In balancing the latitudes and departures do not obliterate or change the original figures, but put the corrections above in red ink. Do not change the footing of the original figures, but put the corrected footing below in red ink.  
 3. See Chapter IX, Manual of 1930, for instructions relative to balancing the closing error, computation of areas, and use of total latitudes and departures.

# TABLING AND CALCULATIONS OF

Correct No 20 River boundary to "See 348" - with Thomas's Entry

No.	COURSE	DISTANCE	LATITUDES		DEPARTURES		DOUBLE MERIDIAN DISTANCE	NORTH AREAS	SOUTH AREAS	TOTALS	
			NORTH	SOUTH	EAST	WEST				LATITUDE	DEPARTURE
	N. 0° 9' E.	6397	6397.8		174		174				
	N. 35° 30' E.	1357	6397.0 1104.9 1104.9		788.1 788.0 1070.33	8229	1113.22				
	S. 45° 35' E.	14983		1048.44 458.40 488.47	1070.33 1070.19	123143	909222		129108047		
	S. 35° 30' W.	6000			348.36 348.42 802.52	195340		95404056			
	N. 45° 35' W.	11237	786.57 786.44 1536.5		1536.58	80252	631123816				
	<i>John Run No 20 Boundary - 20.388</i>										
				18.416 1.972 20.388				43560		18.407 acres	
	<i>Balance Area 18.416 acres.</i>										
	N. 35° 30' E.	4643	3778.5 3780.0		2695.0 2696.2	26950	10183058				
	S. 0° 9' W.	6397		6399.0 6397.0	184 168	53716		34372868			
	N. 45° 35' W.	3746	2620.5 2621.7 6399.0		2695.0	26766	7014030				
	<i>Balance Area 1.972</i>										
								43560		1.971 acres	



E:EHK  
Gr. 313, Ariz.

State Office  
233A Main Post Office Building  
Phoenix, Arizona

August 14, 1956

Regional Forester  
Forest Service  
510 Second St., NW.  
Albuquerque, New Mexico

Attn: Mr. E. A. Schilling

My dear Mr. Schilling:

Reference is to L Exchange-Coconino, Kaibab, Sitgreaves  
(Tonto) Norton, Daniel F. Jr. (Proposed).

I am enclosing a copy of a memorandum from the Area  
Cadastral Engineer, dated August 10, 1956, in regard to the proposed  
survey to accommodate the subject exchange, and listing three differ-  
ent methods by which a survey may be accomplished.

Under the first method it does not appear that the survey  
could be executed this winter, due to prior commitments. Our first  
priority being given to a resurvey of T. 17 N., R. 5 E., by request  
of the Forest Service.

Method No. 2, as would also apply to No. 1, will require  
a retracement and possible resurvey of the east four miles of the  
south boundary of T. 11 N., R. 10 E., before any interior section  
lines could be surveyed.

Mr. Perl Charles advised me yesterday afternoon that you  
desire a survey of secs. 33 and 34 of T. 11 N., R. 10 E., instead  
of secs. 33 and 35 as requested in your letter dated July 31, 1956.

If you should elect to make an exchange survey, as proposed  
under No. 3, you might furnish me a diagram, preferably a tracing so  
that we may prepare several copies, showing the approximate position,  
with bearings and lengths of lines, to accompany the instructions  
which I will prepare for approval by the Area Administrator.

Sincerely yours,

E.H. Kimmell  
Office Cadastral Engineer

Enc.

F.X.  
013393

X copy

L  
EXCHANGE-Coconino, Kaibab, Sitgreaves (Tonto)  
Norton, Daniel F. Jr.  
7/31/56

November 28, 1956

Office Cadastral Engineer  
State Office  
Bureau of Land Management  
1305 North Central Avenue  
Phoenix, Arizona

Dear Mr. Kimmel:

Reference is made to Special Instructions, Exchange Survey No. 680 dated August 31, 1956 by Cadastral Engineering Staff Officer Petersen and approved by Area Administrator Nelson.

Attached in quadruplicate are notarized Field Notes of Exchange Survey No. 680 by Cartographic Survey Aide Charles C. Doak. Attached is a single pen and ink copy of Tabling and Calculations of Exchange Survey No. 680. Under separate cover (mailing tube) we are sending you the original tracing of a Plat of Exchange Survey 680.

