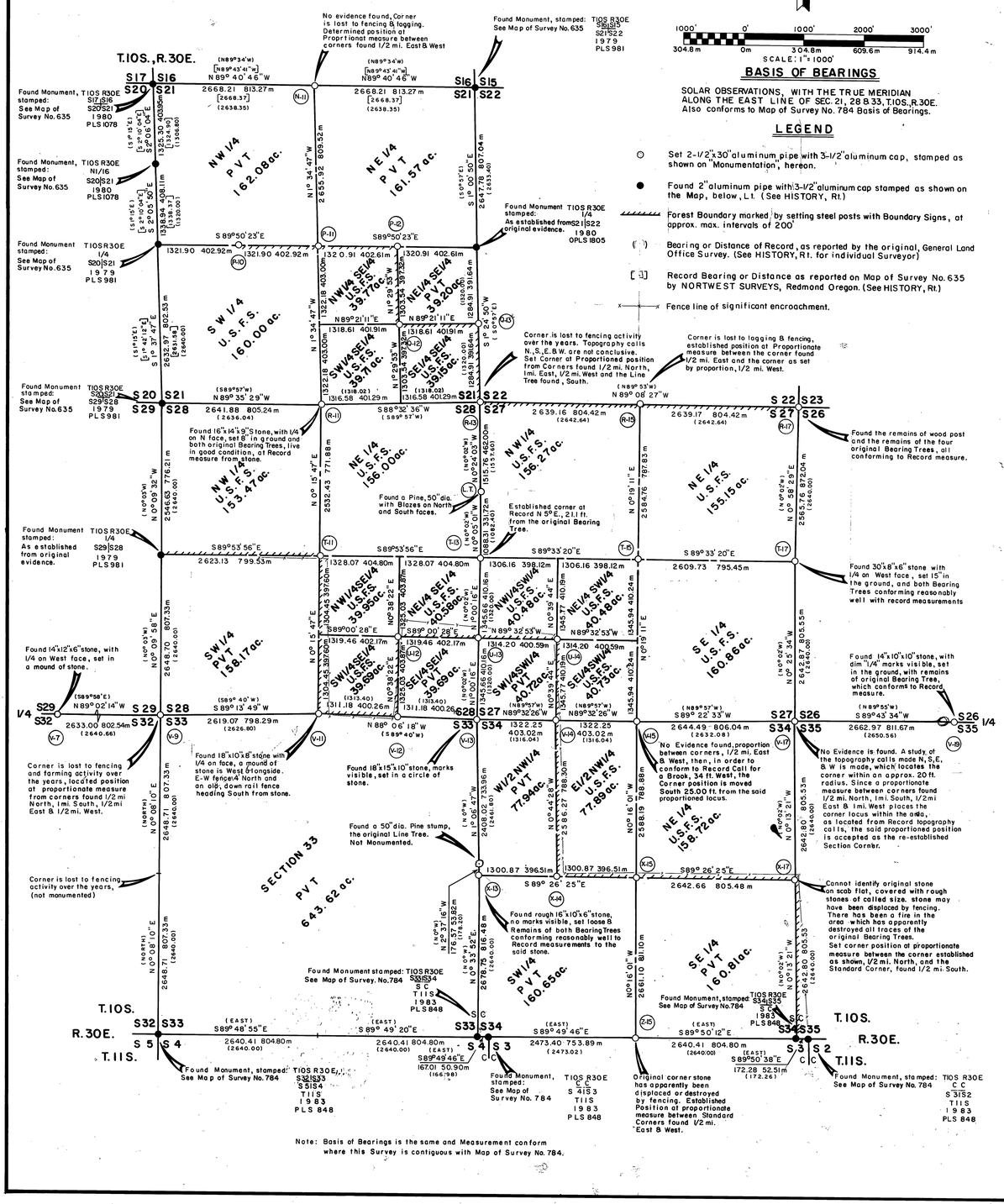
Retracement of Exterior Lines, Sections 21, 27, 28 & 34, and the Subdivision of said Sections 21, 27, 28 & 34, all in T.10S., R.30E., W.M., Grant County Oregon.

