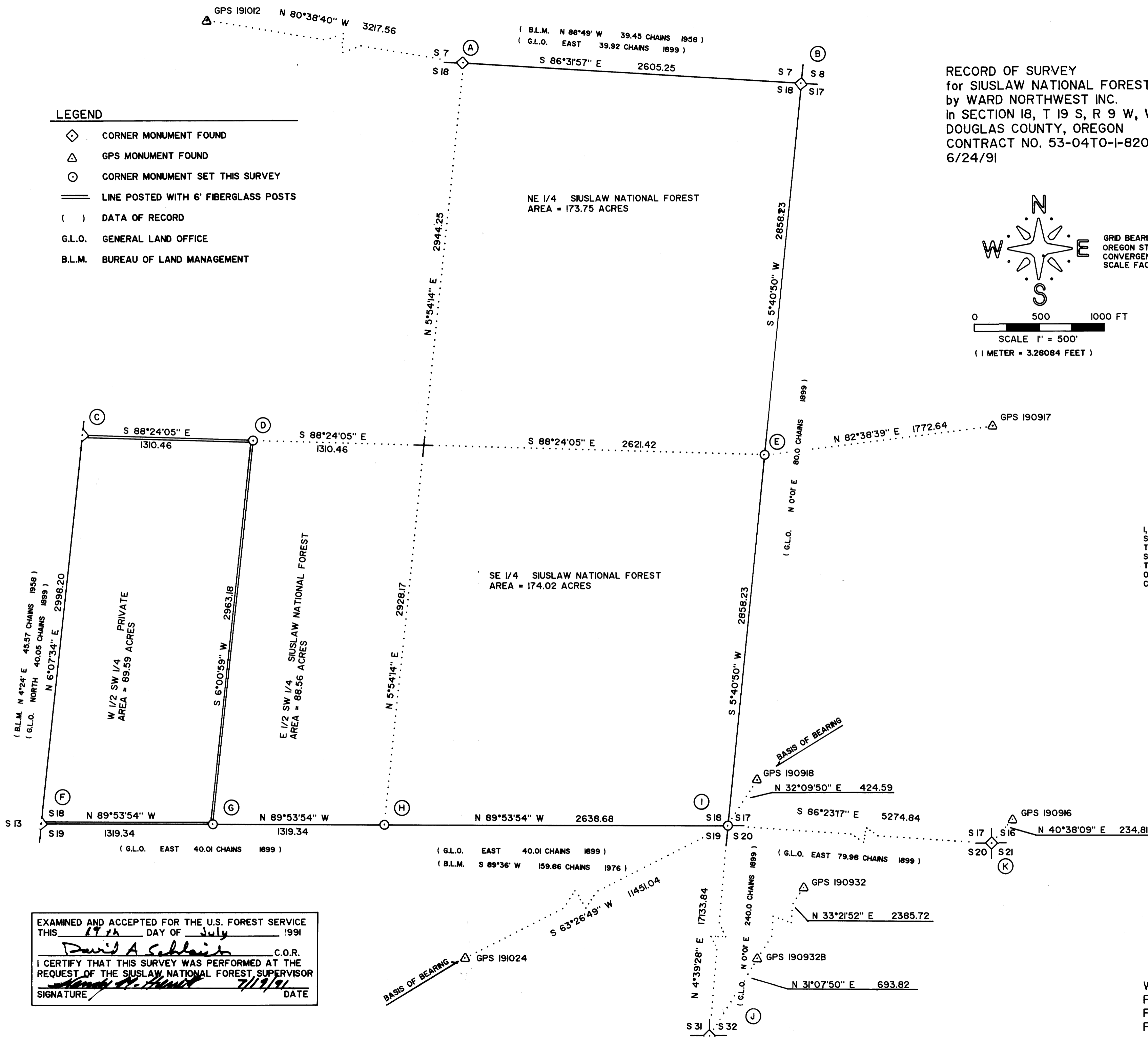
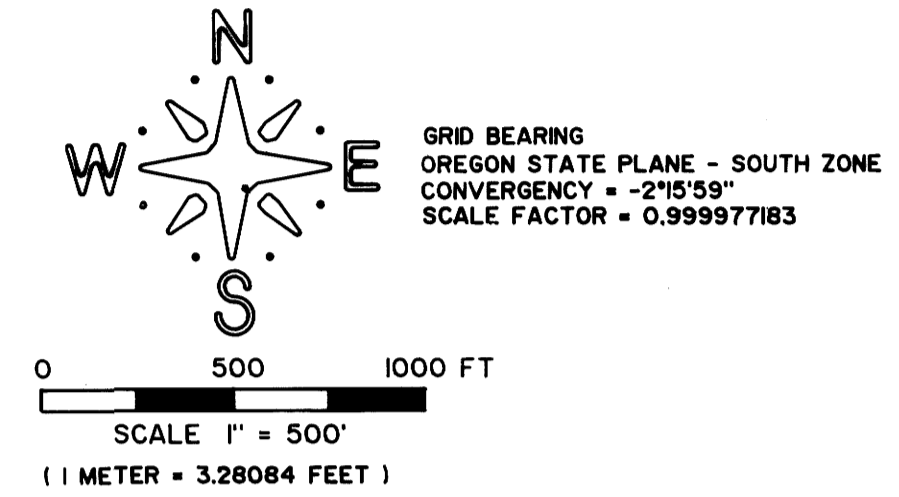