We have submitted this exchange case to Manager Britt for conditional approval. In order that such approval not be unduly delayed we would appreciate a reasonably early review of these Field Notes and Plat, and approval if appropriate.

Sincerely yours,

FRED H. KENNEDY, Regional Forester

By /s/ A. Allan McCutchen

Certified mail

E:EHK

January 4, 1957.

MEMORANDUM

To: Area Cadastral Engineer  
From: Office Cadastral Engineer, Phoenix  
Subject: Exchange Survey No. 680

Enclosed are the field notes, in quadruplicate, and a diagram for preparing final plat of Exchange Survey No. 280, Arizona.

The field notes and tracing were received from the Forest Service on December 3, 1956, during my leave. A copy of their letter of transmittal is also enclosed.

The Forest Service is very anxious for an approval of this survey at the earliest possible date.

I believe the field notes are adequate in their present form.

E. H. Kimmell

E:GWJ



*X copy*

Area 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

February 4, 1957

DATE ROUTED..... INIT'S FOR;

Certified Mail

.....	STATE SUPV.	.....	<i>EW</i>
.....	ADM. ASST.	.....	
.....	ROC. & FOR.	.....	ACTION.....
.....	LANDS & M.N.	.....	
.....	LAND OFFICE	.....	COMMENTS.....
.....	CAD. ENGR.	.....	
.....	GRAZ. DIST.	.....	INFORM.....
.....	RETURN TO	.....	

**Memorandum**

To: Director  
From: Area Administrator, Area 2  
Subject: Transmittal of survey returns Exchange Survey No. 680, Arizona

Transmitted herewith by certified mail for examination and acceptance are the returns of Exchange Survey No. 680, in unsurveyed T. 11 N., R. 10 E., G. & S. R. M., Arizona, consisting of the original plat and field notes in quadruplicate. This exchange survey was executed by Charles C. Doak, Cartographic Survey Aide, of the U. S. Forest Service.

There is also attached sheet showing suggested memorandum to be placed by you upon the plat.

For the Area Administrator

Leo M. Petersen  
Cadastral Engineering Staff Officer

Attachments

Accepted:

Copies to: E. G. Harrington, Washington, D.C.  
SQ-Arizona ✓  
Area Drafting Office  
Area Administrator

X copy

Area II  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 10, 1956

## Memorandum

To: Office Cadastral Engineer E. H. Kimmell  
Through BLM State Supervisor for Arizona

From: Area Cadastral Engineer

Subject: Proposed Arizona Group 313

After we finished our telephone conversation this morning concerning the subject group, I contacted Mr. Harrington in Washington to obtain his views with respect to the matter. After discussing it at length the following represents my views.

1. The survey could be made by one of our field engineers under the same administrative and technical procedures followed in surveys of any other type for the Bureau of Land Management. Should this procedure be employed we could do the work not as an exchange survey but as a group survey. That is, our survey would consist of the identification of the boundaries of the two sections involved with the preparation of regular field notes and plats. As you know our field schedules are pretty well made up for Arizona this winter. The first work to be undertaken is on Group 312, also a Forest request, to be followed by surveys on Groups 307, 306, 297, 299, and 302.

2. This survey could be made by a crew supplied by the Forest Service if supervised by a BLM cadastral engineer. If this choice were selected, I plan on you being the BLM supervisor. Field notes of the survey would be certified by you stating substantially that you had supervised the work executed by engineering employees of the Forest Service with the names of such employees being listed as assistants on the reverse of the form. Included in this procedure would be the preparation of field notes and plats by the BLM.

3. The work could be done, returns submitted, including plats and field notes by an engineer of the Forest Service provided the work was not identified as an



extension of the public surveys. The Forest Service has no authority to take such action. What could be done is that the same lines could be run as provided for in the preliminary instructions you have prepared for the group but the areas enclosed not be designated as sections but instead as areas of Exchange Survey No. \_\_\_\_\_ with corners of the area marked in numerical sequence as corners of the exchange survey, for instance, 1-ES-999. Because no one but the BLM has authority to set its regulation iron posts, the Forest Service would have to supply some other type of monument.