May, June, 1984 and July, Aug., 1985
FOR: Malheur National Forest
BY: Douglas M. Ferguson, PLS 848

Ferguson Surveying & Engineering
MT. Vernon Oregon



1000' 0' 1000' 2000' 3000'
304.8m 0m 304.8m 609.6m 914.4m
SCALE: 1" = 1000'

BASIS OF BEARINGS

SOLAR OBSERVATIONS, WITH THE TRUE MERIDIAN ALONG THE EAST LINE OF SEC. 21, 28 & 33, T.10S., R.30E. Also conforms to Map of Survey No. 784 Basis of Bearings.

LEGEND

- Set 2-1/2"x30" aluminum pipe with 3-1/2" aluminum cap, stamped as shown on 'Monumentation', hereon.
- Found 2" aluminum pipe with 3-1/2" aluminum cap stamped as shown on the Map, below, Lt. (See HISTORY, Rt.)
- Forest Boundary marked by setting steel posts with Boundary Signs, at approx. max. intervals of 200'
- ( ) Bearing or Distance of Record, as reported by the original, General Land Office Survey. (See HISTORY, Rt. for individual Surveyor)
- [ ] Record Bearing or Distance as reported on Map of Survey No. 635 by NORTWEST SURVEYS, Redmond Oregon. (See HISTORY, Rt.)
- Fence line of significant encroachment.

HISTORY

The Township Line between Townships 10 & 11 South is originally surveyed in Aug., 1873, by W.H. Byars, under General Land Office Contract No. 197. He ran East on a true line, establishing corners at 40 chain intervals.

A portion of Township 10 South, Range 30 East was Subdivided by W.H. Byars, in Sept., 1873, also under General Land Office Contract No. 197. That work which is pertinent to this Survey is the establishment of the line between Sections 32 & 33 and the line between Sections 16 & 21.

In 1892, Henry W. Cooke, under General Land Office Contract No. 589, Subdivided the remainder of Township 10 South, Range 30 East. That Work which is pertinent to this Survey is the establishment of The lines between Sections 20 & 21, Sections 21 & 22, Sections 21 & 28, Sections 22 & 27, Sections 26 & 27, Sections 27 & 28, Sections 28 & 29, Sections 28 & 33, Sections 27 & 34, Sections 28 & 33, Sections 33 & 34 and Sections 34 & 35. In performing this partial Township Subdivision he treated the line through the E-W Centerline of the Township as an auxiliary Township line, with lots along the north of Section 21.

In 1979 & 1980 the firm of "Northwest Surveys" of Redmond Oregon, retraced and subdivided Section 20, T.10S., R.30E., The Professional Surveyors involved were PLS 981 & PLS 1078. Refer to Map of Survey No. 635 of the Grant County Survey Records. PLS 981 also monumented the 1/4 corner between Sections 29 & 28 from original evidence, See CERTIFIED RECORD OF LAND CORNER MONUMENTATION, as on file in the Grant County Survey Records.

In 1980 Elmo Calkins, PLS 1805, monumented the 1/4 corner between Sections 21 & 22, from original evidence, See CERTIFIED RECORD OF LAND CORNER MONUMENTATION, as on file in the Grant County Survey Records.

In 1982 & 1983, this firm, "Ferguson Surveying & Engineering", under the direction of this surveyor, Douglas M. Ferguson, PLS 848, retraced and re-established the line between Townships 10 & 11 South, Range 30 East, along the South Lines of Sections 32, 33, 34, & 35. (See Map of Survey No. 784, of the Grant County Survey Records.)

In 1983, 1984, and 1985, this firm, "Ferguson Surveying & Engineering", under the direction of this surveyor, Douglas M. Ferguson, PLS 848, performed a survey contiguous to the West edge of this Survey. (See Map of Survey No. 908, of the Grant County Survey Records.)

NARRATIVE

This Survey is performed under contract for the Malheur National Forest, the purpose of which is the monumentation and marking of the Forest boundaries and controlling corner thereof. In order to accomplish this a retracement of the pertinent original lines is made, as well as the retracement of the East line of Section 20, as previously retraced in 1979 & 1980 as shown in the "HISTORY". All available original evidence is recovered and all recent monumentation and survey work is recovered as shown on the map. The corners to Sections 21/22/27/28, the 1/4 corner to Sections 22/27, the corner to Sections 28/29/32/33, the 1/4 corner to Sections 27/34, the corner to Sections 26/27/34/35, the 1/4 corner to Sections 34/35 and the South 1/4 Corner of Sec. 34 are all determined to be lost, primarily due to fencing and forming activity. (See specific details as shown on the map.) The lost corners are re-established as shown on the map and the required subdivisions are made in a routine manner.