- LEGEND**
- ◊ CORNER MONUMENT FOUND
 - △ GPS MONUMENT FOUND
 - CORNER MONUMENT SET THIS SURVEY
 - ==== LINE POSTED WITH 6' FIBERGLASS POSTS
 - () DATA OF RECORD
 - G.L.O. GENERAL LAND OFFICE
 - B.L.M. BUREAU OF LAND MANAGEMENT

RECORD OF SURVEY
for SIUSLAW NATIONAL FOREST
by WARD NORTHWEST INC.
in SECTION 18, T 19 S, R 9 W, WM
DOUGLAS COUNTY, OREGON
CONTRACT NO. 53-04TO-I-8203 NORTHFORK SMITH RIVER CADASTRAL.
6/24/91



I, ROBERT B. WARD JR., A REGISTERED LAND SURVEYOR IN THE STATE OF OREGON HEREBY CERTIFY THAT THIS PLAT AND THE NOTES HEREON ARE A CORRECT REPRESENTATION OF A SURVEY I PERFORMED DURING MAY AND JUNE OF 1991, FOR THE U.S. FOREST SERVICE, IN ACCORDANCE WITH THE STATUTES OF THE STATE OF OREGON AND WITH THE ARTICLES OF MY CONTRACT.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Robert B. Ward Jr.
OREGON
ROBERT B. WARD, JR.
JULY 30 1976
1291

WARD NORTHWEST INC.
P.O. BOX 105
FLORENCE, OREGON 97439
PH: 997-9201

EXAMINED AND ACCEPTED FOR THE U.S. FOREST SERVICE
THIS 17th DAY OF July 1991
David A. Schlaich C.O.R.
I CERTIFY THAT THIS SURVEY WAS PERFORMED AT THE
REQUEST OF THE SIUSLAW NATIONAL FOREST SUPERVISOR
Kenny A. Smith 7/19/91
SIGNATURE DATE

RECORD OF SURVEY
for SIUSLAW NATIONAL FOREST
by WARD NORTHWEST INC.
in SECTION 18, T 19 S, R 9 W, WM
DOUGLAS COUNTY, OREGON
CONTRACT NO. 53-04T0-I-8203 NORTHFORK SMITH RIVER CADASTRAL
6/24/91

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Robert B. Ward, Jr.

OREGON
ROBERT B. WARD, JR.
JULY 30, 1976
1991

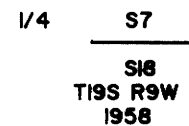
DATUM: NAD27
ZONE: 3602 OREGON SOUTH
STATE PLANE IN: US SURVEY FEET

STATION	LATITUDE	LONGITUDE	NORTHING	EASTING	CONVERGENCE	SCALE FACTOR
GPS 191012	43°55'54.4" N	123°49'42.0" W	842941.849	1123387.475	-2°16'37.5"	0.999983376
GPS 190916	43°54'54.1" N	123°47'13.4" W	836418.731	1134014.163	-2°14'55.8"	0.999979519
GPS 190917	43°55'24.7" N	123°48'01.3" W	839643.984	1130637.857	-2°15'28.5"	0.999981463
GPS 190918	43°54'57.2" N	123°48'24.6" W	836932.267	1128822.911	-2°15'44.5"	0.999979712
GPS 191024	43°53'59.0" N	123°50'44.5" W	831453.912	1118353.700	-2°17'20.2"	0.999976065
GPS 190932	43°52'30.7" N	123°48'15.8" W	822082.009	1128876.327	-2°15'38.5"	0.999970677
GPS 190932B	43°52'10.5" N	123°48'32.7" W	820089.480	1127564.270	-2°15'50.0"	0.999969473

