## UNITED STATES DEPARTMENT OF THE INTERIOR bureau of Land management duplicate <br> Field Notes

OF THE

DEPENDENT RESURUEY AND EXTENSTON SURVEY
INCLUDING LANDS ERRONEOUSLY OMTTTED

FROM THE ORIGINAL SUPVEY,

SECTION 29,

TOWNSHIP 39 NORTH, RANGE 9 EAST,
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Of the $\qquad$ FQURTH PRINCIPAL Meridian,

In the State of WISCONSIN

## EXECUTED BY

Hugh B. Crawford, Associate Cadastral Engineer
$\qquad$
$\qquad$

| Under special instructions dated and supplemental instructions dated | $\begin{gathered} \text { June } 9 . . \\ \text { July 19, } \end{gathered}$ | $\begin{aligned} & 19 \ldots 50 \text {, } \\ & 1950 \end{aligned}$ |
| :---: | :---: | :---: |
| for the surveys included under Group No. | 62 |  |
| and assignment instructions dated | July 26, | .... 1950 |


| Survey commenced | August 14 | 19.50 |
| :---: | :---: | :---: |
| Survey completed | August 25 | 19.50 |

## INDEX DIAGRAM


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Subdivistonal lines of sec. 29, Adjustddineapders of 1863
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$\because 1$ $\qquad$
4. $\qquad$

The subdiviaion and meander linea of F. 39 H., R. 9 E., wore surveyed by Willian E. Daugherty, Deputy 3urveyor, in 1863. The offleial aurvey is represented on the plat approved June 9, 1864. That plat ropresents several meandered lakes inoluding one aituated In sees. 20, 21 and 29; that lake is now known as Sand lake. The followng field notes are those of a dependont resurvey or reestab lishment of the boundaries of mec. 29, and oxtension survey including landa orroneously onltted from the original survey in seo. 29.

The survoy wan initiated as an administrative measure upon the application and ropresentations of Carl O. Borge, Amhorst Junotion, Wisoonsin, for the survoy of lands purportedly omitted from the original aurvey in sec. 29 of this township.

Preliminary th the resurvey the lines of the original survey wore retraced, and diligent searoh made for all corner poats, bearing treen, and other calle of the original field note record. When duly identified the corner positions were remonumented and new bearing treen marked.

Direot oontrol was found for all original cornor positions oxoopt the moander corner and the $\frac{1}{4}$ sec. cor. of socs. 28 and 29 , where single proportionato measuremente were applied in order to ancoriain the position of these corners. The true lines, thua adjucted to the identified original ovidence, wore then duly run and meriked through the timber.

The oxamination disolosed that a conaiderable area of land bordering on the autheriy shore of Sand lake, in eec. 29, was omitted from the original survey by reason of the grossly erroneous oharacter of the reported original meanders of the lake in that eection. The land so omitted has the atatus of publio land.

The reaurvey of the boundaries of sec. 29 presented conaiderable diatortion and deficiency in longths in those lines over the original record. To reach a more equitable looation for the recorded meandor line of the lake in sec. 29, proportionate points for the orossings of the reoorded meanders on the sectional subdivision lines were determined, as oaleulated from the original record and adjustod to the resurvey. Then preliminary to the establishment of the original meander line, the latitudes and departures of the recorded oourses were calculated and adjusted to a olosing with the several proportiomed points on the ubdivisional lines, distributing the clowing orror in each quarter along the several meander courses in proportion to the length of each course, adopting new courses to the noarest minute and lengthe to the nearest link. So much of this adjusted line as forms the boundary betwoen the lands inoluded in the original survoy and those orroneously onitted therefrom, has been ostablishod on the ground as a fixed and limiting boundary, with the angle points thereon monumented with regulation corner monumente, appropriately marked and witnessed. The present thore of Sand Lake in sec. 29, was meandered. The survey to include the lands ondtted form the original aurvey is made in sooordance with the provisions of Chapter 3 of the Manuel.

In order to simplify the reoord, the true line notes only are supplied horewith, wioh refor to the completed surveys.

The survey is exeouted with a solar transit made by Burf and Buff, eorial Ho. 17997, constructed in accordanoe with the standard epecifications of the Bureau of Land Vanagement. The horizontal circle has a diamoter of $4 \frac{1}{2}$ inches, wi th two double opposite verniere reading to aingle minuten; the vertionl oircle ham a diameter of 4 inobes, with one aouble vernier reading to single minutes. The inetrumat is equipped with the improved Smith solar attaohment, radius of latitude aro 3 inohes, and of deolination are $3 \frac{1}{2}$ inohes, each with verniers reading to ingle minutea. The instrument was in good oondition and mas placed in gatiafactory adjustment prior to the beginning of the survey.