It should be noted that this map is a portion of a larger overall project performed under the below shown Contract No., and in so doing the entire project was computed using a single local grid thus relating all work on the project. In order to provide a good proximity to true bearings, the bearings on this map are rotated 4°00'52" from the North project Grid Azimuth, which places true meridian as shown on this map, along the East lines of Sections 21, 28, & 33. (convergency = 0°00'52" per mile)

Pertinent provisions of the Bureau of Land Management, "Manual of Surveying Instructions", of 1973 are followed in the performance of this survey, in particular, Chapter Four, Five & Six.

Positional control for this survey is provided by a closed traverse network. LIETZ SDM 3E Electronic Tacheometer is used to obtain the measurements and HP-86B Computer System, with Lewis & Lewis soft ware is used to perform the computations. Field Notes and computations are on file in the office of "Ferguson Surveying & Engineering", Mt. Vernon Oregon.

I, Douglas M. Ferguson, Registered Professional Land Surveyor in the State of Oregon, hereby certify that this plat, notes and records hereon or attached are a correct representation of the survey I performed during, Nov. & Dec., 1983, May, June, Oct., & Nov., of 1984 and Aug., 1985, for the U.S. Forest Service, in accordance with the statutes of the State of Oregon and the articles of my contract, No. 53-04H1-3-9418N.

Douglas M. Ferguson, Or. PLS 848

MONUMENTATION

See standard U.S.F.S. "INDEX No.", in circle, on the Map Lt., Monuments are stamped & Bearing Trees or other Accessories are taken as shown below. Nailed Bearing Tree signs above scribing blaze, warning signs on back and brass washers stamped "PLS 848 above BT scribe on each tree. Set steel posts with warning and/or boundary signs, on the property line, approx. 5 ft. each way from Property Corners. Set steel posts with warning sign within 5 ft., in a cardinal direction from each Controlling Corner. See "CERTIFIED RECORD OF LAND CORNER MONUMENTATION" forms as referenced to this Map of Survey "No. 913" and on file in office of the Grant County Surveyor, for complete description of History, Evidence, Monument & Accessories.