(A) 1/4 CORNER S7, S18

FND: 3-1/4" DIA. BRASS CAP MARKED
WITH THE FOLLOWING ACCESSORIES,

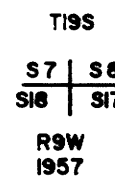
25" FIR BEARS S 38-3/4° E, 40.6 (HEALED FACE)
30" FIR BEARS N 32° W, 64.6 (VISIBLE SCRIBING)*
ROOT HOLE BEARS N 34-3/4° W, 42.8 (DOWNED BT)



(B) SECTION CORNER S7, S8, S17, S18

FND: 3-1/4" DIA. BRASS CAP MARKED
WITH THE FOLLOWING ACCESSORIES,

8" HEMLOCK BEARS N 79° E, 27.0 (HEALED FACE)
34" FIR BEARS N 15-1/4° W, 17.8 (HEALED FACE)
FIR SNAG REMAINS BEARS N 82-1/2° W, 8.5
37" HEMLOCK BEARS S 39-3/4° W, 21.9 (HEALED FACE)
33" FIR BEARS S 53-3/4° E, 44.4 (HEALED FACE)



(C) W 1/4 CORNER S18 ONLY

FND: 3" DIA. BRASS CAP MARKED
WITH THE FOLLOWING ACCESSORIES,

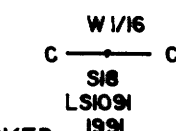
42" FIR STUMP BEARS S 59-1/4° E, 27.2 (NO MARKS)
11" FIR BEARS N 36-3/4° E, 27.1 (VISIBLE SCRIBING)*
3" DIA. BRASS CAP REFERENCE MONUMENT
BEARS N 83°22' E, 52.44 AND MARKED



(D) CW 1/16 CORNER S18

SET: U.S.F.S. ALUMINUM CORNER MONUMENT MARKED
WITH THE FOLLOWING ACCESSORIES,

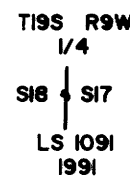
11" FIR BEARS N 67° W, 4.4 (SCRIBED "CW1/16 S18 BT")
8" FIR BEARS N 50° E, 9.2 (SCRIBED "CW1/16 S18 BT")



(E) 1/4 CORNER S18, S17

SET: U.S.F.S. ALUMINUM CORNER MONUMENT MARKED
WITH THE FOLLOWING ACCESSORIES,

11" FIR BEARS S 56° E, 33.6 (SCRIBED "1/4 S17 BT")
18" FIR BEARS S 77° W, 6.6 (SCRIBED "1/4 S18 BT")
12" FIR BEARS N 31° W, 38.5 (SCRIBED "1/4 S18 BT")
13" FIR BEARS N 32° E, 18.7 (SCRIBED "1/4 S17 BT")

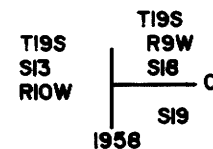


(F) SECTION CORNER S13, S18, S19

FND: 3" DIA. BRASS CAP MARKED
WITH THE FOLLOWING ACCESSORIES,

44" FIR STUMP BEARS N 14-1/4° E, 39.3 (HEALED FACE)
5" FIR BEARS N 60° E, 38.9, (VISIBLE SCRIBING)*
47" FIR STUMP BEARS S 8-1/4° E, 39.9 (HEALED FACE)
18" CEDAR STUMP BEARS S 28-1/2° E, 93.4 (VISIBLE SCRIBING)

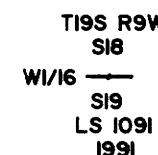
3" DIA. BRASS CAP REFERENCE MONUMENT
BEARS S 2°39' W, 49.84 AND MARKED



(G) W 1/16 CORNER S18, S19

SET: U.S.F.S. ALUMINUM CORNER MONUMENT MARKED
WITH THE FOLLOWING ACCESSORIES,

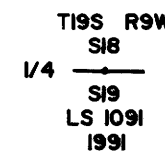
27" FIR BEARS S 16° W, 48.9 (SCRIBED "W1/16 S19 BT")
14" ALDER BEARS N 58° E, 24.7 (BARK SCRIBED "W1/16 S18 BT")