Dependent Resurvey of Section Bounderies and Survey of
Lande Onitted from the Original Survoy, Sec. 29,
T. $39 \mathrm{M}_{\mathrm{o}}$, R. 9 E., Lth Prin. Mor., Wieconsin.

The directions of all lines herein roported were initially determined with the solar transit, carried forward by the transit angle mothod and rerified by meridian established by an altitude obsorvation of the am. The measurements were made with a ateol tape, 5 ohaine in length, graduated overy link for the first 100 links and the remainder at intervals of 10 11nks. The tape was tested by comparison with atandard tape and found correct.

Auguat 15, 1950, at the cor. of seos. 28, 29, 32 and 33, T. 39 m. 2. $9 \mathrm{E} 0^{\circ}$, in approximate latitude $45^{\circ} \mathrm{L9} 9^{\prime} 58^{\prime \prime}$ N. and longitude $99^{\circ} 23^{\prime}$ $03^{\prime \prime}$ 青., I make a series of three obesrvations of the $\operatorname{sum}$ for azimuth, each with the tolesoope in direot and reversed positions, observing opposite limbe of the un, by ighting at a flag on the random line weat of the station, traniliting the telescope and reeding the horicontal defleotion angles to the right to the mu.


By let observation Pleg bears By 2nd observation flag bears
By 3rd observation flag bears
Mean true bearing of flag
S. $89^{\circ} 014^{\prime \prime}$ \%. S. $39^{\circ} 01{ }^{\prime} 49^{\prime \prime}$ w. s. $89^{\circ} 01^{\prime} 16^{\prime \prime}$ W.
S. $89^{\circ} 01138^{\prime \prime}$.

The doolination of the sun for the mean of the three observations is $4^{\circ} 07^{\circ} 50^{\prime \prime}$.

Dependent Renurvey of the Boundaries of Sec. 29, T. 39 I., R. 9 E., 4th Prin. Mer., Wisconain.



Dependent nesurvey of the Boundaries of Seo. 29, F. $39 \mathrm{~N}, \mathrm{R} .9 \mathrm{E} ., 4$ th Prin. Mer., Wisconsin.


Dependent Resurvery of the Boundaries of Sec. 29,
T. $39 \mathrm{~N}_{0}$, R. 9 E., 4 th Prin. Mer., Wisconsin.


Dependent Resurvey of the Boundaries of Sec. 29, T. 39 N., R. 9 E., Lth Prin. Mer., Wisconsin


Dependent Resurvey of the Boundaries of Sec. 29, T. 39 N., R. 9 E., Lth Prin. Mer., Wisconsin.



Survey of Lands Omitted from the Original
Survey in Sec. 29, T. 39 N., R. 9 E., Lth Prin. Mer., Wisconsin.

## Chains

Point for W. $1 / 16$ sec. cor., secs. 20 and 29, in Sand Lake.
Land, gently roliling.
Soil, sandy loam.
Timber, birch and popple; undergrowth, young timber.

From the point for the center $\mathrm{E} .1 / 16 \mathrm{sec}$. cor. of sec. 29.
N. $5^{\circ} 25^{\prime}$ W., on the E. $1 / 16$ sec. line.

Over rolling land, through timber and undergrowth.
Enter recently cut over land.
Point for adjusted record meander line, at proportionate distance.
I did not momument this point because of its nearness to angle point No. 8 of the adjusted meanders, which point I determined by a line from angle point No. 7 passing through this point on the E. $1 / 16$ sec. line to the calculated position for the $N .1 / 16$ sec. line.

Point for E. $1 / 16$ sec. cor., secs. 20 and 29 , in Sand Lako.
Land, rolling.
Soil, sandy and stony loan.
Timber, birch and popple; undergrowth, young timber.

> Establishment of a Portion of the Recorded Original Meander Line of Sand Lake in Sec. 29, as a Fixed and Limiting Boundary

An exarination made in connection with the present survey, disclosed that the recorded original meander line of Sand Lake, in Sec. 29 is grossly erroneous and that a considerable area of pubilc land situated between the recorded meander line and the actual shore line of Sand Lake was omitted from the original survey of the township.

