SOIL MOISTURE DETERMINATION STUDY

By

Bruce J. Blanchard
Principal Investigator

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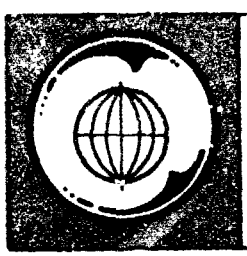

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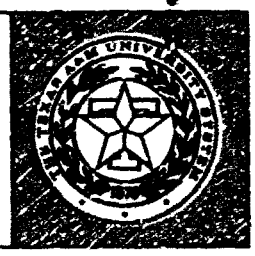

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1.0 DATA COLLECTION PROCEDURES

1.1 Introduction

This report is a summary of soil moisture data collected in conjunction with aircraft sensor and SEASAT SAR data taken near Guymon, Oklahoma from August 1 through 18, 1978. The data will be used in subsequent studies to evaluate the response on Modular Multispectral Scanner (MMS) bands, Multifrequency Microwave Radiometer (MFMR) and active microwave scatterometers due to differences in soil moisture ranging from very dry to very wet. These data will also be utilized to make comparisons of the SEASAT Synthetic Aperture Radar (SAR) and 1.6 GHz scatterometer σ° values over the same field conditions.

In order to minimize the effects of vegetation and roughness three bare and uniformly smooth fields were sampled 6 times at three day intervals on the flight days from August 2 through 17. Two fields remained unirrigated and dry. A similar pair of fields were irrigated at different times during the sample period. In addition, eighteen other fields were sampled on the non-flight days with no field being sampled more than 24 hours from a flight time. The aircraft sensors used included either black and white or color infrared photography, L- and C-band passive microwave radiometers, the 13.3, 4.75, 1.6 and .4 GHz scatterometers, the 11 channel MMS and the PRT5.

1.2 Selection of the Sampling Area

Selection of Guymon, Oklahoma as the sample area was based on several factors. This area is representative of the Great Plains which produces much of the agricultural crops of the U.S. The site has

reasonably uniform surface soils and utilizes irrigation practices which provide a wide variation in soil moisture. During planning stages, SEASAT was scheduled to make passes every three days over the Guymon area on the planned sample dates. Farmer interest in the measurement of soil moisture assured that control of water could be arranged at the time of overpasses. These factors together with SEASAT's intended orbit made the Oklahoma panhandle a logical choice. In the initial plan, aircraft coverage was requested to both allow calibration of the SAR data and serve as a backup to assure adequate data in the event of a failure of SEASAT.

1.3 Selection of Sample Fields

The Oklahoma panhandle is blocked into one mile sections. Agricultural practices usually dictate one crop type per quarter section or 160 acres of land which is also the area irrigated by one center pivot sprinkler system. For this study a field was defined as one half of a quarter section (80 acres) with the long axis of the field along the aircraft flight line.

The selection of fields was determined by several parameters that would directly influence the signatures in the images for each sensor. To insure a full range of soil moisture conditions, two fields were set up as controlled sites. Fields 6, 14, 21 and 26 were chosen for disked surface uniformity and the availability of circular irrigation. These irrigation systems provided controlled irrigation rates plus the option to start or stop the system at the discretion of the experiment manager.

The remaining 18 fields were irrigated, but were not under direct control of the experiment manager. Six of these fields were chosen for

their uniformity of soils, smoothness and lack of vegetation (summer fallow wheat fields).

Fourteen uncontrolled fields were chosen to determine the effect of vegetation and surface roughness on the ability to determine soil moisture. Included in this group were four alfalfa fields with uniform vegetation and relatively smooth soil surfaces. Ten milo fields were chosen with varied roughness and row direction: two were drilled, four had rows parallel to the flight lines and four had rows perpendicular to the flight lines. Field locations and field lines are shown in Figure 1 and field conditions are summarized in Table 1.

Table 1. Surface Condition of Fields

Condition	Fields
Summer fallow	2, 10, 17, 21, 26
Irrigated August 1	14
Irrigated August 14	6
Listed parallel August 17	2x
Circular Irrigated Alfalfa	4, 13, 22, 27
Milo	
6" high, drilled	7, 15
3' high, parallel rows	8, 1x, 1a, 2a
3' high, perpendicular rows	19, 24, 20, 25

1.4 Sampling Patterns and Depths

On each flight day the controlled fields (6 and 14) were sampled at thirty-seven points as shown in Figures 2 and 3. Field 14 was irrigated before the first flight day and allowed to dry, whereas field 6 was not irrigated until August 14. Field 21, was kept dry and was, also intensively sampled on the first flight day. Afterward it was

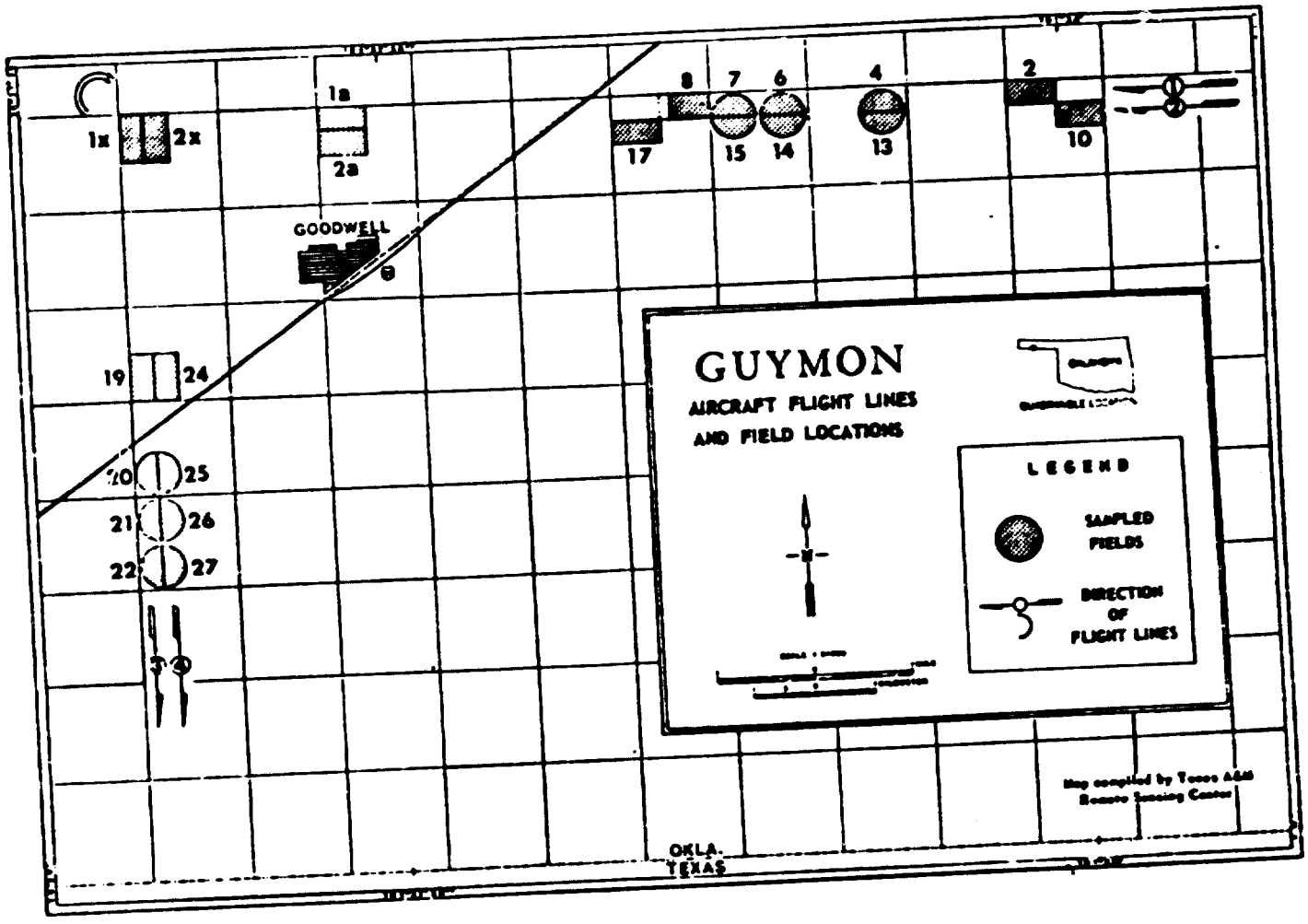

GUYMON
AIRCRAFT FLIGHT LINES
AND FIELD LOCATIONS
LEGEND
SAMPLED FIELDS
DIRECTION OF FLIGHT LINES
GOODWELL
1x
2x
1a
2a
17
8
7
6
15
14
4
13
2
10
19
24
20
25
21
26
22
27
OKLA.
TEXAS

