

DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE

February 14, 1924.

Mr. Frank S. Spofford,  
Assistant Supervisor of Surveys,  
Olympia, Washington.

Dear Sir:

Your letter of January 9, 1924, and previous correspondence with Mr. Robert A. Farmer, U. S. Cadastral Engineer, regarding the establishment of the line between Secs. 3 and 4, T. 21 N., R. 6 E., Washington, across an island, has been referred to me for consideration and advice.

The corner of Secs. 3, 4, 9 and 10 of this township falls in Lake Sawyer and naturally the point for that corner can not be occupied. The original record of the survey of this township, however, contains the measurements from the meander corners on the section lines in four directions from this corner to the point for the corner, and with this information at hand it is necessary that the point for the section corner be determined by proportional measurement in accordance with the original record, using the measurements in all four directions from the corner.

To accomplish this proportion, the four meander corners, if identified, may be used as a basis for the proportion. It is not necessary to make additional retracements of the section boundaries in order to determine the positions of the quarter section or section corners for this proportion.

I have noted the statement in your letter to Mr. Farmer in which you state that meander corners can

not be used as a basis for the location, by proportional measurement, of a section or quarter section corner. This assumption appears to me to be incorrect and not supported by the instructions of the Manual. Sec. 374 of the Manual provides that corners on standard lines are to be proportioned between standard quarter section, section or closing corners but that meander corners are not to be used as a basis for the proportional reestablishment of standard corners. This prohibition does not apply to corners within a township and it is unreasonable to assume that such corners can not be used as a basis for the reestablishment of other corners set at the same time.

From the correspondence which has been referred to me I am unable to judge just how much of the field work in connection with the survey of this island has been accomplished but I am of the opinion that the section line should be established across the island in accordance with the foregoing suggestions. Apparently the island is not very inaccessible and the cost of executing additional field work, if necessary, would not be prohibitive.

Very respectfully,

(Signed) Frank M. Johnson  
Supervisor of Surveys.

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

Washington, D. C., February 25, 1924.

Mr. Frank S. Spofford,  
Assistant Supervisor of Surveys,  
Federal Building,  
Boise, Idaho.

My dear Sir:

With reference to your letter of the 18th inst. with which you inclosed copies of office letters dated January 7 and February 25, 1916, to the Surveyor General at Portland, Oregon, regarding the adoption of meander corners in proportioning for the reestablishment of other corners I will state that as these letters were written before the publication of the new Manual the instructions contained therein have been superseded by the instructions of the Manual.

I must admit that the instructions in the Manual are not extremely specific. Sec. 374 provides that meander corners shall not be adopted in the restoration of other corners on meander lines.

Sec. 375 provides that  
"All lost exterior section and quarter section corners will be restored by single proportionate measurement between the nearest identified corners on opposite sides of the missing corner."

It is apparent that here meander corners can be adopted in the reestablishment of section or quarter section corners.

Sec. 376 provides that all lost interior quarter section corners will be reestablished by single pro-

portionate measurement between the adjoining section corners.

While instructions may have been issued to the contrary in some specific cases it is generally recognized that meander corners have the same status as any other corner and when identified must be adopted in the reestablishment of section or quarter section corners.

Very respectfully,

(Signature) Frank M. Johnson

Supervisor of Surveys.

COPY

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE

WASHINGTON June 12, 1924.

IN REPLY PLEASE REFER TO

1140778 "E" TCH

: Removal of survey  
: monuments.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Denver, Colorado.

Sir:

I am in receipt of your letter of May 29, 1924, transmitting for consideration a communication from Mr. Leland Perry of Cedar City, Utah, received by you from the Chief of Field Division at Salt Lake City, relative to securing authority for the removal of the corner of Secs. 10, 11, 14 and 15, T. 36 S., R. 11 W., S. L. M., Utah, which is situated in the tennis court of one William W. Butler. You refer to the provision heretofore made for the witnessing and removal of public land corners that fall within such public enterprises as state road construction, but as the case here presented involves an enterprise that is strictly private in character, you express considerable doubt as to the merits of the case, and as similar situations

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have frequently arisen of late, you ask for an opinion regarding the whole subject in general.

The willful destruction of the corners of the public land surveys is prohibited by Sec. 57 of the Penal Code of the United States (35 Stat., 1088), which provides that:

"Whoever shall willfully destroy, deface, change, or remove to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or shall willfully cut down any witness tree or any tree blazed to mark the line of a Government survey, or shall willfully deface, change, or remove any monument or bench mark of any Government survey, shall be fined not more than \$250, or imprisoned not more than six months, or both."

There is, however, full and complete authority vested in the surveying service of the General Land Office by Sec. 543 of the Revised Statutes, the various resurvey acts and the Manual of Surveying Instructions to destroy, change or remove, any corner of the public land surveys to which no legal rights have attached as occasion may require. The general attitude of this office towards the preservation of the position of its public land corners and of the

1140778 "E" TCH

monuments themselves that are liable to be covered up or destroyed in the carrying out of some enterprises authorized by law is indicated by Secs. 19 and 20 of the Regulations concerning Right of Way over Public Lands and Reservations for Canals, Ditches, and Reservoirs, approved June 6, 1908, which read as follows:

19. Witness monuments for destroyed public survey corners.---Whenever a corner of the public survey will be covered by earth or water, or otherwise rendered useless, marked monuments (one on each side of destroyed corner) must be set on each township or section line passing through, or one on each line terminating at, said corner. These monuments must comply with the requirements for witness corners of the Manual of Surveying Instructions issued by the General Land Office, and must be at such distance from the works as to be safe from interference during the construction and operation of the same. If two or more consecutive corners on the same line are destroyed, the monuments shall be set as required in the Manual for the nearest corner on the line to be covered.

20. Method of establishing witness monuments.---The line on which such monument is set will be determined by running a random line from the corner to be destroyed to the first existing corner on the line to be marked by the monument, a temporary mark being set on the random line at the distance of the proposed monument. If the random line strikes the

1140778 "E" TCH

corner run to, the monument will be established at the place marked; if the random line passes to one side of the corner, the north and south or east and west distance to it will be measured and the true course calculated. The proper correction of the temporary mark will then be computed and a permanent monument set in the proper place. The field notes for the surveys establishing the monuments must be in duplicate and separate from those of the canal or reservoir, and must be certified by the surveyor under oath. They must comply with the form of field notes prescribed in the Manual of Surveying Instructions issued by the General Land Office.

Furthermore, this office, in letter of March 1, 1919, addressed to the U. S. Surveyor General for Montana, gave its approval to certain suggestions offered by the State Highway Commission of Montana, as to the preservation of the public land corners which may be in danger by the construction of a highway. The suggestions as approved are as follows:

METHOD OF WITNESSING CORNERS WHICH  
WOULD BE DESTROYED BY  
HIGHWAY CONSTRUCTION.

Corners to be witnessed by 4 monuments so that original point can be located by intersection alone.

Monuments to be of iron pipe of 1 inch or more in diameter and at least 30 inches long driven so that top is about 3 inches above ground surface.



1140778 "E" TCH

Guard stakes with description of corner on one side and distance and angle on the other side to be driven at witness monuments.

The following disposition is to be made of the original corner:

When the corner is in fill; cover corner and record in notes depth of fill at that point.

When corner is in cut; reset corner from witness monuments, placing same at least 12 inches below road surface, and record depth in notes.

Notes, accompanied by sketch, are to be filed in the office of the County Clerk and Recorder and a copy of same to be sent to the office of the Surveyor General in Helena.

Herewith sketch showing various conditions and method of witnessing.

The procedure has since been carried into other surveying districts, notably Wyoming.

It might be stated as a general principle that when any project of a Governmental or public character or under authority of Federal law, endangers the safety of a public land corner and the requirements above referred to are faithfully carried out the procedure will not, in the opinion of this office, con-

1140778 "E" TCH

stitute such an offence as is contemplated by said Sec. 57 of the Penal Code. It should be clearly understood, however, that since the law makes it a crime to willfully destroy, deface, change or remove a corner of the official surveys this office is without power to authorize the commission of the offence, or to excuse or condone the offence when once committed. It here merely expresses the opinion that the procedure above outlined involved no act cognizable under the law above quoted.

Coming now to the purely private undertaking, we find nothing to sanction, on the part of this office, any act that would tend to endanger the safety of our public land monuments, in their original position and form, nor is this office disposed to make any general provision for the witnessing of corners so endangered, that would be suggestive of a purpose to sanction such action. Its advice to individuals interested in private projects is to commit no act that would tend to work a violation of the statute.