The resurvey of the boundaries of sec. 29 disclosed considerable distortion and deficiency in lengths of those lines. To reach. more equitable location for the record meander line of the lake, proportionate points for the crossings of the meridonial subdivisional lines of the section with the recorded meander line were determined. Then, preliminary to the establishment of the original meander IIne, the latitudes and departures of the recorded courses were calculated and adjusted to a closing with the proportioned points of the meridional subdivision lines, distributing the closing errors along the

> Survery of Lends Onitted from the Original Survey in Sec. 29, T. $39 \mathrm{~N} ., \mathrm{R} .9 \mathrm{E}$. .
> Lth Prin. Mer., Wisconsin


## Survey of Lands Onitted from the Original Survey in Sec. 29, T. 39 N., R. 9 E., 4th Prin. Mer., Wisconsin



| Chains | Set an iron post, 30 ins. long, 2 ins. diam., 22 ins. In the ground, with brass cap mkd. <br> from which <br> A hemlock stump, 16 ins. diam., bears $\mathrm{S}^{\circ} 8^{\circ}$ E., 11 lks. dist., mked. AP8 S29 BS. <br> A hemlock stump, 16 ins. diam., bears N. $12^{\circ}$ W., 19 lks . dist., mkd. AP8 S29 BS. <br> N. $23^{\circ} 49^{\prime}$ E., 10.27 chs. |
| :---: | :---: |
| 1.78 | Road, bearing N. 32 $\frac{1}{2}^{\frac{1}{*}}$ W., and S. $32 \frac{1}{2}^{\frac{1}{*}}$ E. |
| 3.20 | SW. end of nearly round pond, left 80 lks . dist. |
| 4.50 | NE. end of pond, left, 50 lks . dist. |
| 5.00 | Leave cut over land, enter timber and undergrowth, bearing $N$ and $S$. |
| 7.20 | Intersect swamp and flowage area, bearing S. $70^{\circ}$ E. and N. $30^{\circ} \mathrm{W} .3$ point selected for witness angle point No. 9. <br> Set an iron post, 30 ins. long, 2 ins. diam., 24 ins. in the ground, with brass cap mkd. |
|  | from which <br> A hemlock, 16 ins. diam., bears S. $65^{\circ}$ E., $45 \frac{1}{2}$ lks. dist., mkd. WC AP9 S29 BT. <br> A maple, 5 ins. diam., bears N. $377^{\circ}$ W., 201 ks . dist., mkd. WC AP9 S29 BT. |
| 10.27 | Adjusted position for angle point No. 9 falls in flowage; impractical to establish momument. <br> N. $55^{\circ} 37^{\prime}$ E., 7.51 che. |
| 5.00 | Leave swamp and flowage, enter rolling land, bearing w. and SE. |
| 7.51 | The meander cor. of secs. 20 and 29 , on E. shore of Sand Lake. <br> Land, rolling, gently rolling, and level. <br> Soll, sandy loan, with some stone. <br> Timber, birch, popple, hemlock, maple, spruce, and balsam; undergrowth, young timber and alder. |

## Meanders of Sand Lake

From the meander cor. of secs. 20 and 29 , on $E$. shore of the lake.
With the meanders of Sand Lake in sec. 29.
Along a well defined bank 6 ft . in height, gradually descending to water level, with timber and undergrowth.
S. $63^{\circ} 45^{\prime}$ W., 3.70 chs.

> At 2.60 chs., leave high bank to low ridge between lake and swamp flowage; at end of course, leeve ridge, enter flowage area.
S. $80^{\circ} 15^{\prime}$ W., 5.00 che.
N. $85^{\circ} 30^{\prime}$ W., 6.20 chs.

At $4.40 \mathrm{chs}$. , leave swamp, enter along banks 4 to 5 ft . in height; at $5.60 \mathrm{chs} .$, boat landing at end of road from S. $17^{\circ} \mathrm{E}$.
N. $72^{\circ} 15^{\prime}$ W., 4.40 chs.

At 0.60 chs., leave high land, enter swamp; at 3.00 chs. leave swenp, enter high land, banks 4 to 10 ft . in height.
N. $75^{\circ} 45^{\prime}$ W., 2.60 chs.
N. $84^{\circ} 00^{\prime}$ W., 2.60 chs.