(H) 1/4 CORNER S18, S19

SET: U.S.F.S. ALUMINUM CORNER MONUMENT MARKED
WITH THE FOLLOWING ACCESSORIES,

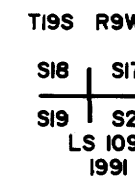
19" HEMLOCK BEARS N 30° W, 24.0 (SCRIBED "1/4 S18 BT")
10" HEMLOCK BEARS N 36° E, 34.7 (SCRIBED "1/4 S18 BT")
8" HEMLOCK BEARS S 52° E, 27.8 (SCRIBED "1/4 S19 BT")
10" HEMLOCK BEARS S 46° W, 25.6 (SCRIBED "1/4 S19 BT")



(I) SECTION CORNER S17, S18, S19, S20

SET: U.S.F.S. ALUMINUM CORNER MONUMENT MARKED
WITH THE FOLLOWING ACCESSORIES,

9" FIR BEARS N 29° E, 22.1 (SCRIBED "T19S R9W S17 BT")
11" FIR BEARS N 13° W, 10.4 (SCRIBED "T19S R9W S18 BT")
10" FIR BEARS S 80° W, 5.5 (SCRIBED "T19S R9W S19 BT")
13" FIR BEARS S 23° E, 18.6 (SCRIBED "T19S R9W S20 BT")



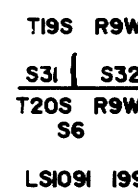
(J) SECTION CORNER S31, S32

FND: 1921 G.L.O. BRASS CAP ATTACHED TO A BADLY RUSTED
IRON PIPE WITH THE FOLLOWING ACCESSORY,

17" FIR BEARS N 21° E, 20.4 (HEALED FACE)

SET: I REPLACED THE 1921 CAP WITH A U.S.F.S. ALUMINUM CORNER
MONUMENT AND BURIED THE 1921 CAP ALONGSIDE. THE
FOLLOWING NEW CORNER ACCESSORIES WERE ESTABLISHED,

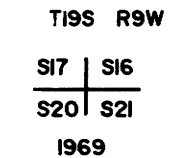
23" FIR BEARS S 34° E, 29.1 (SCRIBED "T20S R9W S6 BT")
15" MAPLE BEARS S 16° W, 7.9 (BARK SCRIBED "T20S R9W S6 BT")
25" MAPLE BEARS N 73° W, 26.1 (BARK SCRIBED "T19S R9W S31 BT")



(K) SECTION CORNER S16, S17, S20, S21

FND: 3" DIA. BRASS CAP MARKED
WITH THE FOLLOWING ACCESSORIES,

18" FIR BEARS N 43-1/4° E, 11.2 (HEALED FACE)
16" FIR BEARS S 39-3/4° W, 17.1 (HEALED FACE)
15" FIR BEARS N 65-1/2° W, 14.0 (HEALED FACE)
12" FIR BEARS S 59° E, 19.0 (HEALED FACE)



HISTORY

1899-ORIGINAL SURVEY BY HENRY CHANDLER - GENERAL LAND OFFICE - TOWNSHIP BOUNDARY AND SECTION SUBDIVISION. CHANDLER SURVEYED SAME AREA IN 1895 BUT SURVEY WAS NOT APPROVED BY THE GENERAL LAND OFFICE.

1921-DEPENDENT RESURVEY OF THE SOUTH TOWNSHIP BOUNDARY BY FRED MENSCH FOR THE GENERAL LAND OFFICE.

1958-DEPENDENT RESURVEY OF THE WEST TOWNSHIP BOUNDARY INCLUDING THE WEST AND NORTH SECTION LINES OF SECTION 18, BY THOMAS TILLMAN, ROBERT HOLM, FLOYD BROOKS - BUREAU OF LAND MANAGEMENT - CADASTRAL SURVEY SECTION.

1969-RETRACEMENT SURVEY WHICH INCLUDED TIES TO THE NORTHEAST SECTION CORNER OF SECTION 18 AND THE SOUTHWEST SECTION CORNER OF SECTION 18 - BY DONALD BECK AND PETER PETERSON - BUREAU OF LAND MANAGEMENT - CADASTRAL SURVEY SECTION.

NARRATIVE

THE PURPOSE OF THIS SURVEY WAS TO ESTABLISH PROPERTY LINES AND CORNERS WHICH DEFINE SIUSLAW NATIONAL FOREST LANDS FROM THAT OF OTHER OWNERSHIP.

THE E1/4, S1/4 AND SE SECTION CORNER OF SECTION 18 WERE LOOKED FOR BUT NOT FOUND. THE S1/4 CORNER OF SECTION 17 WAS ALSO LOOKED FOR BUT NOT FOUND. ALL SECTION CORNERS AND 1/4 CORNERS ON THE LINE BETWEEN THE SE SECTION CORNER OF SECTION 18 AND THE SECTION CORNER ON THE TOWNSHIP LINE BETWEEN SECTIONS 31 AND 32, WERE ALSO SEARCHED FOR BUT NO ORIGINAL EVIDENCE WAS FOUND.