As to what would constitute a violation of the

1140778 "E" TCH

statute it should be noted that the term "willful" when used in imposing a penalty for a criminal act, means not merely voluntary, but with a bad purpose. In *Spurr vs. United States*, 174 U. S., 728, the Supreme Court stated that:

The significance of the word 'wilful' in criminal statutes has been considered by this court. In *Felton v. United States*, 96 U. S. 699, 702, it was said: 'Doing or omitting to do a thing knowing and wilfully, implies not only a knowledge of the thing, but a determination with a bad intent to do it or to omit doing it. The word 'wilfully', says Chief Justice Shaw, 'in the ordinary sense in which it is used in statutes, means not merely 'voluntarily', but with a bad purpose.' 20 Pick. (Mass.) 220. 'It is frequently understood', says Bishop, 'as signifying an evil intent without justifiable excuse.' *Crim. Law*, vol. 1, Sec. 428.

Furthermore, the statute by specifying the various acts prohibited, namely, to destroy, deface, change or remove, excluded all others. Therefore, any act looking to the perpetuation of the position of a corner, either by securing the original monuments in its true locus or in establishing witness corners as an accessory should be commended rather than condemned.

1140778 "E" TCH

The corner in question, as set in 1870 by Joseph Gorlinski, D. S., is described as "a white sandstone 15 x 8 x 5". The maintenance of such a corner in a tennis court, even with the exercise of the greatest care, will be difficult, to say the least. It would therefore appear that if the stone is lowered to the surface, or just below the surface of the ground in its original position, witness monuments with guard stakes established as outlined above for road construction work, and an appropriate record under oath filed with the U. S. Surveyor General's office and this office there would be neither a destroying, defacing, changing or removing of the original monument, but rather a securing and preserving of the monument in its original position and substance.

After all, this office is not the guardian of the public land surveys in the field. The preservation of the monuments is a matter resting largely in the hands of the community in which they are located and however much we might be interested in the matter, we can only express an opinion especially in these private enterprises where public land corners are involved.

114C778 "E" TCH

The foregoing reflects the attitude of this office to the subject in general and, it is believed, will answer the requirements of a reply to Mr. Perry's letter which is returned for that purpose.

Very respectfully,

(Signed) GEO. R. WICKHAM,

Assistant Commissioner.

ADDRES. ONLY THE COMMISSIONER OF THE GENERAL LAND OFFICE

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

WASHINGTON

June 13, 1924.

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200H  
IN REPLY PLEASE REFER TO

1141493 "E" TCH 14

: Identification of corners  
for aerial photograph.  
Naval oil reserves 1 and 2.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Denver, Colorado.

Sir:

The inclosed copy of a letter dated June 9, 1924, from the Director of the Geological Survey asking for the assistance of the Surveying Service in identifying and flagging certain corners of the public land surveys to be picked up by aerial photographs of Naval oil reserves Nos. 1 and 2, California, to be made by the Navy Department, and of office letter "E" of even date herewith, authorizing the Surveyor General to prepare special instructions for the work are self-explanatory.

It is the desire of the Geological Survey that the corners be flagged at an early date so that the aerial photographic service of the Navy Department can construct appropriate markers or signals at the corner positions so

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that they will register in the photographs, said signals to be erected just before the aviator makes his flight.

Mr. G. W. Holland of the Geological Survey will confer with the Surveyor General within the next 10 days and it might be well to have Mr. A. C. Horton, Jr., Assistant Supervisor of Surveys confer with Admiral H. H. Rousseau of Los Angeles concerning the details of the undertaking.

Very respectfully,

  
Assistant Commissioner.

ADDRESS OF THE COMMISSIONER OF THE GENERAL LAND OFF.

1 x Johnson  
1 x Horton

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

WASHINGTON

June 13, 1924.

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IN REPLY PLEASE REFER TO

1141493 "E" TCH

: Identification of corners  
for aerial photograph.  
Naval oil reserves 1 and 2.

U. S. Surveyor General,

San Francisco, California.

Sir:

As indicated by the inclosed copy of a letter, dated June 9, 1924, from the Director, the Geological Survey is planning to make, with the cooperation of the Navy Department, a detailed map of naval oil reserves Nos. 1 and 2, situated in T. 30 S., Rs. 22, 23 and 24 E., T. 31 S., Rs. 23 and 24 E., and T. 32 S., Rs. 23, 24 and 25 E., M. D. L., California. In securing the data for such a map hydroplanes will be used in making aerial photographs and in order that the control may be accurate, particularly with reference to the net of the rectangular system of the public land surveys, it becomes important that the position of a few well selected public land corners be identified and appropriately flagged so that

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1141493 "E" TCR

they will register in the photographs to be taken from the hydroplane. The particular corners desired to be identified and flagged are listed in the accompanying letter. As they are of native material and were established in the eighties or thereabouts, the services of a U. S. surveyor or cadastral engineer will be required for the work especially if any of the original corners are lost or obliterated.

You are, therefore, directed to issue special instructions at once for the identification of and if necessary the reestablishment of the corners in question, and hold the instructions in readiness for the surveyor to be assigned to the work by the Assistant Supervisor of Surveys, without submitting the instructions to this office for approval as the Navy Department is making plans for an early flight over the country.

The surveyor should be equipped with a copy of the original field notes describing the corners and of the adjacent lines that may have to be retraced in restoring any corner by proportional measurement to its most probable original position. The instructions should provide for the identification of each corner or

1141493 "B" TSM

its reestablishment and the placing along side a 2 x 4 stake appropriately marked for the section and township, and with a flag so that the corner can be readily found. The aerial photograph branch of the Navy will then visit each corner and construct large signals or marks that will register in the photographs. It may be possible for a representative of the Navy Department or the Geological Survey to accompany the surveyor in his field work; in which event the corners can be pointed out at once and the signals erected without the necessity of flagging the positions. At any rate Mr. G. W. Holland of the Geological Survey will call at your office within the next 10 days regarding the details of this cooperative work, and the surveyor should be directed to confer with Admiral H. H. Rousseau of Los Angeles, who will have charge of the photographing.

Two quadrangle sheets of the Geological Survey showing the naval reserves and corners to be identified are inclosed.

Very respectfully,

  
Assistant Commissioner.

DEPARTMENT OF THE INTERIOR  
UNITED STATES GEOLOGICAL SURVEY  
WASHINGTON

June 9, 1924.

The Commissioner,  
General Land Office.

The Geological Survey is planning to make a detailed map of Naval Oil Reserves No. 1 and No. 2. The base for the map is to be made by the Navy Department through the use of hydroplanes, and in order that the control may be accurate it is necessary that certain township and section corners be marked on the ground. I therefore request that a surveyor of your office identify the following corners:

California, M. D. M.

NE corner	Sec. 1,	T. 30 S.,	R. 23 E.	✓
NW corner	Sec. 6,	T. 30 S.,	R. 23 E.	✓
SW corner	Sec. 31,	T. 30 S.,	R. 23 E.	✓
NW corner	Sec. 6,	T. 31 S.,	R. 24 E.	✓
SE corner	Sec. 30,	T. 30 S.,	R. 24 E.	✓
SE corner	Sec. 35,	T. 31 S.,	R. 24 E.	✓
SW corner	Sec. 31,	T. 31 S.,	R. 24 E.	✓
SW corner	Sec. 31,	T. 31 S.,	R. 23 E.	✓
SW corner	Sec. 13,	T. 32 S.,	R. 23 E.	✓
SE corner	Sec. 13,	T. 32 S.,	R. 24 E.	✓

It will answer the requirements of the Survey if your surveyor will place in the ground a 2 x 4 stake properly marked at each location above listed. It will also be of material assistance in locating the corners

if the surveyor will flag each stake when it is placed in the ground. Such markings as may be necessary for the aerial photography will be made by the Navy Department.

I transmit herewith topographic sheets of the McKittrick and Duane Vista quadrangles on which the corners it is desired to have marked are shown in blue. These sheets will probably be of assistance to your surveyor.

Your cooperation will be appreciated in order that the necessary field work may be undertaken at an early date.

(Sgd.) George Otis Smith  
Director.

Inclosures.

COPY  
6-12 1900

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

February 14, 1924.

Mr. Frank S. Spofford,  
Assistant Supervisor of Surveys,  
Olympia, Washington.

Dear Sir:

Your letter of January 9, 1924, and previous correspondence with Mr. Robert A. Farmer, U. S. Cadastral Engineer, regarding the establishment of the line between Secs. 3 and 4, T. 21 N., R. 6 E., Washington, across an island, has been referred to me for consideration and advice.

The corner of Secs. 3, 4, 9 and 10 of this township falls in Lake Sawyer and naturally the point for that corner can not be occupied. The original record of the survey of this township, however, contains the measurements from the meander corners on the section lines in four directions from this corner to the point for the corner, and with this information at hand it is necessary that the point for the section corner be determined by proportional measurement in accordance with the original record, using the measurements in all four directions from the corner.

To accomplish this proportion, the four meander corners, if identified, may be used as a basis for the proportion. It is not necessary to make additional retracements of the section boundaries in order to determine the positions of the quarter section or section corners for this proportion.