T10S R30E S16 (N-11) W1/16 S21 1985 PLS 848 — Pine 8" dia., Bears N 9°W., 52.2ft., scribed: 1/4 S16 BT; Pine 14" dia., Bears S 12°E., 60.6ft., " 1/4 S21 BT	T10S R30E C1/4 S28 1985 PLS 848 (T-11) — Juniper 16" dia., Bears S28°W., 9.4ft., scribed: C1/4 S28 BT; Juniper 8" dia., Bears S54°W., 57.0ft., " C1/4 S28 BT	T10S R30E S28 S27 S33 S34 1985 PLS 848 (V-13) — Set 5/8"x30" iron pins with plastic cap stamped: SURVEY MARKER PLS 848", and steel guard post with Bearing Tree and Warning signs, as follows: N45°W., 10.0ft., N45°E., 10.0ft., S45°E., 10.0ft., and S45°W., 10.0ft., from the corner.	
T10S R30E (R-10) W1/16 S21 1985 PLS 848 — Fir 6" dia., Bears N37°W., 8.5 ft., scribed: C-W1/16 S21 BT; Fir 8" dia., Bears S27°W., 26.9 ft., " C-W1/16 S21 BT	T10S R30E 1/4 S28 S27 1985 PLS 848 (T-13) — Pine 8" dia., Bears S58°E., 20.5 ft., scribed: 1/4 S27 BT; Juniper 6" dia., Bears S12°W., 15.3 ft., scribed: 1/4 S28 BT	T10S R30E S27 W1/16 S34 1984 PLS 848 (V-14) — Juniper 11" dia., Bears N68°38'E 31.4ft., scribed: W1/16 S27 BT; Juniper 12" dia., Bears S70°56'E 61.0ft., scribed: W1/16 S34 BT	
T10S R30E C1/4 S21 1985 PLS 848 (P-11) — Pine 10" dia., Bears S75°W., 29.6 ft., scribed: C1/4 S21 BT; Pine 12" dia., Bears N 6°W., 47.3 ft., " C1/4 S21 BT	T10S R30E C1/4 S27 1985 PLS 848 (T-15) — Fir 8" dia., Bears S67°E., 34.5 ft., scribed: C1/4 S27 BT; Pine 10" dia., Bears N 33-1/2°W., 67.1 ft., scribed: C1/4 S27 BT	T10S R30E 1/4 S27 W1/16 S34 1985 PLS 848 (V-15) — Pine 12" dia., Bears N25°W., 13.7ft., scribed: 1/4 S27 BT; Fir 8" dia., Bears S58-1/2°E., 28.4ft., scribed: 1/4 S34 BT	
T10S R30E E1/16 S21 C 1985 PLS 848 (P-12) — Fir 10" dia., Bears N11°E., 12.4 ft., scribed: C-E1/16 S21 BT; Fir 7" dia., Bears S12°W., 24.5 ft., scribed: C-E1/16 S21 BT	T10S R30E 1/4 S27 S26 1985 PLS 848 (T-17) — Fir 6" dia., Bears S69°E., 16.5ft., scribed: 1/4 S26 BT; Fir 6" dia., Bears N40°W., 28.1ft., scribed: 1/4 S27 BT	T10S R30E S22 S26 S34 S35 1985 PLS 848 (V-17) — Juniper 7" dia., Bears N43°W., 21.7ft., scribed: T10S R30E S27 BT; Pine 7" dia., Bears N67°E., 16.0ft., " T10S R30E S26 BT; Pine 8" dia., Bears S51-1/2°E., 48.2ft., " T10S R30E S35 BT; Juniper 9" dia., Bears S66°W., 38.2ft., " T10S R30E S34 BT	
T10S R30E S1/16 S21 S22 1985 PLS 848 (P-13) — Pine 8" dia., Bears N23°W., 7.3 ft. scribed: S1/16 S21 BT; Pine 14" dia., Bears S62°E., 5.7 ft. " S1/16 S22 BT	T10S R30E SW1/16 S27 1985 PLS 848 (U-14) — Set 5/8"x30" iron pin with plastic cap stamped: "SURVEY MARKER PLS 848" and guard post with warning and boundary signs South 10.0ft. and West 12.0ft. from the corner.	T10S R30E 1/4 S26 S35 1985 PLS 848 (V-18) — Pine 9" dia., Bears N 3°W., 40.5ft., scribed: 1/4 S26 BT; Juniper 5" dia., Bears S26°W., 19.8ft., scribed: 1/4 S35 BT	
T10S R30E SE1/16 S21 1985 PLS 848 (Q-12) — Pine 6" dia., Bears N 5°E., 35.8 ft. scribed: SE1/16 S21 BT; Fir 11" dia., Bears S48°W., 36.8 ft. scribed: SE1/16 S21 BT	T10S R30E S1/16 S28 S27 1985 PLS 848 (U-13) — Set 5/8"x30" iron pins, with plastic caps stamed "SURVEY MARKER PLS 848" and guard post with Bearing Tree, Warning and Boundaty Signs, East 10.0ft. and West 10.0ft., from the corner.	T10S R30E 1/4 S33 S34 1985 PLS 848 (X-13) — Pine 10" dia., Bears N69°W., 32.4ft. scribed: 1/4 S33 BT; Tamarack 13" dia., Bears S47°E., 20.3ft., scribed: 1/4 S34 BT	