Figure 1

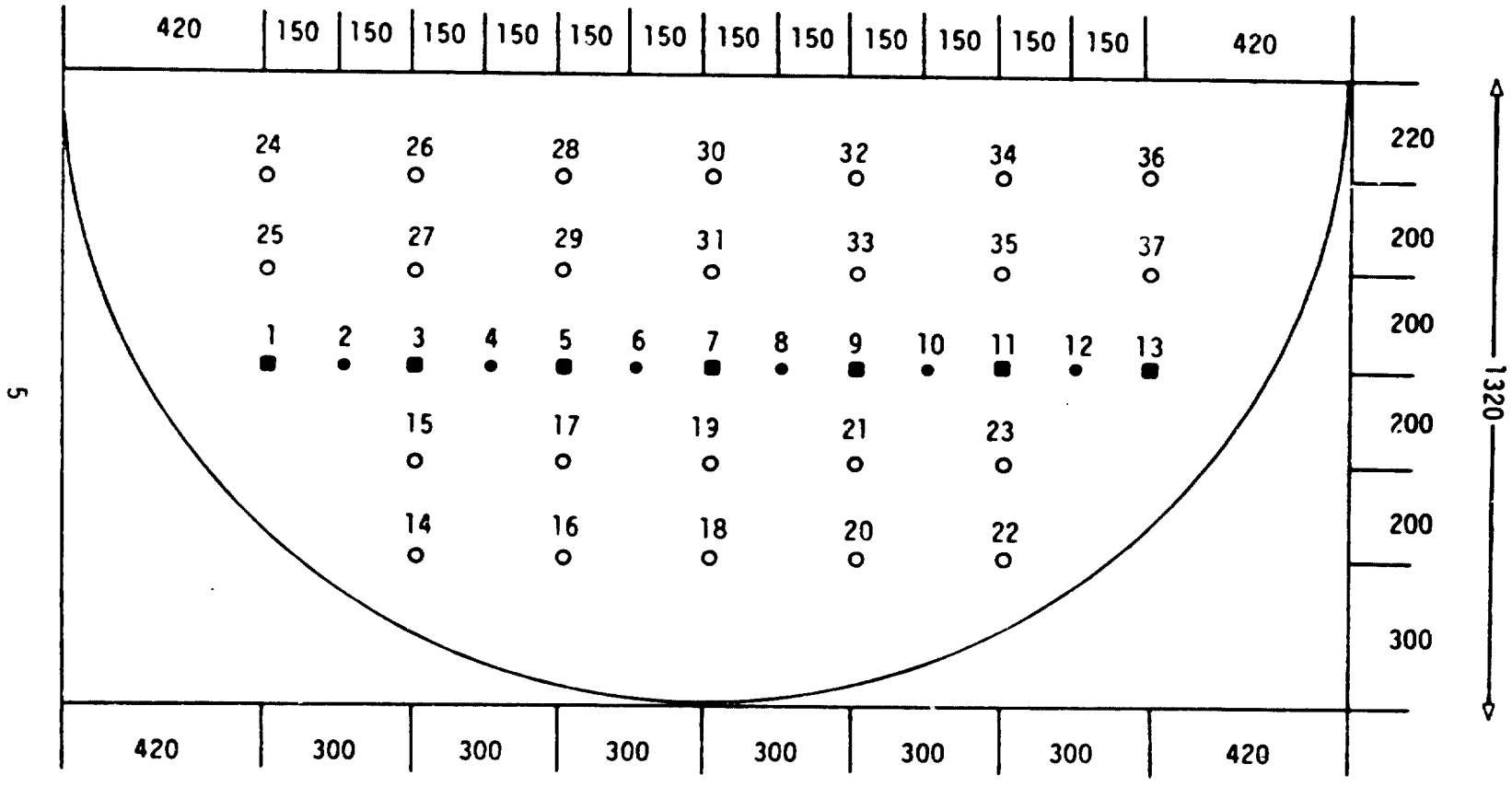


Figure 2. Intensive sampling pattern for right hand side of pivot rig relative to the flight line- fields 6,21.

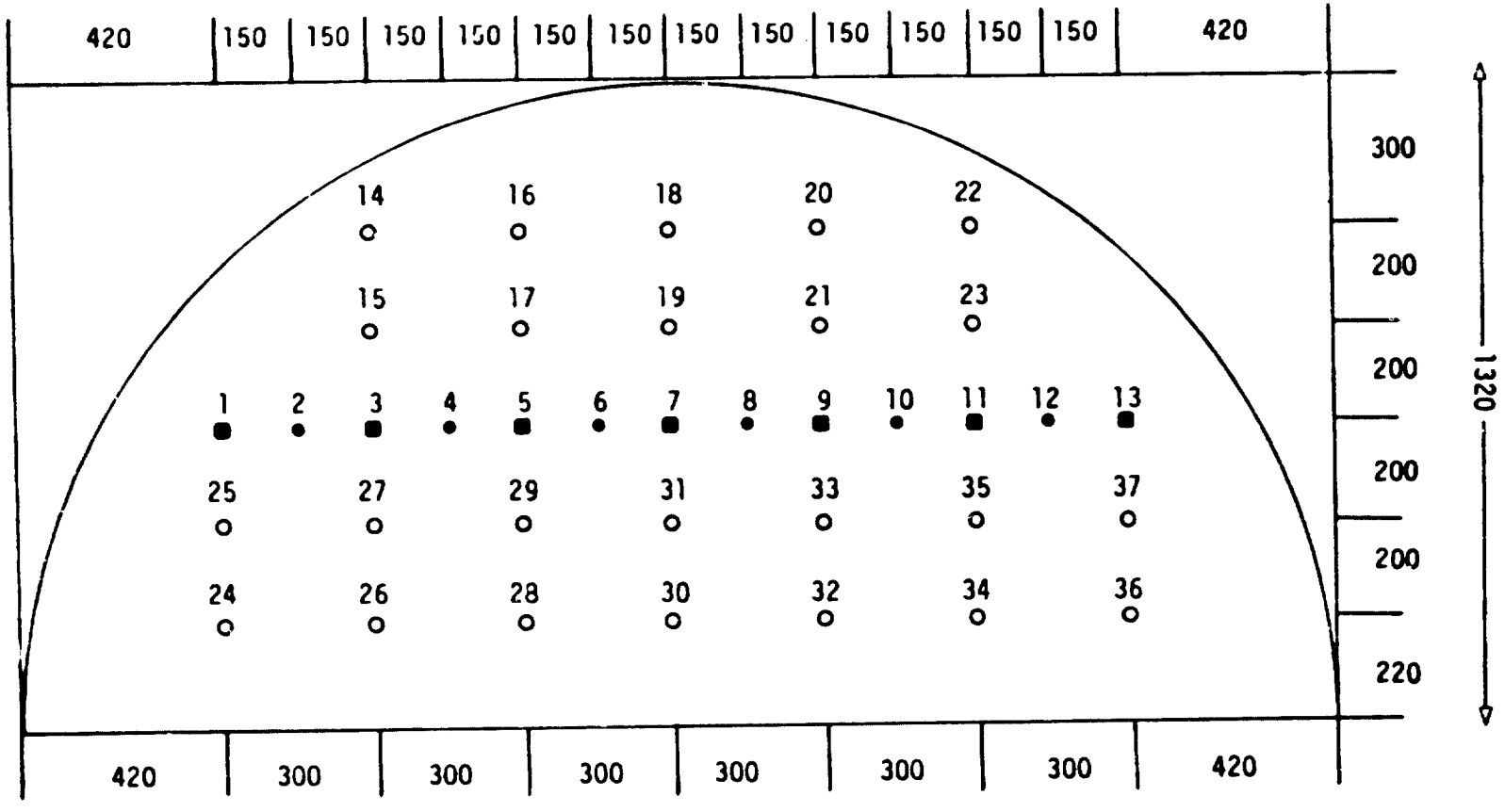


Figure 3. Intensive sampling pattern for left hand side of pivot rig relative to the flight line- field 14.

cut back to eight sample points because the field was not irrigated during the sample period. All other fields were not controlled and had sample patterns as shown in Figures 4 and 5. In fields where circular irrigation was present points 1 and 7 or 2 and 8 were moved inside the circular boundary.