I have noted the statement in your letter to Mr. Farmer in which you state that meander corners can

portionate measurement between the adjoining section corners.

While instructions may have been issued to the contrary in some specific cases it is generally recognized that meander corners have the same status as any other corner and when identified must be adopted in the reestablishment of section or quarter section corners.

Very respectfully,

Wm. H. Johnson

Supervisor of Surveys.

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

OFFICE OF ASSISTANT SUPERVISOR OF SURVEYS

Juneau, Alaska, June 26, 1924.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Denver, Colorado.

Dear Mr. Johnson:

Referring to your letter of June 17, 1924 and particularly the second and third paragraphs therein, I have gone over the records and taken out such information as I believe may be of value to you in the preparation of your annual report. In all probability I have given too many details, but it is better to have too much and trim it down than have to guess at any part of the report.

There were three engineers in the field during the surveying seasons in the last fiscal year. For the period July to November, 1923, Calvin, Dahlquist, and Davis were working, and this year Calvin, Dahlquist, Guerin, are in the field. These engineers were engaged in surveying homesteads (Act June 28, 1918); Forest homesteads (Act June 11, 1906); Townsites, exteriors and subdivisions, (Act March 3, 1891); Naval and Military Reservations, (Executive Orders); Public Parks, Indian allotments (Act May 17, 1906); and in the extension of the rectangular surveys in the various parts of the Territory, as well as our usual examinations of all non-mineral surveys.

The following statement will give you a summary of the work performed by each engineer.

E. D. Calvin, U.S. Cadastral Engineer, July to December, 1923.

Group 106 - Eight isolated surveys, Homesteads, (Act June 28, 1913). These surveys are situated along the Tanana River between Nenana and Fort Gibbon, and along the Yukon River between Kokrines and Circle. The average cost of these surveys, including the note writing, is about \$205.00. The surveyor traveled from Juneau to Seward by boat, thence over the Alaska Railroad to Nenana before he could begin his work. From Nenana he traveled on the river steamers and small boats. He traveled about 1500 miles on the two rivers in making the surveys. It is of interest to note that nearly all of the claimants in these cases had lived on their homesteads for a long period of years and had not been able to apply for patent because of the excessive cost of a private survey.

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The free survey of these isolated homesteads is particularly beneficial to Alaska.

Group 26. Extension of the rectangular surveys along Government Railroad in the vicinity of McKinley Park and Colorado station. 43 miles, average field cost \$22.95 per mile, W.P.N.O.L. 13 days, W.P.O.L. 18 days.

Group 30. Extension of rectangular surveys along Tanana River between Nenana and Fairbanks. This involved additional surveys to cover agricultural land not included in original surveys this locality and also to include some Indian allotments.  $47\frac{3}{4}$  miles, average field cost \$34.77. W.P.N.O.L. 22 days, W.P.O.L. 26 days.

Group 108. Six H.E. Surveys in National Forest, under Act June 11, 1906. These surveys are situated along Icy Straits and Lynn Canal. The cost is divided between the Surveying Public Lands and the Forest Service. We pay the Surveyor and they pay all other expenses. Our cost on these surveys was \$13.90 each.

Calvin's field work for 1923 ended November 7, 1923; Calvin's field work season 1924 began April 22, 1924.

1924.

Group 12. April 22, 1924 Calvin left headquarters with single party for Haines to begin work on Group 12. This involves the extension of the rectangular surveys in T.28 S. Ranges 53, 54, 55, and 56 E. C.R.M., along the Chilcot and Klehini Valleys where the Alaska Railroad Commission have recently extended new wagon roads. This arc contains some of the best land in Southeastern Alaska and already several settlers have filed on homesteads in advance of the survey. The practise followed in Alaska in recent years whereby we are allowed to survey fractional sections and townships is extremely advantageous in this region where the steep mountain slopes rise abruptly from the level valley floor. To date, June 14, 1924, Calvin had surveyed  $46\frac{1}{2}$  miles. The country is heavily timbered in places and where the timber is absent there is a heavy undergrowth of alders and devils clubs. The areas to be surveyed are scattered and transportation facilities inadequate. Back packing to spike camps has to be resorted to in many cases.

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U.S. Cadastral Engineer T.P. Davis,  
1923 Surveying in Field-July 1, 1923 to October 20, 1923.

Group 29. Subdivision on Kenai Peninsula continuation of the surveys in that district. This region is tributary to the government railroad and will be more accessible as soon as wagon road is completed from the railroad down Kenai River, This project is under construction by Alaska Road Commission and Forest Service.

Kenai Peninsula contains large areas of agricultural land, and many homesteaders have taken up land in that vicinity. Total mileage 178.1 average field cost \$44.63, W.P.N.O.L. 75 days. W.P.O.L. 98 days. Surveyor traveled from headquarters to Anchorage regular transportation lines, thence by small boat to Kenai. Supplies taken from Anchorage. Pack train used from ocean beach.  
October 20, 1923 - May 1st, 1924. Writing notes.

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U.S. Cadastral Engineer Fred Dahlquist.

Engineer engaged in miscellaneous surveys and examinations entire season.  
Survey 1473 exterior boundaries Sitka townsite and Survey 1474 subdivision Sitka Townsite. Sitka is one of the oldest towns in Alaska and the Surveyor was called upon to segregate the old fee simple claims acquired by the Russians under the treaty of 1867. These claims were not described by metes and bounds and he had to rely on old maps and existing corners to establish the boundaries. All difficulties have been adjusted. The streets and alleys are extremely irregular and the survey is the most complicated of all the townsite surveys in Alaska. There were conflicts with old Russian Greek church claims and other patented tracts involving retracements of very old and inaccurate surveys.

Survey 1484 and survey 1485 boundaries and subdivisions. Hope townsite. Situated on Turnagain Arm within the national forest. This village was established many years ago in the old Hope mining district and the property lines were irregular and poorly defined.

In addition to the townsite at Sitka, Dahlquist surveyed two naval reservations on adjacent islands and the military cemetery near Sitka.

Survey 1499. Survey of the public park for the City of Skagway.

Group 107. Examination of 16 non-mineral surveys scattered from Juneau in Southeastern Alaska to Sand Point in Southwestern Alaska. These surveys are all in out of the way places where transportation facilities are poor and small gas boats must be used in most of the work.

In addition to the above, Dahlquist made three H.E. Surveys in the national forest under the Act June 11, 1906.

Dahlquist closed his field season December 2, 1923, and was engaged in writing notes until the first week in June, 1924, when he started out on examination work and forest homestead surveys in Southeastern Alaska.

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1924 -

E. C. GUERIN, U. S. Cadastral Engineer.

The Forest Service requested the G.L.O. to subdivide the Stikine River Valley and Mr. Guerin is assigned to this work. The Stikine River flows from Canadian territory and enters Frederick Land near Wrangell. The geodetic position was calculated from Coast and Geodetic Survey Stations and the survey referred to the Copper River Base and Meridian. The surveys will close in the International Boundary between British Columbia and Alaska.

Guerin began work May 1, 1924 and to May 31, 1924 had surveyed  $24\frac{1}{2}$  miles. He was delayed in starting because the four geodetic stations described by the Coast and Geodetic Survey were all destroyed and he had to telegraph for additional data. The Stikine River is extremely difficult to navigate and many crossings and meanders retard the work.

For the Fiscal year 1925.

Mr. Guerin will continue the subdivision of the Stikine River Valley. Mr. Calvin will complete the work in the vicinity of Haines and then proceed to Fairbanks, where he will extend the rectangular surveys in that locality. Later he will make isolated surveys along the Alaska Railroad and extend the rectangular net in the vicinity of Wasilla near Anchorage. He will then proceed to Seldovia and make surveys of a number of homesteads on Ishmailof Island in Kachemak Bay. Later he will sail for Uyak and extend the rectangular net to include some homesteaders who have located outside of the surveyed area there.

Dahlquist has been assigned a number of surveys for examination in Southeastern Alaska. Also, he has a number of Forest Homesteads to survey in this vicinity. The Forest Service have asked for a survey of the so-called Mendenhall Elimination near Juneau, and special instructions will be issued for this in the near future. It is expected that Mr. Dahlquist will be assigned to this work.

Additional work for 1925.

In addition to the work assigned to the Surveyors and listed above, we have considerable work that should be taken care of next year.

We have special instructions for the survey and subdivision of the abandoned military reservation at Nome, Alaska, and the survey of an abandoned signal corps station at Sitka. We also have instructions for the survey of a mission station and Bureau of Education Reserve at Unalaklik in Norton Sound.

We have an application for free survey of a homestead on the Kuskokwim River and there are several other homesteaders along the Yukon who will ask for a survey this summer.

In addition to these, we have several Forest homesteads and a number of non-mineral claims for examination.