T10S R30E S21 1/4 S28 1985 PLS 848 (R-11) — Original BT, Pine 30" dia., Bears N 38°E., 38.7 ft.; Original BT, Juniper 20" dia., Bears S74°E., 29.0ft. (no new scribing on either tree.)	T10S R30E SE1/16 S28 1984 PLS 848 (J-12) — Fir, 10" dia., Bears S67°W, 38.6ft., scribed: SE1/16 S28 BT; Fir 7" dia., Bears S19°W., 53.3ft., " SE1/16 S28 BT	T10S R30E W1/16 C S34 1985 PLS 848 (X-14) — Fir 8" dia., Bears N45°E., 16.2ft., scribed: C-W1/6 S34 BT; Fir 8" dia., Bears N35°W., 26.9ft., scribed: C-W1/6 S34 BT	
T10S R30E S21 S22 S28 S27 1985 PLS 848 (R-13) — Pine 12" dia., Bears N47°08'W., 34.1ft., scribed: T10S R30E S21 BT; 5/8"x30" iron pin, with plastic cap stamped: SURVEY MARKER PLS 848, and guard post, Bears N50°06'E., 10.0 ft.; Juniper 7" dia., Bears S25°53'E., 89.4ft., scribed: T10S R30E S27 BT; Pine 14" dia., Bears S41° 26'W., 109.2ft., scribed: T10S R30E S28 BT	T10S R30E S29 S32 1984 PLS 848 (V-7) — Juniper 10" dia., Bears N30°E 17.4ft., scribed: 1/4 S29 BT; Pine 14" dia., Bears S55°W 135.0ft., " 1/4 S32 BT	T10S R30E 1/4 S34 1985 PLS 848 (X-15) — Juniper 9" dia., Bears S11°E., 34.3ft., scribed: C1/4 S34 BT; Juniper 12" dia., Bears S67°W., 41.3ft., scribed: C1/4 S34 BT	
T10S R30E S22 1/4 S27 1985 PLS 848 (R-15) — Pine 13" dia., Bears S33°W., 18.8ft., scribed: 1/4 S27 BT; Pine 12" dia., Bears N44°E., 19.1ft., " 1/4 S22 BT	T10S R30E S29 S28 S33 S34 1984 PLS 848 (V-9) — Pine 16" dia., Bears N84°48'W 117.8ft., scribed: T10S R30E S29 BT; Pine 28" dia., Bears N6°10'E 324.2ft., scribed: T10S R30E S28 BT; Pine 14" dia., Bears S81°02'E 155.5ft., scribed: T10S R30E S33 BT; Pine 18" dia., Bears South 22.8ft., scribed: T10S R30E S32 BT	T10S R30E 1/4 S34 S35 1985 PLS 848 (X-17) — Pine 16" dia., Bears S75°04'E., 38.4ft., scribed: 1/4 S35 BT; Pine 20" dia., Bears N28°39'W., 109.8ft. scribed: 1/4 S34 BT	
T10S R30E S21 S23 S27 S26 1985 PLS 848 (R-17) — Fir 8" dia., Bears N67°W., 64.4ft., scribed: T10S R30E S22 BT; Fir 8" dia Bears N76°E., 40.4ft., " T10S R30E S23 BT; Pine 22" dia., Bears S32°E., 18.8ft., " T10S R30E S26 BT; Fir 12" dia., Bears S48°W., 11.3ft., " T10S R30E S27 BT	T10S R30E S28 S33 1985 PLS 848 (U-11) — Juniper 7" dia., Bears S36°W 6.1ft., scribed 1/4 S33 BT; Pine 14" dia., Bears N59°W 39.3ft., " 1/4 S28 BT	T10S R30E 1/4 S34 S C 1985 PLS 848 (Z-15) — Juniper 12" dia., Bears N57°39'E., 88.9ft., scribed: 1/4 S34 BT; Juniper 5" dia., Bears N 3°09'W., 34.5ft., " X BT	
T10S R30E LINE TREE S28 S27 1 RM 48.3 1985 PLS 848 (L-T) — Juniper 8" dia., Bears N43°W., 7.0ft., scribed: LINE TREE BT; Juniper 10" dia., Bears N43°E., 9.6ft., scribed: LINE TREE BT (Bearing Trees ref. Center of original Line Tree.)	T10S R30E S28 E1/16 S33 1985 PLS 848 (V-12) — Juniper 6" dia., Bears N88°E., 19.3ft., scribed: E1/16 S28 BT; Pine 6" dia., Bears S53°E., 29.8ft., scribed: E1/16 S33 BT		

RECEIVED AND FILED
MAR 12 1986
OFFICE OF COUNTY SURVEYOR
Grant Co. Oregon
Attest:

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON JULY 12, 1985
DOUGLAS M. FERGUSON
848

MAP OF SURYEY NO. 913