The sampled soil depths ranged from 0 to 45 cm. Depth intervals are shown in Figure 6 with seven samples taken at each point except on the centerline (points 1 through 13) in the intensively sampled fields (fields 6, 14, 21). Here only five layers were sampled to a depth of 15 cm. This additional sampling line was included to insure that the shorter wavelength scatterometers would have a sufficient number of samples in their smaller ground coverage.

1.5 Sampling Techniques

Various sampling techniques have been used in previous experiments to obtain gravimetric soil moisture samples of layers in the top 15 cm. These include using a small trowel and a ruler. This method requires a very conscientious sampler to obtain a representative sample and insure that an optimal amount of soil is obtained. In order to standardize the sampling procedure, the tools shown in Figure 7 were designed and used in this study.

The procedure used was to dig a hole with one vertical side and with sufficient room to push the tools into that side at a perpendicular angle. The tools were designed to fill a standard paper cup (8 oz). Each tool was used alternately to shave the top two sample layers of soil. For each of the next two sample layers the scoops were filled twice to the etched line and dumped into the sample cup. Cups were

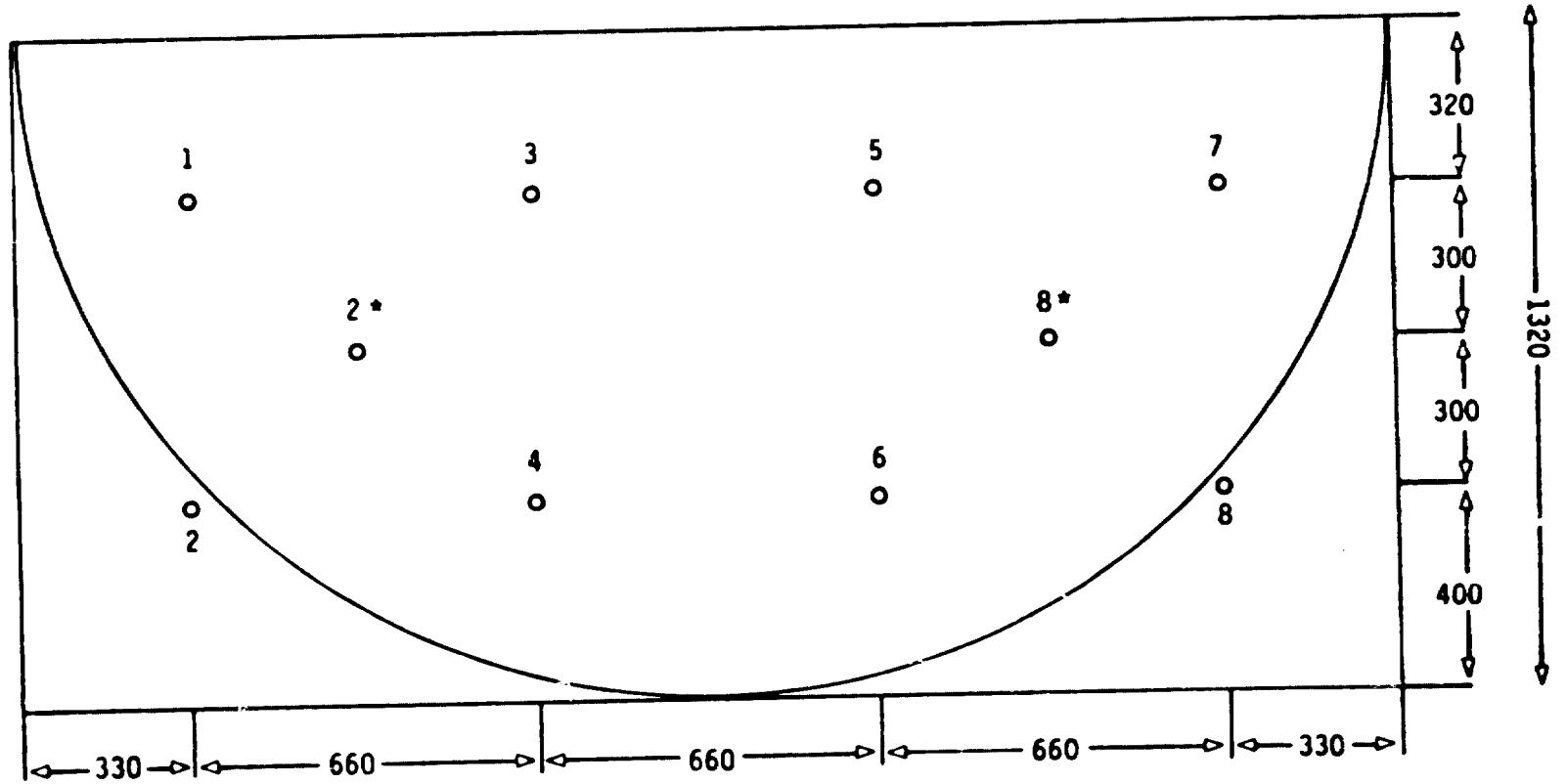


Figure 4. Sampling pattern for fields: 2,4*,7,8*,19,20*,21*,22*,1a,1b

*(sample points 2 & 8 were moved inside the circle for fields with pivot irrigation)