We have an application for a townsite survey adjoining Cordova, Alaska, and in all probability this survey will have to be made next year. It is almost impossible to estimate the probable cost of this work, because new applications are coming in all the time.

I am advised by the District Forester that they have under consideration several eliminations in districts where the land appears to be more valuable for agricultural purposes than for National Forest, and in all probability we will have to make surveys in some of these areas.

There are a large number of oil locations in the vicinity of Chumlna Bay, Cook Inlet; and the Geological survey report favorably on that area. If the wells now drilling at Kanatak are successful, new interest will be created in the adjacent fields and it will be advisable to survey a skeleton control in Chumlna Bay as we have done from Chignik to Cold Bay. This has been considered for the past two years, but in view of the prospecting at Cold Bay we have thought advisable to delay until the results are known. The same condition exists at the mouth of Douglas River, Kamistrak Bay and similar surveys should be made at that place if oil is found at Cold Bay.

We have requests for similar work near Kalalla, but I do not believe that present conditions justify any extended work in that locality. Of course, they are drilling new wells and may strike more oil, and we should be prepared to take care of the situation if it should arise.

The surveys in the Broad Pass region were not completed and we are endeavoring to obtain additional data in cooperation with the Bureau of Mines before we make any further surveys in that vicinity.

Applications for coal leasing permits have been filed for land outside of our surveyed area at Healey, and we should consider extending the rectangular net over a small area there.

The general manager of the Alaska Railroad requested information about a new townsite survey near McKinley Park Station with the idea of leasing or renting building sites in that vicinity and perhaps some within the park. I advised him that we could make the surveys on his request, and the approval of the Commissioner.

Definite recommendations for extending the rectangular surveys cannot be made at this time. Special agents of the General Land Office are investigating certain areas in the Interior to determine the advisability of including them in a regular survey. There are large areas of good land, but it may be better for us to make isolated surveys in that region for a few years. The Coast & Geodetic Survey will soon have stations at convenient intervals along the river, and our isolated surveys can be made to fit the rectangular net.

The District Forester for Alaska is making a study of the forests and will recommend subdivision and skeleton surveys of certain areas where it will be advantageous to have such work and he will have his plans outlined later in the year.

An entirely new phase of the surveying so far as Alaska is concerned is presented in the request of the Federal Mining Engineer, Mr. B. D. Stewart. He is called upon from time to time for estimates and reports concerning oil and coal leases. An accurate survey is essential, and he has suggested that he would be glad if we could detail one of our men to make these surveys for him. He is willing to pay all costs out of his appropriation, but he does not feel warranted in keeping a man for this purpose. I should like to be advised in this matter. Much of the work can be done in the period when our other field work cannot be carried on because of climatic conditions, and it would be advantageous if we could do this. Of course much of his work involves accurate surveys

of the surface and subdivisions of sections. I believe that this is public land surveying and we should do it. If we dont, he will have to have some one sent from the States, because he cannot use the local surveyors.

Another departure is suggested in the policy of surveying the Indian Villages and segregating the individual native holdings therein. The Bureau of Education has requested this, and it was discussed at a conference in Washington last winter. There are a number of these villages and we would have a lot of work that could be done during our slack seasons, and at the same time contribute to the welfare of the natives. The natives at Saxman have petitioned for a survey of their village and are anxiously awaiting some action. The question arises as to whether or not our appropriation can be used for this purpose?

The surveying of public lands in Alaska has gradually assumed new phases, until it has now reached a stage where our work is more complex and involves the survey of town-sites; isolated homesteads; retracing boundaries of old surveys; national park boundaries; forest reserve boundaries; naval and military reservations; determination of boundaries of old Russian claims based on titles derived under the treaty between the United States and Russia, determination of limits of the sixty-foot neutral strip along boundary between Alaska and British Columbia and closing rectangular survey on this line, military cemeteries; Indian allotments; reservations for Bureau of Education, triangulation for position from Coast and Geodetic Survey stations; the examination of non-mineral surveys and extension of rectangular surveys.

The earliest work of the surveying forces in Alaska after the old contract system was discontinued, was confined to the examination of non-mineral surveys. The location of homesteads in the agricultural areas demanded an extension of the rectangular net over those districts and three meridians were established - Copper River, Fairbanks and Seward. For several years these rectangular surveys were the important feature. The coal leasing law created a demand for a survey of the coal fields and a special appropriation was made for this purpose.

The law authorizing free survey of homesteads made it possible for us to reach many claimants who were beyond the limits of the rectangular net and now a vevy large part of our work consists of this class of surveys. Of course, wherever possible the rectangular system is extended to cover the entries.

The agreement with the Forest Service where by we make all of their surveys opened a new field and so far the arrangement has worked most satisfactorily. As a further step in this direction, legislation authorizing us to make all non-mineral surveys should be sought. This will be advantageous to the claimant and materially reduce our costs of examination, Under the present system the costs are doubled because we duplicate the work of the surveyor.

Another suggestion for constructive legislation is that authority be obtained abandoning the cardinal courses for isolated homesteads in Alaska. The reasons for this have been presented to Division "E" and need not be repeated here.

In the future a large part of our work will consist of isolated surveys, forest homestead surveys, and additions to the rectangular net. It may be advisable to establish another meridian near the confluence of the Tanana and Yukon Rivers, as a control for the surveys that must ultimately be made in those valleys.

It is almost impossible to estimate the cost of the work during the coming year, but from the information available I believe we should have at least \$40,000.00 allotted to Alaska. Much of our work will be scattered and transportation costs are high. If it becomes necessary to make additional surveys in the oil fields we would probably need more than that amount but I assume that we could be given an additional allotment of five or ten thousand if absolutely necessary.

Probably this letter is much longer than is necessary, but next time I shall have a better idea of what is desired. I shall wire you additional data when the weekly reports come in so that you can bring this down to date.

Respectfully yours,

*E. A. Cape*

Assistant Supervisor of  
Surveys and Public Lands.

GAP/NEP.

*Had to borrow stenographer from Det. Unit  
and the boat for the south leaves in an hour  
did not have time to read carefully - may  
be some errors.*

*G.A.P.*

*201*  
DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

WASHINGTON

July // , 1924.

IN REPLY PLEASE REFER TO

1142165 "E" DBC.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Denver, Colorado.

Sir:

With reference to your letters of June 11 and June 20, 1924, I am now inclosing herewith a report furnished by the Director of the Bureau of Standards as to the total length of the Lufkin 66-foot steel tape which you transmitted to this office for testing.

It appears from this report that the length of this tape, when tested under the conditions stated in your letter, is 66.005 ft., reading from the outside of the loop attached to the steel ribbon. The tape, which has been certified by the Bureau of Standards under their No. BS No. 3505, is being returned to you under separate cover.

Very respectfully,

*D. C. Parrott*

Acting Assistant Commissioner.

Vol. 183

# Bureau of Standards

## REPORT

ON

66-foot Steel Tape

Maker's Identification Mark: Luffin

B. S. No. 3505

SUBMITTED BY

Department of the Interior,  
General Land Office,  
Washington, D. C.

The above-described tape has been compared with the standards of the United States and, for the intervals indicated, has the following corrections at 68° Fahrenheit (20° Centigrade) under the conditions given below:

Supported on a horizontal flat surface

Tension: 10 pounds

Interval	Correction
(0 to 66 feet)	+0.005 foot

(see footnote)

Note: See note 6 on the last page of the attached notes.

Date tested: July 7, 1924

Test No. 271 40959



Washington, D. C., JUL - 8 1924

George K. Burgess, Director.

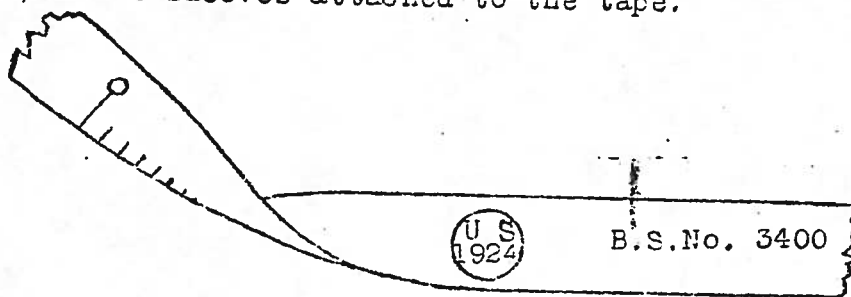


A + correction means that the tape is too long, i. e., longer than the nominal length of the interval; a - correction means that it is shorter by the amount indicated.  
The comparisons of this tape with the United States Bench Standard were made at a temperature of 79° Fahrenheit in reducing to 68° Fahrenheit (20° Centigrade), the coefficient of expansion of the tape is assumed to be 0.00000645 per degree Fahrenheit (0.0000116 per degree Centigrade).