In none of the above alternate proposals would the Forest Service be required to reimburse the BLM for costs.

You may notify the Forest Service officials of the foregoing opinions and obtain from them their desires as to which method they prefer to follow. When such information reaches us, you may then proceed with any revisions required in the proposed special instructions which reached me with your memorandum of August 8, 1956, and which are being returned herewith.

If we are to do the work with our own crew or if the Forest Service is to supply the crew and BLM the supervision, the only change in the instructions that I see necessary would be to revise the paragraph appearing under "Purpose of Survey." If because of urgency of time the Forest Service wishes to execute the survey with its own personnel, the instructions will have to be revised to the extent of removing the group number, inserting the proper exchange survey number or numbers, and eliminating all reference to sections in the area to be surveyed.

I am convinced the type of forest homestead surveys and an exchange survey discussed on page 519 of our survey manual and in GLO Circular 235 contemplate only surveys that are irregular in shape and not surveys extending the rectangular survey net on a section or a township basis.

If the Forest Service elects to make the survey with its own personnel as an exchange survey it seems to me that it could include the exact area in which it is concerned rather than square 640-acre tracts.

Leo M. Petersen  
Area Cadastral Engineer

In Triplicate  
Attachments

Copy to: E. G. Harrington, Washington, D. C. (via AIR MAIL)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
AREA 2  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 31, 1956

SPECIAL INSTRUCTIONS

EXCHANGE SURVEY NO. 680

In Township 11 North, Range 10 East  
Gila and Salt River Meridian, Arizona

Purpose of Survey

A request for these special instructions was made by the Assistant Regional Forester, Division of Lands, Forest Service, Albuquerque, New Mexico, by letter dated August 24, 1956. The survey is to be executed by the Forest Service to accommodate a land exchange with Daniel F. Norton, Jr.

The chief of field party is authorized and directed to make the described survey and any necessary retracements and reestablishment of control points, and will be guided by the Manual of Surveying Instructions and the provisions of these special instructions.

History of Earlier Surveys

The south boundary of T. 11 N., R. 10 E., was surveyed by Campbell and Oakes in 1904. A corrective survey of the east half mile between sections 5 and 32, between 4 and 33, 3 and 34, and west half mile between sections 2 and 35, was made by Charles L. Campbell in 1907. These surveys are represented on the plat of T. 10 N., R. 10 E., approved December 11, 1908.

The boundaries of patented Homestead Entry Survey No. 446 were surveyed by R.P.A. Johnson, Forest Service, in 1917.

### Method and Order of Procedure

The tract to be surveyed will be designated as Exchange Survey No. 680 and the boundaries will be established substantially as delineated in red on the attached diagram which is made a part of these instructions.

The direction of lines will be referred to the true meridian, to be established by one of the methods described in Chapter II of the Manual of Surveying Instructions, or the bearings may be based on azimuth carried by sustained angulation from U.S. Coast and Geodetic Survey triangulation station "Huston".

Measurements will be made in chain units reduced to horizontal distances, in accordance with sections 15 and 16 of the Manual.

### Monumentation

All angle points on the boundaries which have not previously been monumented will be monumented with Forest Service brass tablets, or iron posts with brass caps, or with stones, as provided for in Section 244 of the Manual, appropriately marked. For example, a stone monument at Angle Point No. 2 should be marked with a chisel: 2-ES-680. A brass capped monument at Angle Point No. 3 should be marked

HES / AP3  
446 / ES 680  
1956

Intermediate stations will be monumented as witness points on the east, north, and west boundaries so that distances between monuments will not exceed 45.00 chains, as provided for in section 472 of the Manual.

All corners will be referenced by bearing trees, mound of stones, or bearing objects, as outlined in Sections 316 to 347 of the Manual.

The survey will be initiated at the corner of secs. 2, 3, 34, and 35, on the south boundary of T. 11 N., R. 10 E., which will be designated as Angle Point No. 1, without any additional marking on the original monument.

From Angle Point No. 2 the boundary will be surveyed West to an intersection with the boundary of Homestead Entry Survey No. 446, which point will be monumented as Angle Point No. 3. The line will be extended on a blank line across the H.E.S. to an intersection with the opposite boundary of the H.E.S. where a monument will be established for Angle Point No. 9. The true bearings and distances will be determined from Angle Points 3 and 9 to the H.E.S. corners on either side of the line.