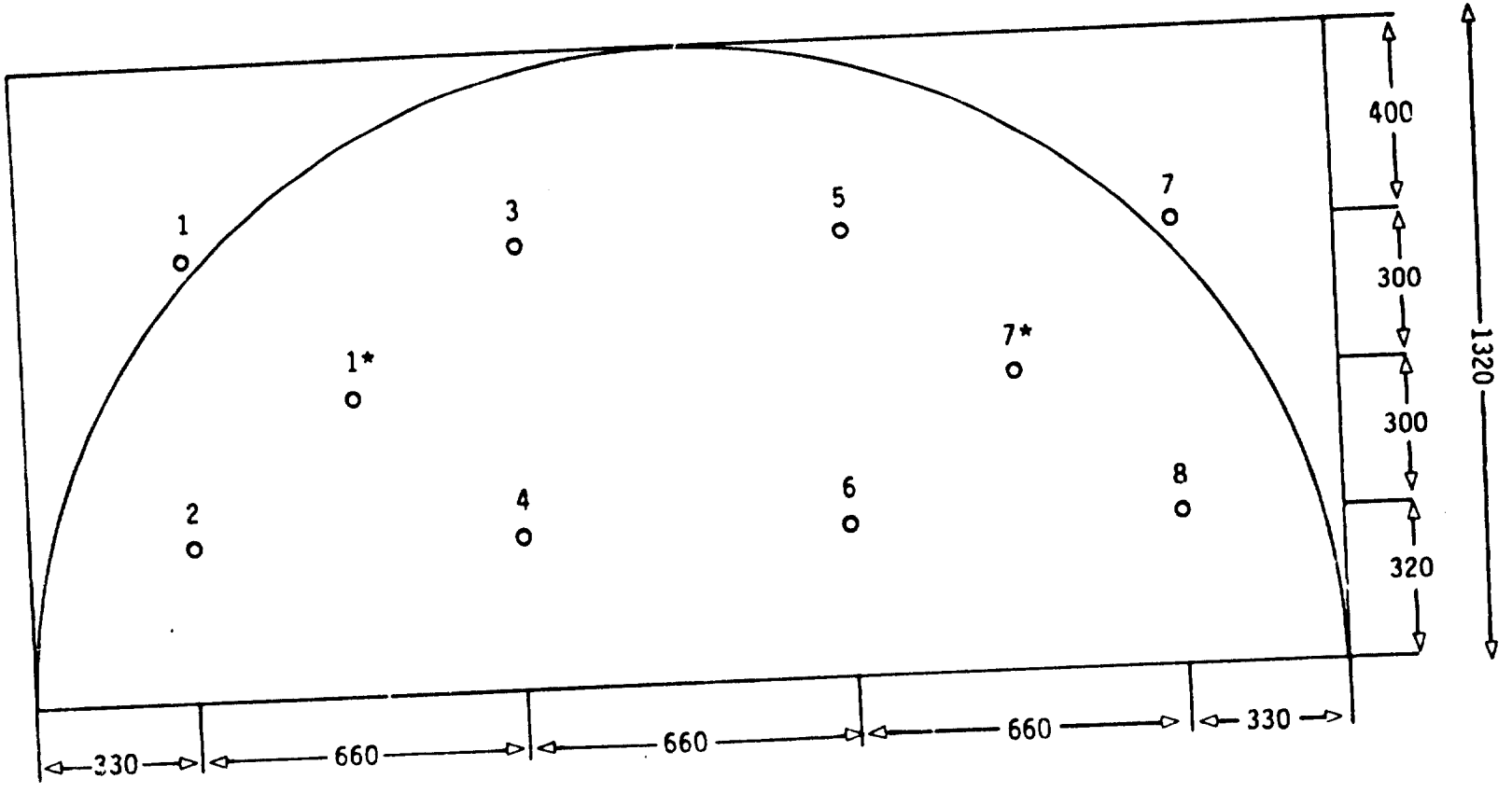
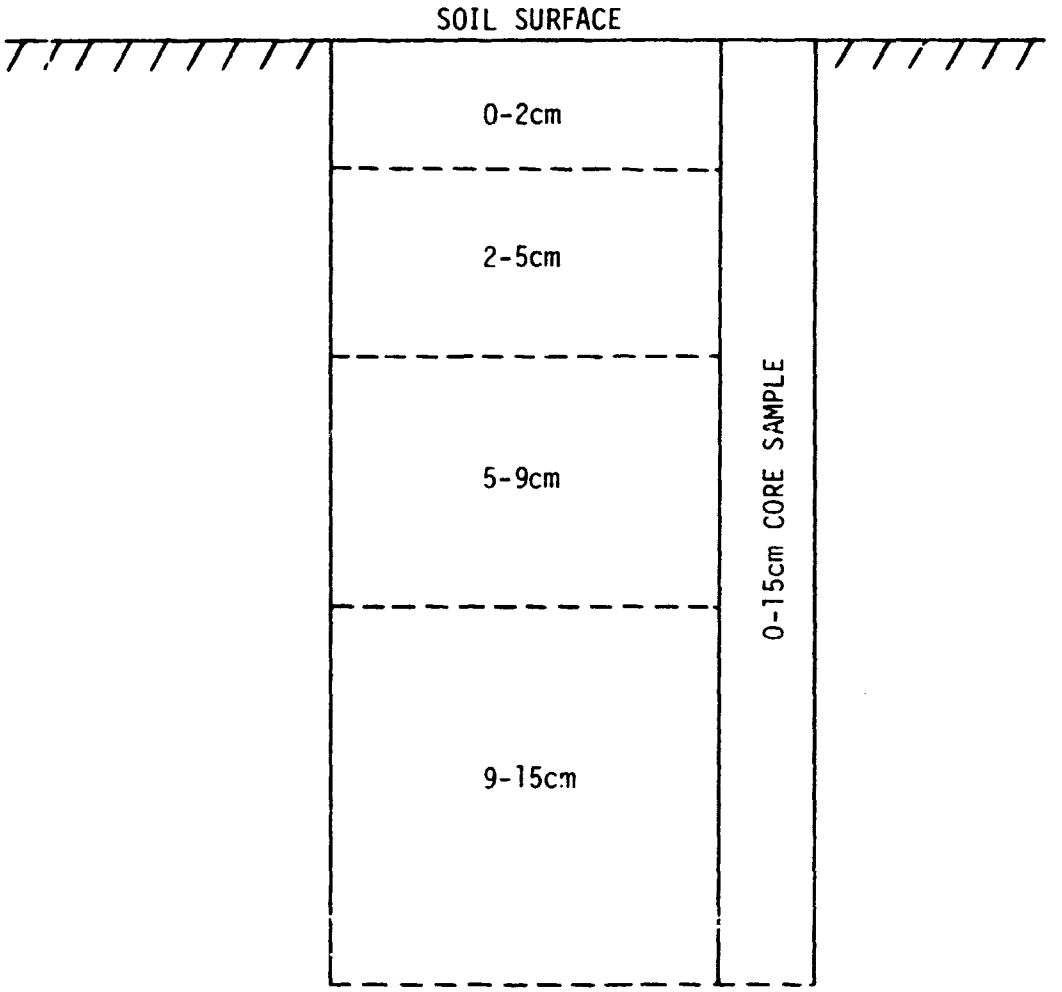


Figure 5. Sampling pattern for fields: 10,13*,15*,17,24,25*,26*,27*, 2a,2x

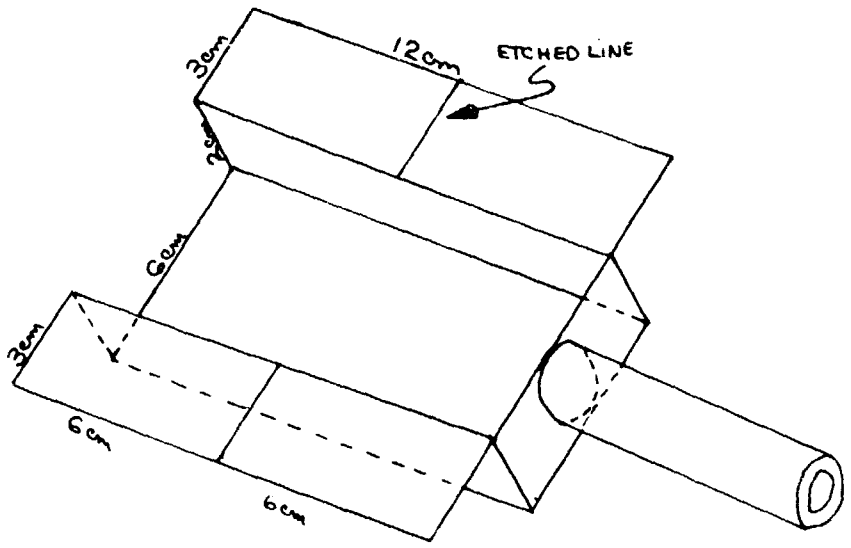
*(sample points 1 & 7 were moved inside the circle for fields with pivot irrigation)



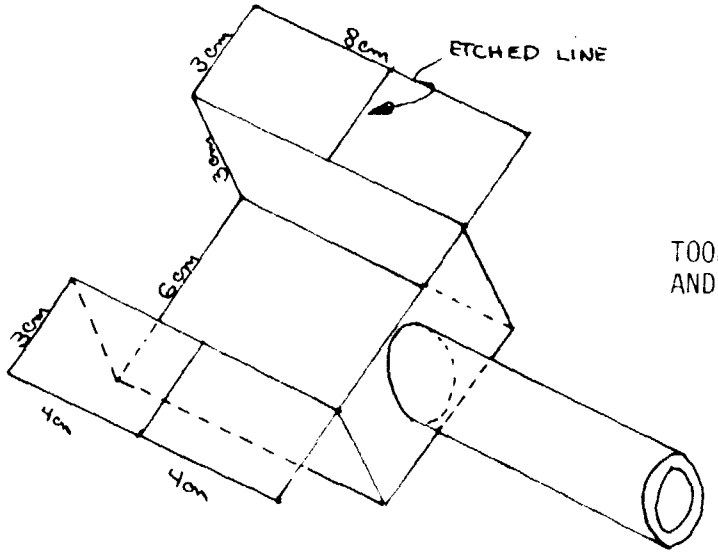
FIVE SAMPLE DEPTHS TAKEN AT ALL POINTS
(DENOTED BY ● AND ○ IN FIGURES 2, 3, 4 and 5)

TWO ADDITIONAL CORE SAMPLES (15-30cm, 30-45cm)
TAKEN AT POINTS DENOTED BY ○

Figure 6. Soil Layers Sampled



TOOL USED FOR 0-2cm AND 5-9cm LAYERS



TOOL USED FOR 2-5cm
AND 9-15cm LAYERS

Figure 7. Sampling Tools

covered immediately with a sheet of plastic wrap and a conventional lid to prevent moisture loss. Samples were marked with date, field number, point number, depth increment, and initials of sampler. This procedure insured that a vertical profile was sampled at uniform depths throughout the series of measurements.