NOTES ON THE USE OF STANDARDIZED STEEL TAPES

Note 1. - Specifications for Standard Steel Tapes. The Bureau of Standards seal is placed only on tapes tested at the Bureau and found to conform to the following specifications: The tape must not be in error in the total length at the standard tension and when supported horizontally throughout its entire length at a temperature of 68°F by more than 0.1 inch per 100 feet (2 mm per 25 meters). The standard tension is 10 pounds (4.5 kilograms) for tapes from 25 to 100 feet or from 10 to 30 meters in length and 20 pounds (9 kilograms) for tapes longer than 100 feet or 30 meters. The initial and terminal marks must be on a single piece of metal ribbon. Neither shall be a wire loop or other attachment liable to be detached or changed in shape, or on a spring balance or tension handle accompanying the tape. The graduations must not be on pieces of solder on the tape, or on sleeves attached to the tape.



Note 2. - Steel tapes are usually intended to be correct at 68°F. when supported throughout their entire length and under the standard tension. The comparisons of these tapes with the U. S. Bench Standard, usually made at a temperature higher than 68°F., are accordingly reduced to 68° by the use of the assumed coefficient of linear expansion of 0.0000045 per degree Fahrenheit, (0.000015 per degree Centigrade) this being the coefficient of the steel Bench Standard. This rate of expansion of steel tapes with change of temperature amounts, in the case of a 100 foot length, to 0.00045 foot per degree Fahrenheit; in other words, a 100-foot tape would be 0.005 foot shorter at 68°F than the value given in this certificate for 68°, or it would be 0.006 foot (0.07 inch) longer at 78°F. than at 68°F., and in proportion for other temperatures. In the case of a 25-meter length this amounts to 0.25 mm per degree Centigrade; in other words, a 25-meter tape would be 2.5 mm shorter at 10°C than the value given in the certificate for 20°C, or it would be 2.5 mm longer at 30°C, and in proportion for other temperatures. Accordingly, in accurate work, the temperature of the tape should be determined and correction made for it, except in certain cases where the tape is used in measuring steel structures or the space in which steel members are to fit, when it may be assumed that the steel piece and the tape expand the same amount and will have the same relative values at all temperatures. If the above assumed

temperature coefficient is not the true coefficient of a tape, the corrections given on this certificate will be in error at 68°F. by an amount equal to the product of the difference between the assumed and the true coefficient times the length multiplied by the difference between 68° and the temperature at which the comparisons were made, as given at the bottom of the first page of this certificate. For example, a 100-foot tape of which the true coefficient was 0.0000600 if it was compared with the bench at 82°F. would be 0.006 foot (0.01 inch) longer at 68° than the value given on the certificate, or a 50-meter tape of which the true coefficient was 0.0000110 if it was compared with the bench at 28°C would be 0.24 mm longer at 20°C than its value given on the certificate.

Note 3. - It is also necessary in accurate work that the tape be used at a definite tension for which its length is known. The change in length of a tape for a change of one pound in tension, when the tape is supported throughout its entire length, ranges from 0.0004 to 0.003 foot (0.005 to 0.04 inch) in 100 feet, or 0.2 to 1.5 mm in 25 meters varying with tapes of different weight, cross-section, and other characteristics. The range of variation of the length is still greater when the tape is supported only at intervals along its length. Spring balances used with tapes should be frequently compared in a horizontal position with some standard. When a tape is used supported throughout on a smooth flat surface such as pavement, stonework, or steel, the tape should be raised in the middle and snapped to overcome friction, while the tension is being adjusted.

Note 4. - Unless otherwise stated, the comparisons of this tape with the Bench Standard have been made at the center of the lines on the edge to which the shortest graduations are ruled. If all the graduations extend entirely across the tape, the ends farthest from the observer when the zero of the tape is at his left hand were used.

Note 5. - On tapes which have been cut off at the zero mark, the extreme end of the steel ribbon has been taken as the zero point and not the center of any line that may be at that point.

Note 6. - On tapes which have the zero point on a loop attached to the steel ribbon at the end the zero has been taken at the outside of this loop unless noted to the contrary on the first page of this certificate. Such tapes are not considered standard tapes in accordance with note 1, and are not given a Bureau of Standards seal.

Remark: Attention is called to the fact that the presence of a Bureau of Standards seal, which consists of the letters "U.S." and the date enclosed in a circle, signifies that the tape on which it appears has been tested and found to comply with the specifications for a standard steel tape.

Circular 11-951.

MINERAL SURVEYS AND RE-SURVEYS.

---- 0 ----

DEPARTMENT OF THE INTERIOR

General Land Office

Washington

July 15, 1924.

To the Cadastral Engineering Service

of the General Land Office:

Under the provisions of the act of June 5, 1924 (Public No. 199, 68th Congress), making appropriations for the Department of the Interior for the fiscal year ending June 30, 1925, and for other purposes, the following item appears under the heading "Surveying Public Lands:"

"For surveys and resurveys of public lands, examination of surveys heretofore made and reported to be defective or fraudulent, inspecting mineral deposits, coal fields, and timber districts, making fragmentary surveys, and such other surveys or examinations as may be required for identification of lands for purposes of evidence in any suit or proceeding in behalf of the United States, under the supervision of the Commissioner of the General Land Office and direction of the Secretary of the Interior, \$700,000: Provided, That the sum of not exceeding 10 per centum of the amount hereby appropriated may be expended by the Commissioner of the General Land Office, with the approval of the Secretary of the Interior, for the purchase of metal or other equally durable monuments to be used for public land survey corners wherever practicable: Provided further, That not to exceed \$100,000 of this appropriation may be expended for salaries of employees of the field surveying service temporarily detailed to the General Land Office: Provided further, That not to exceed \$20,000 of this appropriation may be used for the survey, classification, and sale of the lands and timber of the so-called Oregon and California Railroad lands and the Coos Bay Wagon Road lands: Provided further, That not to exceed \$50,000 of this appropriation may be used for surveys and resurveys, under the rectangular

(over)

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There is embodied in the act the following new legislation:

"The purchase of supplies and equipment or the procurement of services for the Department of the Interior, the bureaus and offices thereof \* \* \* at the seat of Government, as well as those located in the field outside the District of Columbia, may be made in open market without compliance with sections 3709 and 3744 of the Revised Statutes of the United States, in the manner common among business men, when the aggregate amount of the purchase or the service does not exceed \$100 in any instance."

Deducting from the appropriation of \$700,000 the sums of \$22,000 for supervisors' offices; \$42,000 for the Eastern District; \$25,000 for iron posts; \$25,000 for freight and express; \$2,500 for stationery; \$10,000 for salaries of field employees temporarily detailed to this office; \$10,000 for the survey classification and sale of the lands and timber of the so-called Oregon and California Railroad lands and the Shen Bay Wagon Road lands; \$5,500 for retirement and \$15,000 for reserve, there remains available for apportionment among the several surveying districts the sum of \$530,000.

From the total of \$530,000 there is hereby apportioned to:

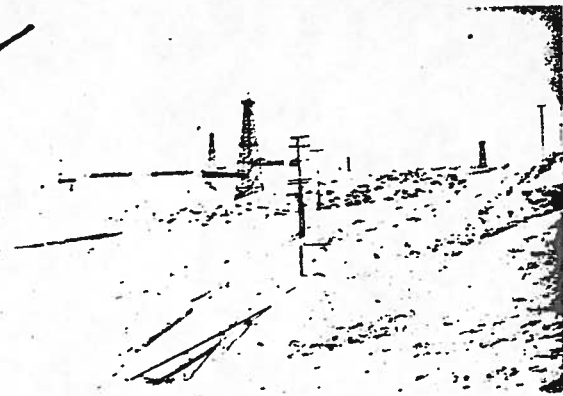
Alaska.....	\$40,000
Arizona.....	45,000
California.....	40,000
Colorado.....	42,000
Idaho.....	40,000
Montana.....	40,000
Nebraska and South Dakota.....	35,000
Nevada.....	35,000
New Mexico.....	45,000
Oregon.....	45,000
Utah.....	40,000
Washington.....	25,000
Wyoming.....	35,000

The annual instructions dated August 30, 1923, are full and complete and the provisions thereof are hereby made equally applicable to the services to be rendered during the current fiscal year.

Hereafter when there is reference on any plat of survey a mineral monument, the name of the mining district will be shown in addition to the number of the monument.

Very respectfully,

Commissioner.



Ts 30, 31 S. R. 24 E. Sec. 36

DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND OFFICE  
UNIT SUPERVISOR OF SURVEYS

Los Angeles, California,  
July 25, 1924.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Denver, Colorado..

Dear Sir:

I appreciate the satisfaction expressed in your letter of the 21st of identification work on Naval Oil Reserves Nos. 1 and No. 2. However, credit is largely due Mr. Benj. J. Kinsey, U. S. Surveyor, whose intense physical efforts early and late in a Phoenix-like temperature of 115° insured the successful completion in time of this important undertaking. Mr. Warboys also ran well.