THE SE SECTION CORNER FOR SECTION 18 WAS SET BASED ON A DOUBLE PROPORTION POSITION. BECAUSE THE BASIS OF BEARING FOR THIS SURVEY IS AN OREGON STATE PLANE GRID BEARING, THE ENTIRE SURVEY WAS ROTATED BY -2°15'59" TO SHIFT TO TRUE BEARINGS PRIOR TO CALCULATING THE DOUBLE PROPORTION POSITION FOR THE SECTION CORNER. ONCE THE DOUBLE PROPORTION POSITION WAS DETERMINED, THE ENTIRE PROJECT WAS THEN ROTATED BACK TO ITS STATE PLANE GRID BEARING.

THE E1/4 CORNER FOR SECTION 18, WAS SET AT A MIDPOINT POSITION BETWEEN THE TWO ADJOINING SECTION CORNERS.

THE S1/4 CORNER FOR SECTION 18, WAS ALSO SET AT A MIDPOINT POSITION BETWEEN ITS TWO ADJOINING SECTION CORNERS. THE ORIGINAL SURVEY BY CHANDLER IN 1899 ALSO CALLS FOR THE POSITION OF THIS CORNER TO BE AT A MIDPOINT INSTEAD OF PLACING THE ERROR TO THE WEST OF THE 1/4 CORNER. SINCE THE ORIGINAL SURVEY PLACES THE 1/4 CORNER AT A MIDPOINT, I ALSO CHOSE TO SET THE TWO 1/16 CORNERS SET AS PART OF THIS SURVEY AT THEIR RESPECTIVE MIDPOINT POSITIONS.

BEARINGS AND DISTANCES SHOWN ON THIS SURVEY MAP ARE GRID BEARINGS BASED ON THE OREGON STATE PLANE GRID, SOUTH ZONE. BEARINGS TO CORNER ACCESSORIES ARE SHOWN AS TRUE BEARINGS, WITH A MAGNETIC DECLINATION OF 19°30' EAST.

THE BASIS OF BEARING FOR THIS SURVEY IS THE BEARING OF THE LINE BETWEEN GPS 190918 AND GPS 191024. ADDITIONAL GPS STATIONS WERE USED AS CONTROL AND ARE SHOWN ON THE SURVEY MAP WITH A LISTING OF GPS DATA FOR EACH POINT FOUND ON SHEET 2 OF 2. GPS DATA FOR STATIONS WAS PROVIDED BY THE SIUSLAW NATIONAL FOREST USING TRIMBLE NAVIGATION GPS EQUIPMENT AND SOFTWARE.

THE AMOUNT OF ROTATION TO SHIFT FROM A GRID BEARING TO A TRUE BEARING WAS DEVELOPED BY TAKING AN AVERAGE OF THE CONVERGENCE FOR THE GPS STATIONS USED IN THIS PROJECT. A SCALE FACTOR OF 0.999977183 WAS APPLIED TO EACH FIELD TRAVERSE PRIOR TO BALANCING THE TRAVERSE DATA. ALL FIELD TRAVERSES WERE BALANCED USING THE COMPASS ADJUSTMENT RULE

CORNER MONUMENTS SET ARE 2-1/2" X 30" ALUMINUM PIPES WITH A FLARED BOTTOM AND A 3-1/4" ALUMINUM CAP WITH MAGNET.

BEARINGS AND DISTANCES TO BEARING TREES ARE TAKEN TO THE CENTER OF THE TREE AT THE TOP OF THE ROOT CROWN. NEW BEARING TREES ARE DOUBLE BLAZED (HARDWOODS BARK SCRIBED) AND HAVE A BRASS WASHER MARKED "LS 1091" NAILED TO THE LOWER BLAZE.

THIS SURVEY WAS PERFORMED WITH A NIKON NTD-2 AND NTD-4 SEMI TOTAL STATION.

REFERENCE FIELD BOOKS 1 & 2

NOTE:

FOUND G.P.S. MONUMENTS ARE 3-1/4" U.S.F.S. ALUMINUM CAPS SET FLUSH WITH THE GROUND EXCEPT FOR STATION "GPS 190932B" WHICH IS A 2-3/8" ORANGE PLASTIC CAP.

* B.T.'S FROM 1988 UNOFFICIAL B.L.M. SURVEY.