Core samples were taken for three depths (0-15 cm, 15-30 cm, 30-45 cm) with a standard one inch "Soil Test" core tube. Compaction of the soil and loss to the wind of the dry top portion of the 0-15 cm core samples were problems. Bulk density samples were taken along the centerline points of the intensively sampled fields and the middle four points in other fields whenever the fields were irrigated or tilled.

Along with a design of more concise sampling tools, the problems with uninterested and inexperienced samplers was largely eliminated because most of the personnel were graduate students familiar with remote sensing and soil sampling. Each team was assigned a set of fields which were always sampled by that team. Team leaders who were experienced in the collection of soil moisture field samples were selected and asked to submit field reports on each day. These reports were important supplements to daily changes in the fields. Available reports are summarized in Appendix A. Laboratory personnel were responsible for weighing and drying of the samples and tabulating the data.

2.0 SAMPLE PROCESSING

Samples processed for this report were brought into the laboratory at Panhandle State University in Goodwell. Samples were immediately weighed with seals and lids on the containers. To take into account the weight of the cup, seal and lid, twenty of each were weighed together and an average weight was determined. This weight was then removed from the gross weights of the soil. After the wet weight was recorded, the lids were removed and samples dried in conventional microwave ovens. The samples were determined to be dry by periodically weighing two samples in each oven until they lost no more than one-hundredth of a gram.

3.0 DATA PROCESSING

Gross weights were entered into a programmable calculator along with averaged weight of cup, cover, and seal in order to calculate percent soil moisture by weight.

Bulk density values were computed by inputing dry weights and volumes of the sample. The values below 15 cm were considered unchanged by irrigation or cultivation. For each field, mean bulk density values, and standard deviations were computed for all data. Bulk density was then recomputed after the eliminating data points with a difference of greater than one standard deviation from the mean. These data are listed in Appendix B.

Volumetric soil moisture values calculated from the basic data were calculated for each sample. For the fields that were sampled one day prior or one day after the aircraft overpass, these data were plotted versus time. Data points were connected by drafting decaying curves through the points while taking into account the time when water was applied at the point. An illustration of these plots is shown in Figure 8. Estimated volumetric water content for each level was then determined from the intersection of the drafted line and the time of each aircraft overpass. These data are listed in Appendix C.

In most instances reasonable changes in moisture are apparent in the plots described. In one field that remained dry throughout the experiment there is evidence that on alternate sampling days higher and lower moisture content occurs in the samples. Field notes and the notations on the sample container indicate that this occured as a result of alternating between two individual samples. The field surface was loose soil and one sampler seemed to allow more of the dry surface to contami-

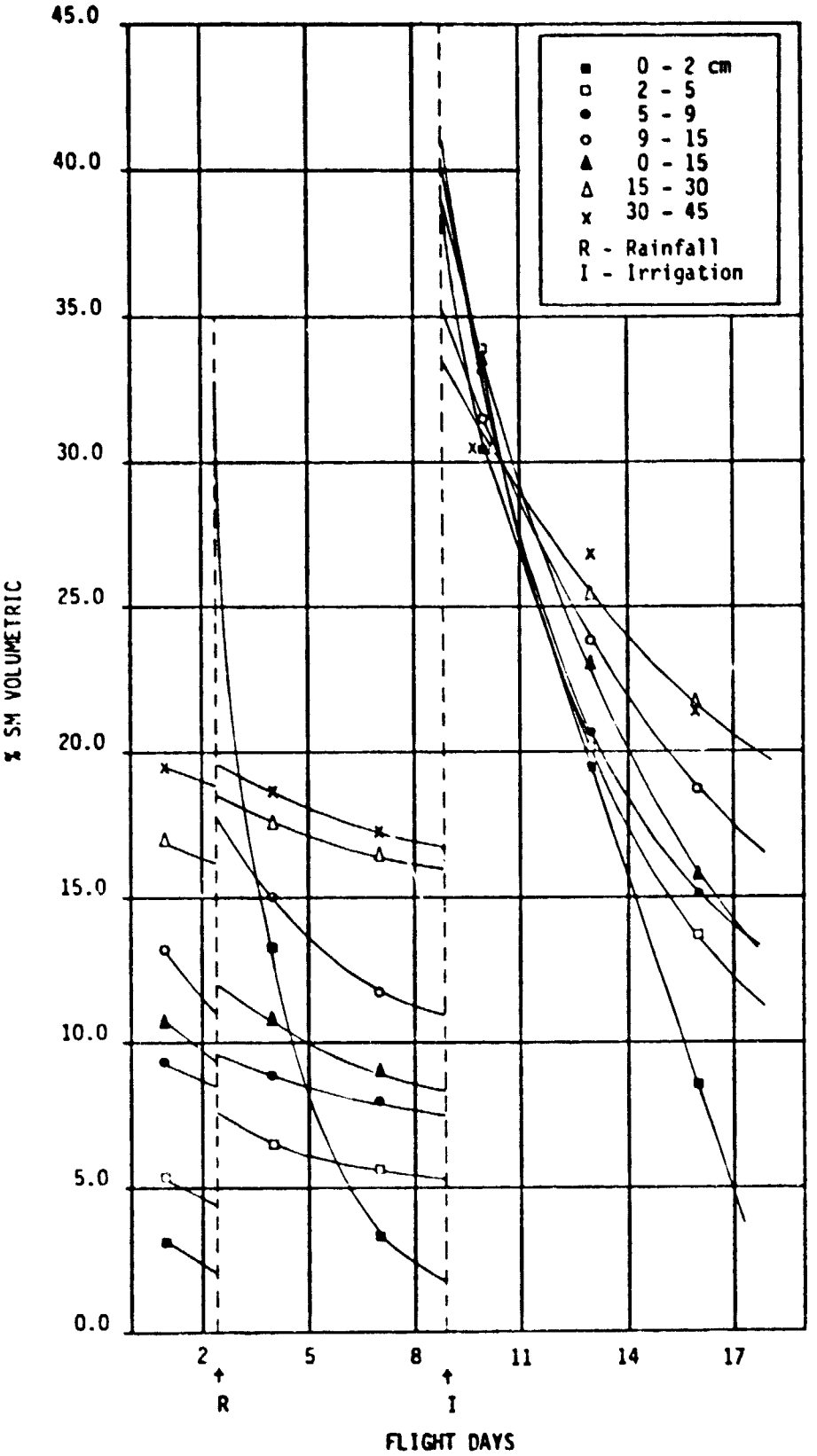


Figure 8. Time series at point 5 of field 8.

nate his samples from the lower depths. This is a clear illustration that technique even after training and experience varies between individuals.

Another distinct advantage in plotting data in the fashion described above is the opportunity these plots afford for detecting samples that have been mislabeled for depth. An error of this nature may go undetected in the field and laboratory, but will be obvious when a time series of each depth is plotted.

A composite average of all data points in each field for each depth and each flight data was computed. These data are presented in Appendix D and are for use only in relation to average values of the return on the MMS images.

To arrive at reasonable estimates of soil moisture sensed by the scatterometers and the MFMR, selected data points within the beam width of the sensor are required. Maps were prepared with each data point located within each field. Flight lines based on the nadir points of the aerial camera were located on these maps. Data points in each field were then selected for each pass over the field that represented the best estimates of moisture in view of the line scan. Averages were then computed using only the selected points. These data are summarized in Appendix E and should only be used in studies related to the scatterometers and the MFMR data from the aircraft.