Commander Landis informed me yesterday that San Diego reported that our markers showed up fine in the air photographs. I inclose a picture showing the air pannel at the cor. of Ts. 30 and 31 S., Rs. 24 and 25 E., M.D.M. The derricks are in sec. 36, T. 30 S., R. 24 E., the famous Tupman lease of the Standard Oil company, reported to have produced approximately 25 million barrels of oil, and still producing. The well in the foreground came in at around 3800 barrels a day, a few years ago. The Pan-American offset well in sec. 1, T. 31 S., R. 24 E. to the south (not shown in the picture) is reported to have come in at 200 barrels a day with no gas pressure. This would tend to show the need of immediate ~~xxxxxxx~~ offset drilling on Naval Oil Reserves. The \$100,000 and also the manner of negotiating the lease are other questions.

Very respectfully,

Asst. Supervisor of Surveys.

Vol. 188

July 26, 1924.

Mr. George A. Parks,  
Asst. Supervisor of Surveys & Public Lands,  
Juneau, Alaska.

Dear Mr. Parks:

It is a source of great satisfaction to me and I know to the General Land Office also, for this office to be in position to furnish information as to the detailed activities of our engineers in various parts of the country without undue delay, and such letters as yours of July 7, 1924, enable us to maintain that position. It just happened that since the receipt of your letter I have had two inquiries that were answered fully from the information contained therein. This is efficiency ~~service~~.

Yours very sincerely,

(Signed) Frank W. Johnson

Supervisor of Surveys.

RCM.

Vol. 190

1

July 26, 1924.

Mr. Geo. A. Parke,  
Asst. Supervisor of Surveys & Public Lands,  
Juneau, Alaska.

Dear Mr. Parke:

Referring to your letter of the 9th instant on the subject of eliminations from National Forests in Alaska, I would say that your program as outlined therein is heartily approved and I am glad to learn further of the fine spirit of cooperation existing between the Forest Service and our Service in Alaska.

The General Land Office under the organic law is required to make all surveys for proprietary purposes. There have been some exceptions made to this principle throughout the course of many years, but in looking back it is found that rarely has any question involving title arisen where the Land Office has made the survey. Furthermore, from the engineering and economic standpoint, we should make the surveys in question and any other for other Services where the identification of public land is involved.

Yours very truly,

(Signed) Frank M. Johnson

Supervisor of Surveys.

RCI.

Vol. 190

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

OFFICE OF ASSISTANT SUPERVISOR OF SURVEYS

Olympia, Wn.  
July 29, 1924.

Mr. Frank H. Johnson,  
Supervisor of Surveys,  
Denver Colo.

Dear Sir;

I have covered all of the camps in this district with the exception of Pecore's on group 88. and as he will be moving early in August to the Yakima reservation boundary will visit him there at a later date. In general things are going fairly well but I am more than ever convinced that we have been losing lots of mileage on account of cloudy days, wet bushes and light rains all of which seem unnecessary. Our fellows are working hard on the good days but losing the fruits of their labor by not hitting the ball every day. I have tried to point this out to the engineers and think gradually it will soak in, but it will be gradual as it is hard to teach an old dog new tricks.

Conditions in Campbells camp were not good, partly due, no doubt, to hard luck. All of his crew except one man had quit. He had the wife of the packer doing the cooking and she has three small children with her. Campbells wife and two children were in camp.

I told him it was against the regulation to have his wife in camp and advised him to get a man cook as soon as possible, tho this latter I felt was up to him to decide. In the matter of his wife being in camp. I told him it was against regulation. Mr Campbell said that he did not want to do any thing that was against the regulations and wanted to do what was right in the matter, but that Mr. Spofford had always allowed him to have his wife and family with him, that he rather encouraged it and that he, Campbell deducted their pro rata share of expense from the grocery bill. I advised him that I would set a ruling on the matter from you. but in the mean time I transferred him from group 83 with the one man he has, to group 102. the survey of Hog Island and advised him while on that survey in a settled agricultural part of the country to pick up another crew and return to group 83 on the completion of 102. This should not take him from group 83 more than three or four days. will give him a chance to get his family out of camp, get another crew and start over fresh. In the mean time I would like to have your views as to the matter of the engineers having their wives in camp. If we let down the bars for one it seems to me will have to for all, and while in some cases it may work all right in others it will not and I rather favor a strict rule against it. To the average young fellow the attractiveness of survey work is the freedom in camp and with a woman in camp the psychological effect, at least, is that the freedom is gone. In Campbell's case he says that the women being

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DEPARTMENT OF THE INTERIOR

2

GENERAL LAND OFFICE

OFFICE OF ASSISTANT SUPERVISOR OF SURVEYS

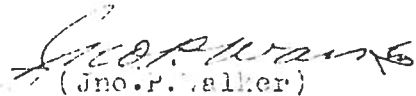
in camp had nothing to do with the men quitting and probably that may be the case. But in any event it didnt look like a survey camp but before giving definite instructions on the subject and in light of what Campbell says as to former practice I want to be fair in the matter and therefore ask for instructions in the prizes. I think his transfer to group 102 and the general discussion I had with him on the subject will be sufficient to set matters right in this instance but it is a good time to have the question definitely settled on the basis of a flat ruling for all.

In the camps visited. Long and Campbell have the best country to work, mountains are rolling, not precipitous, brushy in places but much open timber and some few grassy hill tops. within one days pack of supply point. Davis and Bates country comes next mountainous brushy and partly precipitous with differences of elevation of about 5000 ft. Two to three days pack from supply point (one way) Betts on group 87 Washington has the roughest country I visited, mountainous precipitous and brushy, one days pack from supply point to main camp but most of the work will have to be done from fly camps and back packing. He has the worst of his assignment finished tho and in the future his mileage should show some improvement. Pecoras country is probably little better than Betts, tho I did not have time to get to his camp.

All of the men feel very much encouraged over classification and I think will put forth their best efforts to prove that it will not increase the unit cost of the work. I am very glad to see that you were able to hold the Alaska differential as it is absolutely necessary in order to hold men there in contentment.

Corrin sent me copy of the account of the point Borrow trip which he sent you, as I had written him on the subject. He was really more disgusted than the report showed and I guess the expedition was magnificently bungled. They are continuing to bungle it on the trip Smith is making this season. Dog team and grand stand propaganda that looks fine in eastern news papers but to the westerner all comes under the general classification of "funk". I am truly sorry to see this element getting on top of the U.S.S. as they have for the most part a fine personell and have done some wonderful constructive work and it seems a shame to see these correspondence school geologist and topographers cheapen the efforts of the old school self sacrificing worker by peddling cheap propaganda.

Yours very truly,

  
(Jno. P. Walker)

Asst. Supervisor of Surveys

Inc.

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

WASHINGTON

August 4, 1924.

IN REPLY PLEASE REFER TO

WTP

Fire suppression in  
National Forests.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Denver, Colorado.

Sir:

I transmit herewith a copy of a letter dated July 16, 1924, from the Acting Secretary of the Department of Agriculture addressed to the Secretary of the Interior requesting that instructions be issued to bureaus of this Department which have surveying and other crews working in the field to respond promptly to unavoidable fire calls which the district officers of the Forest Service may make in emergencies where forest fires are in progress and in other ways to cooperate with that service in controlling and reporting the discovery of such fire hazard; such calls to be made only in case of absolute emergency.

It will be noted that in case calls are made on our service, arrangements are provided whereby all expenses

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"B" WIP

of labor and supplies are to be borne by the Forest Service, salaries of permanent employees excepted, and the labor being paid for at the current fire fighting rates; also that members of our service so called into action will be released as soon as the danger period is passed or other suitable fire-fighting forces are available.

The request of the Acting Secretary of the Department of Agriculture has been referred to this office by the First Assistant Secretary of the Interior for compliance therewith, wherever it is practicable to do so.

You are accordingly requested to issue appropriate instructions to the Cadastral Engineering Service to the end that the desired cooperation may be carried into effect.

There is inclosed for your information a copy of the instructions issued to the chiefs of field divisions dated August 2, 1924.

Very respectfully,



Acting Assistant Commissioner.

Circular #740

DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

WASHINGTON

August 1, 1924.

IN REPLY PLEASE REFER TO

"FS" GEH

Instructions.

Chiefs of Field Division.

In view of the extraordinary conditions of fire hazard now existing on the National Forests in the west, as well as on privately owned and public timber lands, it is of the utmost importance that all Government agencies unite to the utmost possible extent in measures for the suppression of fires on, or threatening, the National Forests and the timbered lands of the public domain.

All means at the command of the Forest Service and the authorities of the heavily timbered States are being used to guard against fires, and no effort is spared to impress upon campers, hunters, and others frequenting the forests, the urgent necessity for being careful with fires. In spite of all precautions fires often start from natural and other unavoidable causes. Whatever the cause the fires must be vigorously attacked with every human resource available.