It will not be necessary to retrace or resurvey other portions of the boundary of H.E.S. No. 446 unless it is required due to error in closure or to reestablish lost corners.

The survey of the boundary of the Exchange Survey will then be resumed West to the point for Angle Point No. 10, 160.00 chains west of Angle Point No. 2, thence southerly to an intersection with the corner of sections 4, 5, 32, and 33, which will be designated as Angle Point No. 11, without additional markings on the original monument.

A retracement or resurvey of the south boundaries of sections 33 and 34 will not be required unless it is necessary on account of an excessive closing error, or to reestablish lost corners.

A connection should be made from the first witness point west of Angle Point 9 to Corner No. 1 of H.E.S. No. 123, to make certain that there be no conflict with this claim. From previous records this corner is calculated to be approximately 4 chains north and 79 chains west of the point for Angle Point No. 2 of the Exchange Survey. This connection should be entered in the final returns.

#### General

The allowable limit in closing error for either latitude or departure is expressed by the ratio of 1:640, and before leaving the field the engineer should make certain, by computation, that this limit is not exceeded.

The engineer will also prepare a topographic sketch during the progress of the field work, to be used in the preparation of the final plat, unless aerial photography is available for this purpose.

A connection will be made, if feasible, to U.S.Coast and Geodetic Survey triangulation station "Huston" which is located approximately one mile NNE of the point for Angle Point No. 2 of this survey; also to any other government triangulation stations, or bench marks, that may be found in the vicinity of the work.

There are no mineral surveys within the area to be surveyed.

The Forest Service will prepare and submit the final returns consisting of a plat, the outside dimensions to be 16 7/8 x 21 inches, and the field notes in quadruplicate.

Modification of Instructions:

Should conditions arise that seem to require additional instructions, an interpretation of these instructions, or make these instructions inapplicable as prepared, the chief of party will submit a report of the situation at once, with appropriate recommendations for office consideration, to the Survey Office in Phoenix.

Accompanying data

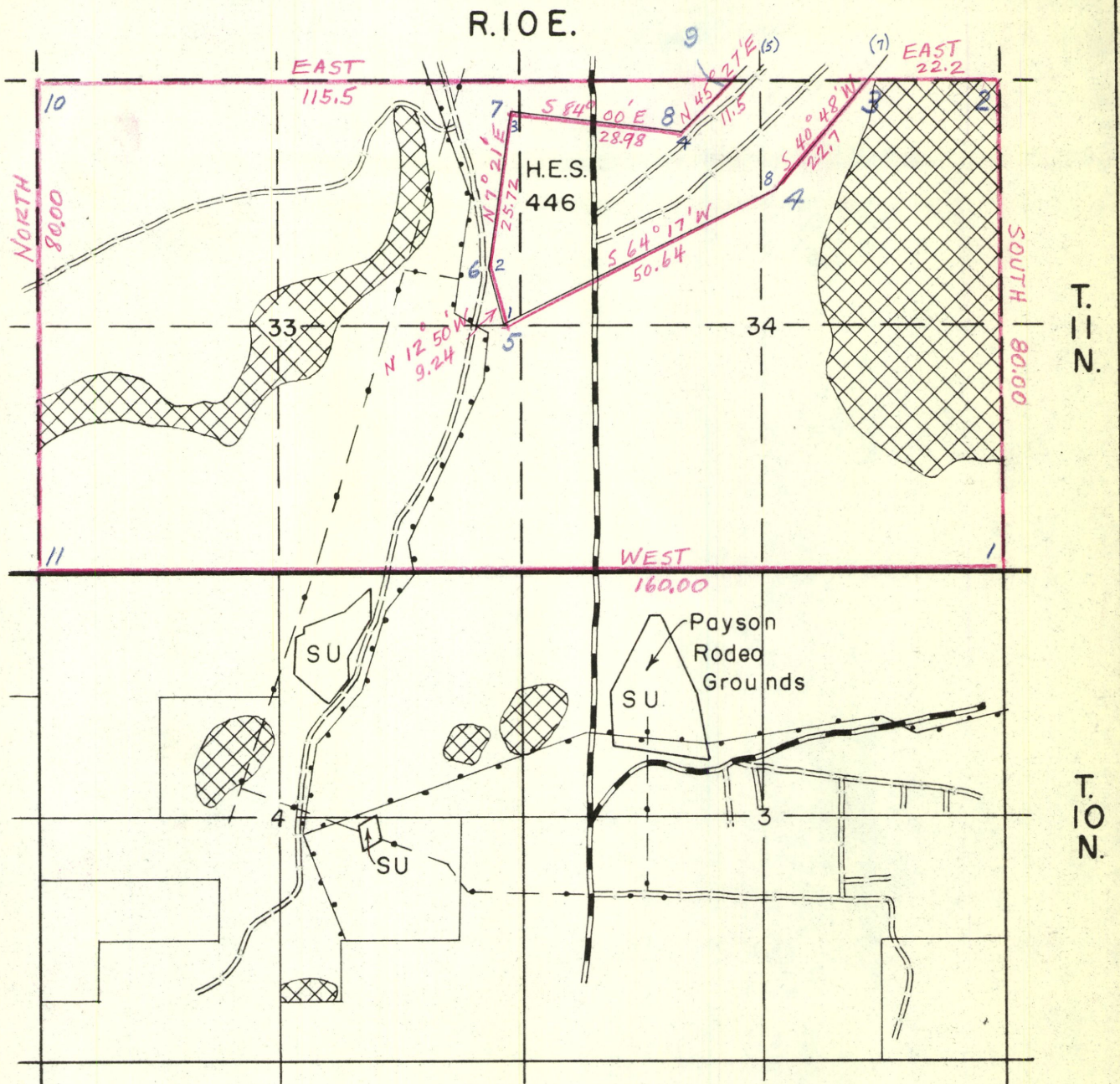
Copy of records of earlier cadastral surveys.