APPENDIX A

FIELD NOTES

FIELD NOTES

Field #

1X Crop Type - Milo

Aug. 1 - irrigated; standing H_2O on pts. 1, 2, 3, 6, 8

Aug. 4 - field condition still wet; SE corner dry (pt. 7)

Aug. 7 - Pt. 1 wet

Aug. 10- Pts. dry except in NE corner

Aug. 13- Milo blooming

Aug. 14- Surface cracks developing

2X Crop Type - None - Bare

Aug. 1 - field smooth; little stubble; dry & loose but uniform

Aug. 4 - Pt. 8 wet; plow pan at 11 cm.

Aug. 6 - Dry; tilled around wet Pt. 8

Aug. 10- Pt. 3 & 7 dry

1A Crop Type - Milo (Irregular 2 ft. weeds)

Aug. 3 - field dry and hard, cracks throughout field

Aug. 6 - Top dry; moist below 7 cm; some rows flooded

Aug. 9 - All pts. dry

Aug. 15- All pts. dry; milo heading out

2A Crop Type - Milo (Irregular 2' weeds)

Aug. 1 - Sampling consistently dry although began irrigation

Aug. 4 - Even points wet; odd points dry

Aug. 6 - Conditions same

Aug. 16- 2, 4, 6, 8 drier

Field #

2 Crop Type - Bare

Aug. 1 - Smooth w/5 cm of straw on top; 5-10% weeds

Aug. 10- Crust formation (1-2 cm) - result of light rain previous day; soil moist below 15 cm

10 Crop Type - Bare

Aug. 1 - Surface dry & medium rough

Aug. 4 - Surface moist from Aug. 2's light rain (<.10")

Aug. 10- Light rain 8/9 resulting in crust formation of 1-2 cm deep; soil moisture below 15 cm

4/13 Crop Type - Alfalfa

Aug. 3 - Wet down to 15 cm due to moderate rain 8/2; ripped with chisel; sandy caliche soil below 15 cm (usually 30-45 cm)

Aug. 6 - Dried considerably since last sampling

Aug. 9 - Alfalfa 18" in height

Aug. 12- Dry except pt. 8(field 13)

6 Crop Type - Bare

Aug. 2 - Powdery soil; low area near pt. 7 very moist caliche

Aug. 5 - Top layers moist

Aug. 8 - Dry

Field #

14 Crop Type - Bare

Aug. 2 - Wet - just irrigated

Aug. 5 - Soil dry below 30-45 cm

Aug. 8 - Volunteer wheat 3" in eastern half; moist below surface

Aug. 17- Surface dry - subsurface moist

7 Crop Type - Milo 8" hgt.

Aug. 3 - Ditches filled with rain night of 8/2

Aug. 6 - Pt. 3 moist to 15 cm; sampling difficult at deep samples (30-45 cm) due to caliche which is present in much of the field; field drying

Aug. 9 - Irrigation in operation - pts. 5, 6, 7, 8 moist (pt. 6 directly under sprinkler - unable to sample; top 15 cm moist, 15-45 cm dry

15 Crop Type - Milo 8" height

Aug. 3 - Ditches filled with rain from 8/2 shower

8 Crop Type - Milo 2½-3 ft. tall

Aug. 1 - Dry

Aug. 4 - No rain; all pts. dry although running H_2O down 4 rows; soil very hard under 15 cm.

Aug. 10- Irrigation - pts. 3 & 7 dry; pts. 1 & 5 wet, even #'s dry

Aug. 13- Plant in northern half thinner; soil dry

17 Crop Type - Straw stubble

Aug. 1 - Soil dry but with subsurface moisture

Aug. 4 - Effect on rain (<.10") very slight

Aug. 5 - Crop duster flew over

Aug. 7 - Dry

Aug. 10- Dry; below 9 cm soil was hard

Aug. 13- Surface very dry; subsurface moist

19 Crop Type - Milo 2½'

Aug. 1 - Pts. 1 & 2 very muddy

Aug. 4 - Pts. 5, 6, 7, 8 dry; rows between pts. flooded

Aug. 7 - Pts. 1, 4 dry; pts. 5, 6 - muddy; pts. 7, 8 drying out

Aug. 10- All pts. dry; irrigation between some pts.

Aug. 13- Pts. 1 & 2 dry; pts. 3 & 4 being flooded

24 Crop Type - Milo 2½'

Aug. 1 - Pts. 7, 8 muddy

Aug. 4 - Pts. 7,8 muddy

Aug. 7 - Pts., 1, 4 dry; pts. 5, 6 wet; pts. 7, 8 drying out

Aug. 10- All pts. dry

Aug. 13- Pts. 1 & 2 dry; pts. 3, 4 being flooded

Aug. 16- Sprayed with parathyon (8/15); all pts. dry at surface

20 Crop Type - Milo 3'

Aug. 3 - Irrigation - pts. 1, 3 wet

Aug. 14- Wet north half of field has nature milo heading out well;
saturated south half just beginning to head out

Aug. 17- All pts. wet except #1

Field #

25 Crop Type - Milo 3'

Aug. 3 - Field moist

Aug. 8 - Pt. 1 dry, remaining pts. wet

21 Crop Type - Bare

Aug. 3 - Top 0-2 cm wet from light rain; below 2 cm crumbly dry

Aug. 5 - Dry

Aug. 8 - Ammonia being put down around field edges

Aug. 17- All dry

26 Crop Type - Bare

Aug. 3 - Light rain

Aug. 6 - Soil very dry

Aug. 9 - Plowed

Aug. 12- Powdery dry

Aug. 18- Dry

22 Crop Type - Alfalfa

Aug. 3 - Caliche layer at 15 cm; H_2O near pt. 5

Aug. 6 - Alfalfa 1.5'

Aug. 9 - Wet from irrigation (pt. 7 dry); Alfalfa 2'

Aug. 12- Damp to slightly muddy

Aug. 18- Alfalfa has been cut

Field #

27 Crop Type - Alfalfa

Aug. 3 - Heavy clay

Aug. 6 - Irrigation - pts. 1, 4 wet

Aug. 9 - Dry

Aug. 12- Irrigation - pts. wet

Aug. 15- Alfalfa 2'

Aug. 18- Alfalfa has been cut; irrigation began

APPENDIX B

BULK DENSITY VALUES

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 1	24	3	1.27	1.36	1.23	1.07	.	1.26	.
8- 1	24	4	1.08	1.18	1.12	1.34	.	1.40	.
8- 1	24	5	1.11	1.35	1.28	1.28	.	1.29	1.36
8- 1	24	6	0.99	1.32	1.47	1.79	.	1.74	.
8- 1	19	3	0.97	1.17	1.21	1.35	.	1.33	.
8- 1	19	4	1.38	1.36	1.31	.	.	.	.
8- 1	19	5	1.25	1.09	1.16	1.38	.	1.34	.
8- 1	19	6	1.38	1.55	1.36	1.31	.	1.42	1.36
		MEANS	1.17	1.30	1.27	1.36	1.30	1.40	1.36
		STD DEV	0.15	0.15	0.11	0.22	0.00	0.16	0.00
		N	8	8	8	7	0	7	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.20	1.29	1.26	1.33	1.29	1.34	1.36
STD DEV	0.10	0.09	0.07	0.04	0.00	0.06	0.00
N	5	6	6	5	0	6	2

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 3	1A	3	1.33	1.13	1.20	1.10	.	1.30	1.29
8- 3	1A	4	1.25	1.02	1.01	1.43	.	1.49	.
8- 3	1A	5	1.16	0.92	0.79	1.34	.	1.15	.
8- 3	1A	6	1.25	1.05	1.32	1.20	.	1.29	.
8- 4	2A	3	1.18	1.33	1.42	1.30	.	1.23	1.18
8- 4	2A	5	1.07	1.26	1.16	1.22	.	0.89	.
		MEANS	1.21	1.12	1.15	1.27	1.20	1.23	1.24
		STD DEV	0.09	0.15	0.23	0.12	0.00	0.20	0.08
		N	6	6	6	6	0	6	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.21	1.12	1.17	1.27	1.20	1.24	1.24
STD DEV	0.05	0.11	0.13	0.07	0.00	0.07	0.08
N	4	4	4	4	0	4	2