Whenever public timbered lands are involved or threatened, this office, on being so advised, is cooperating with National Forest officials, State authorities, and local fire protective organizations in the fighting of fires. When such fires occur in your Division you should at once notify this office and request authority to employ such a force as is proper, considering the amount of public timber involved.

You will instruct your field men that while about their routine field duties they will watch for fires and, on discovery of such, communicate at once with the proper authorities, either Federal or State, or both. If fires are on public lands they should report at once to you, by wire if possible, fully setting forth the situation and giving information sufficient to permit you to act intelligently.

Circular #740

You will also instruct your field employees in case of necessity, and when called upon by National Forest officers, to respond promptly to unavoidable fire calls which may be made in emergencies, and lend every assistance in the efforts to extinguish such fires. In the case of National Forest fires all expenses for labor and supplies will be borne by the Forest Service, except salary and per diem of your permanent employees, at the current fire-fighting rates.

It is understood that members of your force so called into action will be released as soon as other suitable fire fighting forces are available. It is also understood that calls of this kind will not be made except in cases of absolute emergency.

Employees of all field services of the Government are being given similar instructions.

Very respectfully,

GEORGE R. WICKHAM,

Acting Commissioner.

COPY

DEPARTMENT OF AGRICULTURE  
WASHINGTON

July 16, 1924.

The Honorable

The Secretary of the Interior.

Dear Mr. Secretary:

In view of the extraordinary conditions of fire hazard now existing on the National Forests in the West it is of the utmost importance that Government agencies unite to the utmost possible extent in measures for the suppression of fires on or threatening the National Forests. The amount of precipitation during the past winter was much less than normal, and since early spring the lack of rain, especially in the Pacific Coast States, together with dry and unusually high winds, has resulted in conditions which invite disaster. All means at the command of the Forest Service are being used to guard against fires, and no effort is spared to impress upon Forest users, campers, hunters, and others frequenting the Forests the urgent necessity of being careful with fire. Despite all precautions fires often start from natural and other unavoidable causes such as lightning storms, but whatever the cause may be the fires must be vigorously attacked with every human resource available.

In this situation it would be very greatly appreciated if you could find it practicable to issue instructions to bureaus of the Department of the Interior which have surveying and other crews working in the field to respond promptly to unavoidable fire calls which the District officers may make in emergencies. It is most desirable that fires discovered by members of field parties be reported to the nearest known Forest officer immediately. In the cases of such cooperation all expenses of labor and supplies will be borne by the Forest Service of this Department, salaries of permanent employees excepted, and the labor being paid for at the current fire fighting rates. It is understood that members of working crews of other Departments so called into action will be released as soon as the danger period is passed or other suitable fire fighting forces are available. It is also understood that calls of this kind will not be made except in cases of absolute emergency.

Sincerely yours,

(Sgd) Howard M. Gore,

Acting Secretary.

Department of the Interior  
July 19, 1924

Respectfully referred to the Commissioner of the General Land Office for compliance with the wishes of the Secretary of Agriculture in this matter wherever it is practicable to do so.

E. C. FINNEY  
First Assistant Secretary.

8-1-hr

Circular No. 996.

INSTRUCTIONS AS TO THE ABOLISHMENT OF OFFICE OF  
SURVEYOR GENERAL.--REORGANIZATION.

- - - 0 - - -  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
General Land Office  
Washington

April 7, 1925.

To the Surveying Service

of the General Land Office:

(43824.1144)

The act of Congress approved March 3, 1925 (Public No. 580, 68th Congress), making appropriations for the Department of the Interior for the fiscal year ending June 30, 1926, and for other purposes, provides as follows:

The office of surveyor general is hereby abolished, effective July 1, 1925, and the administration of all activities theretofore in charge of surveyors general, including the necessary personnel, all records, furniture, and other equipment, and all supplies of their respective offices, are hereby transferred to and consolidated with the Field Surveying Service, under the jurisdiction of the United States Supervisor of Surveys, who shall hereafter administer same in association with the surveying operations in his charge and under such regulations as the Secretary of the Interior may provide.

Surveying public lands:--For surveys and resurveys of public lands, examination of surveys heretofore made and reported to be defective or fraudulent, inspecting mineral deposits, coal fields, and timber districts, making fragmentary surveys, and such other surveys or examinations as may be required for identification of lands for purposes of evidence in any suit or proceeding in behalf of the United States, under the supervision of the Commissioner of the General Land Office and direction of the Secretary of the Interior, \$840,290: Provided, That the sum of not exceeding 10 per centum of the amount hereby appropriated may be expended by the Commissioner of the General Land Office, with the approval of the Secretary of the Interior, for the purchase of metal or other equally durable monuments to be used for public land survey corners wherever practicable: Provided further, That not to exceed \$10,000 of this appropriation may be expended for salaries of employees of the field surveying service temporarily detailed to the General Land Office: Provided further, That not to exceed \$15,000 of this appropriation may be used for the survey, classification, and sale of the lands and timber of the so-called Oregon and California Railroad lands and the Coos Bay Wagon Road lands: Provided further, That not to exceed \$50,000 of this appropriation may be used for surveys and resurveys, under the rectangular system provided by law, of public lands deemed to be valuable for oil and oil shale.

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By this legislation the entire Surveying Service of the General Land Office is brought under the immediate jurisdiction of the Supervisor of Surveys, who is charged with the administration of all matters pertaining to that Service under the supervision of the Commissioner and direction of the Secretary.

In furtherance of the consolidation of the Surveying Service, the Secretary has directed that the Division of Surveys of the General Land Office be under the general supervision of the Supervisor of Surveys, who, under the Commissioner, shall prescribe the methods and procedure to be followed.

#### Public Land Surveys.

With this single surveying organization to perform all field and office duties--administrative, engineering, fiscal or otherwise--ranging from the inception of a survey to its acceptance, the following regulations will govern:

Applications by settlers for original surveys will be the subject of appropriate investigation by the District Cadastral Engineer (formerly the Assistant Supervisor of Surveys), and if the survey is found to be merited, special instructions will be prepared at once. Other surveys to cover lands of known agricultural value, or deemed advisable from an administrative standpoint, will also be made the subject of original consideration by the District Cadastral Engineer, and covered by appropriate special instructions to be prepared at once. All special instructions must be submitted to the General Land Office for examination. The approval of the special instructions by the General Land Office will carry with it the authorization for the survey.

Upon completion of the surveys in the field, township by township, formal report will be made to the General Land Office of that fact, in lieu of the monthly progress report system now in use.

Under the corps of competent engineers now constituting the Field Surveying Service, and the close supervision exercised by the Supervisor of Surveys and the District Cadastral Engineers, the resulting surveys should be of a high standard, requiring but a single examination and review to test the sufficiency and accuracy of the work. This examination will be made under the supervision of the District Cadastral Engineer, and will cover both the field and office features of the accomplished work.

All surveying returns now prepared for the approval of the Surveyor General, or ex-officio Surveyor General, will, after June 30, 1925, be prepared for the approval of the Supervisor of Surveys, and when so approved will be forwarded to the General Land Office.

Upon receipt of the returns by the General Land Office, the Survey will be formally accepted without further examination, unless, by reason of special or unusual conditions attending any particular case, the Commissioner deems it advisable to further scrutinize the returns or test the accuracy of the work.

The existing practice and procedure of handling resurveys and special surveys will be continued.



### Mineral Surveys.

The appointment of United States mineral surveyors is under the jurisdiction of the Supervisor of Surveys, and all such appointments will be made by him under such rules and regulations as he may prescribe.

Orders for the survey of mining claims will be issued by the Office Cadastral Engineers (formerly the technical and administrative head of the Surveyor General's office force), who will be authorized by the Supervisor of Surveys to administer the work in connection therewith and approve plats and field notes of such surveys, and otherwise to perform the duties prescribed by the mining regulations to be performed by the surveyors general in connection with the survey of mining claims, including certification as to expenditures made upon the claims.

### Accounts.

The discontinuance of the Office of Surveyors General on July 1, 1925, necessitates a change in the method of handling accounts, allotments, and disbursements.

Subject to the provisions of the Appropriation Act that 10 per cent of the amount appropriated may be expended for the purchase of metal monuments, \$10,000 for salaries of employees of the Field Surveying Service temporarily detailed to the General Land Office, \$15,000 for the survey, classification, and sale of the lands and timber of the so-called Oregon and California Railroad lands, and \$50,000 for surveys and resurveys of oil and oil shale areas, and deducting \$3,500 for stationery, as provided for elsewhere in the act, all matters pertaining to the accounts, allotments, and disbursements will be handled in the Office of the Supervisor of Surveys, at Denver, with the single exception of Alaska.