WEST, 4.20 chs .
S. $62^{\circ} 45^{\circ} \mathrm{W}_{0}, 2.20 \mathrm{chs}$. At end of course, begin low bank 2 to 3 ft. in height.
S. $37^{\circ} 45^{\prime}$ W., 1.50 chs.
S. $75^{\circ} 45^{\prime}$ W., 2.31 chs.
N. 77* $30^{\prime} \mathrm{W} ., 2.50 \mathrm{chs}$.
S. $89^{\circ} 15^{\prime}$ W., 2.50 chs.
S. $80^{\circ} 00^{\prime}$ W., 3.30 chs.
S. $75^{\circ} 30^{\prime}$.W., 2.70 chs.
S. $85^{\circ} 30^{\prime}$ W., 3.60 chs.
N. $75^{\circ} 301$ W., 3.30 chs.
N. $61^{\circ} 15^{\prime}$ W., 4.50 chs. At end of course, leave high land, begin ridge between lake and swanp flowage area.
N. $83^{\circ} 15^{\prime}$ W., 1.50 chs.
N. $48^{\circ}$ 15' W., 4.20 chs.

At 1.00 chs., leave ridge and flowage area, enter high land, bank 2 to 6 ft . in height.
S. $21^{\circ} 00^{\prime} W_{0}, 2.90$ chs.
S. $0^{\circ} 15^{\prime}$ W., 3.10 chs. At end of course, leave high land, enter flowage area.
S. $5^{\circ} 15^{\prime} \mathrm{W} ., 4.00$ chs.
N. $78^{\circ} 45^{\prime}$ W., 3.17 chs. Point for angle point No. 2 of the adjusted meanders of 1863.

Land, rolling and lovel.
So11, mandy and stony loam.
Timber, bl reh, popple, hemioek, and pine; undergrowth, young timber and alder.

## Gomornl Dosoription.

The greater part of the land opitted from the origenal survey and ineluded in this marver is gontiy roliing to roliing upland, reaching approximately 25 ft . ebove the weter lovel of send Lako. There in as area of mamp at the east ond and one at the went ond, both coverod by Kiowage orcetted by a dam at the outlet of Dem Lake, the lowir lake of this chatn; thew am three mall areas of suamp above the klowage. The coll in a mandy loam with ocme gravol and stone.

The timber consists of bireh, popple, hemlook, Noxway pine, and maple. The mamp and thomego aroas foxmerly mupportod a good stand of coder, tamarack, and apruce. A conalderable area of the upland timber has been out recently and the ground left completely bare of timber. The stumpa indicate this timber ranged from 12 to 24 ing. diam. The stapaing tiaber is motiry aceend grewth. ranging from 4 to 10 ins. diam. There is a goed stand of young Horway pine on a knoll at the extrine NW. part of the area, ranging from 4 to 10 ins. dism. Alder undergrowth is found in the awamp axeas and around the edge of the lake and flowage.

Thoze are two oubins, $20 \times 24 \mathrm{ft}$. ou the area, a ched, and a woll pump; the cabina are not findehed ineide. A roed leads to the cabine frem the south and coveral logging traile orose the area. These improvmente were made by Carl O. Borge, the applicant.
the formation of the body of land ineluded in thia murvey is aimilar in overy respeet to the adjecent survered land. A ming count was made on a hemlook otump, 24 ins. diem., and approximately 200 annuel ringe were counted.

On the ovidence developed, it is concinded thet the mourvoyed axee was in oxistione in 1840, When Wisconim wat abuitted into the Daton, in 2863, when the temichip wes oublivided, and at all subsequent cates, and thozefore has the etatue of pubilo land.

There are no aurface indioations of mineral doposite.
All of the now lote are over $50 \%$ upland.

## CERTIFICATE OF CADASTRAL ENGINEER

## I, Bngh B. Gxawford

HEREBY CERTIFY upon honor that, in


the lande onitted from the original survey in soction 29, T. 39 I., R. 9 I.,
of the
fourth Princtpal Meridian, in the State of
W18consin
which are represented in the foregoing field notes as having been executed by me and under my direction; and that said survey has been made in strict conformity with said instructions, the Manual of Instructions for the Survey of the Public Lands of the United States, and in the specific manner described in the foregoing field notes.

Denver, Colorado
Bugh B. Oraviond
January 8. 1951.
Assoodate Cadastral Engineer.

## CERTIFICATE OF APPROVAL

Bureau of Land Management,
Washington, D. C.,
3
The foregoing field notes of thef survey of the section boundaries and survey of lands omitted Ercm the ortamal eurver in oection 29 . T. 39 N., R. 9 S., 4th Prin. Mer., Wimeonsin
executed by Fugh B. Grawford
having been critically examined and found correct, are hereby approved.
(2, En En Cumitgon
Chiof, Branch of Engineoring and Constrwotion.


## CERTIFICATE OF TRANSCRIPT

I CERTIFY that the foregoing transcript of the field notes of the above-described surveys in $\qquad$


## UNITED STATES DEPARTMENT OF THE INTERIOR bureau of land management

## FIELD ASSISTANTS

Mames