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 7	1X	3	1.12	0.97	1.08	1.39	.	1.27	.
8- 7	1X	4	0.94	0.89	0.93	1.35	.	1.36	1.30
8- 7	1X	5	1.18	1.28	1.09	1.42	.	1.39	1.36
8- 7	1X	6	1.07	0.96	1.14	1.34	.	1.36	.
	MEANS		1.08	1.03	1.05	1.38	1.18	1.35	1.33
	STD DEV		0.10	0.17	0.10	0.04	0.00	0.05	0.04
	N		4	4	4	4	0	4	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.10	0.94	1.10	1.36	1.17	1.37	1.33
STD DEV	0.04	0.04	0.03	0.03	0.00	0.02	0.04
N	2	3	3	3	0	3	2

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	14	1	1.00	1.06	1.17	1.44	.	1.81	.
8- 2	14	3	1.09	0.96	1.14	1.22	.	1.34	.
8- 2	14	5	1.08	1.03	1.09	1.56	.	1.50	.
8- 2	14	7	1.31	1.16	1.38	1.49	.	1.58	1.39
8- 2	14	9	1.28	1.10	1.31	1.40	.	1.36	.
8- 2	14	11	1.26	1.08	1.28	1.50	.	1.49	.
8- 2	14	13	1.33	1.34	1.44	.	.	1.57	.
8- 8	14	1	1.21	1.18	1.22	1.38	.	1.48	1.53
8- 8	14	3	1.05	1.12	1.27	1.44	.	.	.
8- 8	14	5	1.09	1.31	1.25	1.54	.	.	.
8- 8	14	7	1.21	1.44	1.51	1.62	.	.	.
8- 8	14	9	1.10	1.31	1.33	.	.	.	.
8- 8	14	11	1.35	1.29	1.43	1.52	.	.	.
8- 8	14	13	1.32	1.33	1.38	1.51	.	.	.
	MEANS		1.19	1.19	1.30	1.47	1.33	1.52	1.46
	STD DEV		0.12	0.14	0.12	0.10	0.00	0.15	0.10
	N		14	14	14	12	0	8	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.10	1.13	1.30	1.43	1.33	1.52	1.46
STD DEV	0.09	0.11	0.06	0.06	0.00	0.05	0.10
N	9	10	8	10	0	5	2

			DEPTH (CM)						
DATE	FIELD	SITE	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 6	20	3	1.05	1.00	1.24	1.52	.	1.46	1.47
8- 6	20	4	1.14	1.05	1.13	1.51	.	1.52	.
8- 6	20	5	1.27	1.41	1.18	1.58	.	1.50	1.49
8- 6	25	3	1.12	1.43	1.47	1.69	.	1.39	1.47
8- 6	25	4	0.99	1.03	1.03	1.23	.	1.39	1.54
8- 6	25	5	0.98	0.84	0.94	1.12	.	1.31	.
8- 6	25	6	1.00	0.89	1.08	1.20	.	1.25	.
	MEANS		1.08	1.09	1.15	1.41	1.23	1.40	1.49
	STD DEV		0.11	0.24	0.17	0.22	0.00	0.10	0.03
	N		7	7	7	7	0	7	4

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE
THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.05	0.99	1.13	1.41	1.20	1.41	1.49
STD DEV	0.07	0.07	0.08	0.18	0.00	0.07	0.01
N	6	4	5	5	0	5	3

			DEPTH (CM)						
DATE	FIELD	SITE	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 3	22	3	1.02	1.33	1.30	1.17	.	.	.
8- 3	22	4	1.03	1.21	1.27	1.31	.	1.45	1.53
8- 3	22	5	1.13	1.10	1.44	1.48	.	1.41	.
8- 3	22	6	0.97	1.45	1.40	1.42	.	1.38	.
8- 3	27	3	0.94	1.13	1.15	1.24	.	1.23	.
8- 3	27	4	1.02	1.38	1.33	1.21	.	1.17	.
8- 3	27	5	1.18	1.12	1.56	1.57	.	1.46	1.39
8- 3	27	6	0.94	1.16	1.25	1.27	.	1.46	.
	MEANS		1.03	1.27	1.34	1.33	1.28	1.37	1.46
	STD DEV		0.09	0.14	0.13	0.14	0.00	0.12	0.10
	N		8	8	8	8	0	7	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE
THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.01	1.27	1.33	1.29	1.26	1.43	1.46
STD DEV	0.03	0.10	0.07	0.08	0.00	0.04	0.10
N	4	4	6	5	0	5	2

			DEPTH (CM)						
DATE	FIELD	SITE	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 4	02	3	1.24	1.15	1.28	1.42	.	1.43	.
8- 4	02	4	1.14	1.14	1.31	1.33	.	1.49	1.49
8- 4	02	5	0.97	0.93	1.16	1.28	.	1.41	.
8- 4	02	6	1.20	1.08	1.09	1.45	.	1.44	1.47
	MEANS		1.14	1.08	1.21	1.37	1.24	1.44	1.48
	STD DEV		0.12	0.10	0.10	0.08	0.00	0.03	0.01
	N		4	4	4	4	0	4	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.19	1.12	1.25	1.37	1.27	1.43	1.48
STD DEV	0.05	0.04	0.08	0.06	0.00	0.02	0.01
N	3	3	3	2	0	3	2

			DEPTH (CM)						
DATE	FIELD	SITE	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 4	04	3	1.44	1.49	1.60	1.49	.	1.51	.
8- 4	04	4	1.27	1.48	1.51	1.46	.	1.34	1.28
8- 4	04	5	1.22	1.31	1.51	1.44	.	1.47	1.41
8- 4	04	6	1.24	1.48	1.50	1.45	.	1.48	.
8- 4	13	3	1.15	1.13	1.41	1.34	.	1.36	.
8- 4	13	4	1.17	1.32	1.52	1.36	.	1.43	1.42
8- 4	13	5	1.41	1.57	1.53	1.53	.	1.48	.
8- 4	13	6	1.07	1.31	1.48	1.32	.	1.44	.
	MEANS		1.25	1.39	1.50	1.42	1.41	1.43	1.37
	STD DEV		0.13	0.14	0.06	0.08	0.00	0.06	0.08
	N		8	8	8	8	0	8	3

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.21	1.43	1.51	1.44	1.42	1.44	1.42
STD DEV	0.05	0.09	0.01	0.05	0.00	0.03	0.01
N	5	6	5	5	0	5	2

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 7	10	3	1.21	1.02	1.15	1.20	.	1.19	.
8- 7	10	4	1.22	1.19	1.13	1.32	.	1.37	1.16
8- 7	10	5	1.17	1.01	1.13	1.29	.	1.31	1.30
8- 7	10	6	1.18	1.03	1.05	1.26	.	1.40	1.54
		MEANS	1.20	1.06	1.12	1.27	1.18	1.32	1.33
		STD DEV	0.02	0.09	0.04	0.05	0.00	0.09	0.19
		N	4	4	4	4	0	4	3

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.20	1.02	1.14	1.28	1.18	1.36	1.23
STD DEV	0.02	0.01	0.01	0.02	0.00	0.05	0.10
N	2	3	3	2	0	3	2

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 7	17	3	1.20	1.18	1.32	1.41	.	1.46	1.33
8- 7	17	4	1.30	1.36	1.34	1.36	.	1.25	.
8- 7	17	5	1.24	1.20	1.22	1.27	.	1.30	.
8- 7	17	6	1.14	.	1.30	1.38	.	1.74	.
		MEANS	1.22	1.25	1.30	1.36	1.30	1.44	1.33
		STD DEV	0.07	0.10	0.05	0.06	0.00	0.22	0.00
		N	4	3	4	4	0	4	1