Description and position data for U.S.Coast and Geodetic Survey triangulation station "Huston".

s/ *Leo M. Petersen*  
Cadastral Engineering Staff Officer

Approved: *August 31, 1956*

s/ *Neal D. Nelson*  
Area Administrator



**L-EXCHANGE, TONTO**  
 (Sitgreaves, Coconino, Kaibab)  
 Norton, Daniel F. Jr. (7/31/56)  
 Scale: 3" = 1 Mile

**LEGEND**

- Selected land
- Wasteland
- Power line
- Telephone line

Area II  
Post Office Box No. 659  
Salt Lake City 10, Utah

August 31, 1956

Memorandum

To: Director

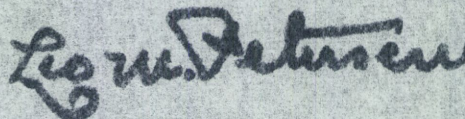
From: Area Administrator, Area II

Subject: Transmitting special instructions, Exchange Survey  
No. 680, Arizona

Transmitted herewith for the cadastral engineering files of your office is the duplicate copy of special instructions dated and approved August 31, 1956, providing for Exchange Survey No. 680 in unsurveyed Township 11 North, Range 10 East, G&SRM, Arizona. This survey is to be executed by a surveyor of the Forest Service to accomodate a Forest land exchange with Daniel F. Norton, Jr.

This survey was discussed by telephone August 10, 1956, between Mr. Harrington of your staff and Mr. Petersen of Area II, and pursuant to the agreements reached in this telephone conversation, Mr. Petersen forwarded a memorandum to Arizona Office Cadastral Engineer Kimmell dated August 10 on the subject, "Proposed Arizona Group 313". A copy of this memorandum was sent to Mr. Harrington. It set forth three alternate methods under which the survey could be executed. The Regional Forester has advised us that due to the urgency of completing the survey, he recommends following the third proposal. The attached special instructions were prepared on that basis.

For the Area Administrator



Leo M. Petersen  
Cadastral Engineering Staff Officer

Attachment

Copies to: SO-Arizona (w/orig. and 2 copies) ✓  
E. G. Harrington, Washington, D. C.  
Area Drafting Office

DIAGRAM  
TO ACCOMPANY SPECIAL INSTRUCTIONS

Group No. 313, Arizona

T. 11 N., R. 10 E., G. & S. R. Mer.

————— Previously surveyed  
----- To be surveyed