The administration of all activities assigned by law to the Surveyors General must continue until the close of business on June 30, 1925, but it is believed that the other duties now discharged by these officers, especially in the matter of the disbursements and accounts incident to the execution of the public land surveys in the field, should be taken over by the Supervisor of Surveys at the earliest opportunity in order that difficulties may be avoided at the end of the fiscal year.

Until June 30, whether vouchers are paid in Denver, or by the respective surveyors general, they will be posted on the cost records in the office of the surveyor general. Thereafter, vouchers to be paid by the special disbursing agent under the centralization plan will be sent to the District Cadastral Engineer, through the Office Cadastral Engineer, in whose office the vouchers will be posted on his cost keeping record, and the fact of such posting evidenced by the Office Cadastral Engineer's initials over the space for the District Cadastral Engineer's signature as approving officer.

To the end that prompt payment may be made of the many vouchers coming to a central office, it will be expected that each District Cadastral Engineer will, before approving a voucher, give it such an examination, or require such an examination to be given by some one under his supervision, as shall insure that the voucher is in proper form, properly signed by the claimant and certified,

ADDRESS ONLY THE COMMISSIONER OF THE GENERAL LAND OFFICE

*Inc.*  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE  
WASHINGTON

*[Signature]*  
June 25, 1925.

IN REPLY PLEASE REFER TO

1183478 "E" CGT

Standard township plat.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Federal Building,  
Denver, Colorado.

Sir:

This office is in receipt of your letter of June 9, 1925, with which you return the specimen township plat submitted for your consideration with my letter of June 4. The Manual Board has given due consideration to your comments and suggestions and is pleased to note your approval, in principle, of the form proposed.

Since the receipt of your letter the whole subject has been given further review and the following modifications have been approved by the Board (3 members present).

1. It is proposed to abandon the engraved plate heretofore in use and to prepare the new plat by photolithography.

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1183478 "E" CGT

2. The lettering upon the plat, with the exception of the two certificates, will appear in a vertical gothic type in lieu of the inclined Roman or modified Roman heretofore in use. The certificates will remain as per copy heretofore submitted.

3. The tabular statement in the lower left hand portion of the plat has been modified by the introduction in the first column of the designation of the lines surveyed. These lines are involved in practically all surveys and the purpose of the amendment is to reduce the amount of hand lettering required in the preparation of the plat.

4. The needle showing the true meridian has been transferred to the left hand margin of the plat in order that full space may be allowed on the right hand side between the neat line of the drawing and the border for such notes, tables and explanatory matter as may be necessary. The words "Mean Magnetic Declination", have been eliminated, as the impression prevails that this item of information is not now generally reported in the returns of our surveys and the Board feels, moreover, that it serves no particularly useful purpose sufficient to justify its appearance upon the plat.

1183478 "E" CGT

5. The bar scale and the corresponding equivalent scale have been inserted between the tabular statement and the certificates; the position as now shown may, however, be slightly shifted for the sake of better appearance. It has been deemed inadvisable to show the scale expressed as a ratio for the reason that although highly appropriate in the case of general maps its utility in connection with our township plats is not so evident.

Your suggestion that in printing the form the heading be stopped out on 40 percent of the edition has been adopted. The Board believes that this is a very excellent recommendation and that much better results can be obtained in the case of resurveys or special surveys if the space at the disposal of the draftsman is not restricted by the printed form.

I am inclosing herewith a rough tracing which will illustrate the changes above described. If these modifications meet your approval and if you have no further suggestions to offer we shall make an effort to send the plat to press at a very early date. Kindly advise by wire in this connection.

1183478 "E" CGT

Mr. Havell is at present out of the city but he has personally considered the proposed modifications and has expressed his approval of the changes.

Very respectfully,

*William Gray*  
Commissioner.

The Manual Board

*W. Paine*

Chairman.

*B. Anderson*

ADDRESS ( THE COMMISSIONER OF THE GENERAL LAND OFF.

1K  
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE

WASHINGTON

July 23 , 1925.

IN REPLY PLEASE REFER TO

1186706 "E" CGT.

Status and progress reports.

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Federal Building,  
Denver, Colorado.

Sir:

Reference is made to your letter of July 10, 1925, wherein you outline the plan adopted by your office for recording by card index, the status and progress of all official public land surveys executed under your jurisdiction and wherein you suggest that in the interest of economy of time and labor, the several forms of report heretofore submitted to this office be combined into a single report covering the situation as a whole.

With respect to the comprehensive system of indexing which you propose to inaugurate, the only suggestion which this office desires to offer is that there be included an item under the caption "Date of Approval of

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1186706 "E"CGT.

Special Instructions"; this date represents the final action by this office before the case is turned over to your office for assignment and is one to which reference is quite frequently made.

This office is in hearty accord with your suggestion looking to a reduction in the number of reports submitted, and is of the opinion that the plan which you propose will fully meet our requirements. As a matter of fact the only reports which are at all frequently consulted are those covering the status of surveys as formerly received from the offices of the U. S. Surveyors General, and the semi-monthly progress reports showing the number of parties in the field and the individual assignments at any given date. The monthly blue print progress reports having been abolished by the provisions of circular 996, a single report along the line suggested will, it is believed, provide all the information required by this office and your recommendation in this connection is accordingly approved.

Very respectfully,

  
Assistant Commissioner.

ADDRESS OF THE COMMISSIONER OF THE GENERAL LAND OFFICE

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GENERAL LAND OFFICE  
WASHINGTON



July 25, 1925

IN REPLY PLEASE REFER TO  
"A" FB

Mr. Frank M. Johnson,  
Supervisor of Surveys,  
Federal Bldg.,  
Denver, Colorado.

Sir:

The position of U.S. Surveyor General having been abolished, effective July 1, 1925, and the administration of all activities heretofore in charge of Surveyors General having been consolidated with the Field Surveying Service, the regulation requiring annual reports by Surveyors General becomes obsolete. You will, therefore, hereafter include the work performed in these offices in your annual report, with estimates for the surveying service in your charge.

Very respectfully,

*William Spry*  
Commissioner.

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CIRCULAR.

July 30, 1925.

: Status of Surveys' Report.

District Cadastral Engineers,  
Cadastral Engineering Service.

Gentlemen:

With a view to simplifying the survey status reporting system of this Service, the following procedure will be observed.

A 3" x 5" card index system showing the status of survey of each unit of each class of survey in each district will be maintained in each District Cadastral Engineer's office.

Public Land Surveys.

A master guide card will be set up and headed "Group No. \_\_\_\_\_ State \_\_\_\_\_."

A guide card will be set up and headed "T. \_\_\_\_\_ R. \_\_\_\_\_ Gr. \_\_\_\_\_ State \_\_\_\_\_." One guide card will be used for each unit whether it be a fractional township, a township, or any special work pertaining to the group indicated by the master guide card under which it is filed. Miscellaneous surveys and field investigations will be treated in the same way.

Thin bond paper cards will then be set up and headed "Gr. \_\_\_\_\_ State \_\_\_\_\_ Twp. (or other unit) \_\_\_\_\_," upon which to record the progress of the work.

Duplicates of each card (master, guide, and paper) will be sent to this office immediately upon being set up in local offices.

The salient points in the progress of public land surveys which it is necessary to record on the thin paper cards are:

1. Date, appropriation, and type of initiation thereof, such as settlers' application, Departmental order, etc.
2. Date of approval of special instructions.

3. Date of assignment and name of field engineer.
4. Date of commencement of field work.
5. Date of completion of field work.
6. Date of completion of notewriting and filing of notes in local office.
7. Date of commencement of office work on returns.
8. Date of completion of returns and forwarding to office of Supervisor of Surveys.

Mineral Surveys.

1. Date of application.
2. Date of issuance of survey order.
3. Date of filing of returns.
4. Date of approval.

Forest Homestead Entry Surveys.

1. Date of request for survey.
2. Date of issuance of survey instructions.
3. Date of filing of returns.
4. Date of approval.

As each point in the progress of the survey is reached, the fact will be written on a thin paper card, in duplicate, the duplicate being forwarded to this office; thus the cards under any unit will be exactly alike both in this office and the local office, and will contain a history of the progress of the work from beginning to end.

Immediately upon receipt of this circular, District Cadastral Engineers will cause to be prepared, in accordance with the foregoing, index cards showing the status, as of June 30, 1925, of each incomplete survey unit in their respective Districts.

The "Monthly Work Report," "Blue Print Progress Reports," and "Status of Surveys" reports, now being rendered by local offices, will be discontinued after July, 1925.

The monthly reports to me on temporary employees, Form B, 421; on mileage run and costs; and semi-monthly report on surveyors in the field, will be continued, as will also the report to the Commissioner on traveling expenses, Circular No. 958, dated August 7, 1924.

Very respectfully,

(Signed) Frank M. Johnson

Supervisor of Surveys.

RCM.