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.22	1.19	1.32	1.38	1.31	1.34	1.33
STD DEV	0.03	0.01	0.02	0.03	0.00	0.11	0.00
N	2	2	3	3	0	3	1

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 3	07	3	.	.	.	.	.	1.23	1.22
8- 3	07	4	1.20	1.18	1.36	1.19	.	1.13	.
8- 3	07	5	1.07	1.10	1.29	1.34	.	1.20	.
8- 3	07	6	1.10	1.17	1.23	1.20	.	1.42	.
8- 3	15	3	0.97	1.15	1.34	.	.	1.20	.
8- 3	15	4	1.18	1.14	1.23	1.35	.	1.13	.
8- 3	15	5	0.93	1.09	1.39	1.20	.	1.20	1.41
8- 3	15	6	0.94	0.99	1.21	1.27	.	1.13	.
		MEANS	1.06	1.12	1.29	1.26	1.21	1.22	1.32
		STD DEV	0.11	0.07	0.07	0.07	0.00	0.10	0.13
		N	7	7	7	6	0	8	2

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.05	1.14	1.23	1.22	1.20	1.19	1.32
STD DEV	0.07	0.04	0.06	0.04	0.00	0.06	0.13
N	3	6	5	4	0	7	2

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 4	08	3	1.00	1.33	1.37	1.26	.	1.35	.
8- 4	08	4	1.06	1.06	1.16	1.23	.	1.33	.
8- 4	08	5	1.00	1.19	.	1.38	.	1.26	1.31
8- 4	08	6	1.06	1.08	1.12	1.26	.	1.29	.
		MEANS	1.03	1.16	1.22	1.28	1.21	1.31	1.31
		STD DEV	0.03	0.12	0.13	0.07	0.00	0.04	0.00
		N	4	4	3	4	0	4	1

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.03	1.11	1.14	1.25	1.16	1.31	1.31
STD DEV	0.03	0.07	0.03	0.02	0.00	0.03	0.00
N	4	3	2	3	0	2	1

DATE	FIELD	SITE	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	06	3	1.24	1.27	1.25	1.53	.	1.46	.
8- 2	06	5	1.18	1.10	1.40	1.52	.	1.40	.
8- 2	06	7	1.38	1.36	1.33	1.53	.	1.34	1.36
8- 2	06	9	1.32	1.33	.	1.91	.	1.33	.
8- 2	06	11	1.26	1.27	1.35	1.51	.	1.20	.
8- 2	06	13	1.21	1.19	1.05	.	.	1.41	.
		MEANS	1.27	1.25	1.28	1.60	1.40		
		STD DEV	0.07	0.10	0.14	0.17	0.00		
		N	6	6	5	5	0		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

		MEANS	1.26	1.27	1.33	1.52	1.38		
		STD DEV	0.05	0.06	0.06	0.01	0.00		
		N	4	4	4	4	0		
8- 5	06	2	1.44	1.25	1.39	1.58	.	1.52	.
8- 5	06	4	1.26	1.17	1.31	1.44	.	.	.
8- 5	06	6	1.40	1.28	1.31	1.33	.	.	.
8- 5	06	8	1.18	1.13	1.17	1.47	.	.	.
8- 5	06	10	1.18	1.05	1.23	1.44	.	.	.
8- 5	06	12	1.42	1.09	1.16	1.33	.	.	.
8- 8	06	3	1.27	1.34	1.29	1.48	.	.	.
8- 8	06	6	1.42	1.36	1.22	1.42	.	.	.
8- 8	06	9	1.10	1.17	1.35	1.33	.	.	.
8- 8	06	12	1.31	1.28	1.27	1.37	.	.	.
		MEANS	1.30	1.21	1.27	1.42	1.32		
		STD DEV	0.12	0.11	0.07	0.08	0.00		
		N	10	10	10	10	0		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

		MEANS	1.27	1.21	1.27	1.44	1.33		
		STD DEV	0.08	0.06	0.04	0.04	0.00		
		N	6	6	6	6	0		
8-14	06	1	1.29	1.10	1.61	1.61	.	.	.
8-14	06	3	1.32	1.41	1.35	1.37	.	.	.
8-14	06	5	1.33	1.27	1.43	1.55	.	1.53	.
8-14	06	7	1.10	1.19	1.17	1.37	.	1.23	1.30
8-14	06	9	0.78	0.93	1.16	1.23	.	1.18	.
8-14	06	11	1.15	1.25	1.24	1.33	.	1.27	1.10
8-14	06	13	1.33	1.05	1.20	1.36	.	1.24	.
		MEANS	1.13	1.17	1.31	1.40	1.30		
		STD DEV	0.20	0.16	0.17	0.13	0.00		
		N	7	7	7	7	0		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.25	1.17	1.26	1.36	1.28		
STD DEV	0.10	0.09	0.11	0.02	0.00		
N	6	5	6	4	0		

MEANS	1.34	1.20
STD DEV	0.12	0.09
N	12	3

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.34	1.33
STD DEV	0.08	0.04
N	8	2

			DEPTH (CM)						
DATE	FIELD	SITE	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 3	2X	3	1.21	1.06	1.06	1.22	.	1.30	1.40
8- 3	2X	4	1.28	1.05	1.20	1.36	.	1.42	.
8- 3	2X	5	1.12	1.07	1.03	1.31	.	1.27	1.38
	MEANS		1.20	1.06	1.10	1.30	1.18		
	STD DEV		0.08	0.01	0.09	0.07	0.00		
	N		3	3	3	3	0		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

	MEANS		1.25	1.06	1.05	1.34	1.19		
	STD DEV		0.05	0.00	0.02	0.04	0.00		
	N		2	1	2	2	0		
8-17	2X	3	1.29	1.13	1.19	1.31	.	1.34	1.33
8-17	2X	5	1.35	1.29	1.29	1.38	.	1.27	.
8-17	2X	6	1.21	1.19	1.03	1.31	.	1.36	.
	MEANS		1.28	1.20	1.17	1.33	1.26		
	STD DEV		0.07	0.08	0.13	0.04	0.00		
	N		3	3	3	3	0		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

	MEANS		1.32	1.16	1.24	1.31	1.26		
	STD DEV		0.04	0.04	0.07	0.00	0.00		
	N		2	2	2	2	0		

MEANS	1.33	1.37
STD DEV	0.06	0.04
N	6	3

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

MEANS	1.31	1.39
STD DEV	0.04	0.01
N	5	2

			DEPTH (CM)						
DATE	FIELD	SITE	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 3	21	1	1.11	1.23	1.32	1.48	.	1.44	1.54
8- 3	21	5	1.34	1.23	1.23	1.42	.	1.43	.
8- 3	21	9	1.04	1.08	1.19	1.26	.	1.51	1.45
8- 3	21	13	1.21	1.16	1.16	1.44	.	1.48	.
8- 6	26	3	1.09	1.38	1.15	1.32	.	1.49	.
8- 6	26	4	0.97	1.15	1.21	1.22	.	1.25	.
8- 6	26	5	1.17	1.19	1.09	1.20	.	1.31	.
8- 6	26	6	1.04	1.17	1.10	1.35	.	1.25	1.56
		MEANS	1.12	1.20	1.18	1.34	1.24		
		STD DEV	0.12	0.09	0.07	0.10	0.00		
		N	8	8	8	8	8		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

		MEANS	1.11	1.19	1.19	1.36	1.25		
		STD DEV	0.07	0.03	0.03	0.07	0.00		
		N	6	6	5	5	8		
8-12	21	3	0.95	1.50	1.47	1.39	.	1.55	.
8-12	21	4	1.10	1.21	1.12	1.31	.	1.44	1.55
8-12	21	5	1.10	1.26	1.42	1.30	.	1.50	.
8-12	21	6	1.32	1.18	1.25	1.42	.	1.37	.
8-12	26	3	1.03	1.10	1.07	1.31	.	1.45	.
8-12	26	4	1.16	1.23	1.39	1.29	.	1.35	1.44
8-12	26	5	1.40	1.27	1.29	1.43	.	1.52	.
8-12	26	6	1.20	1.21	1.22	1.32	.	.	.
		MEANS	1.16	1.25	1.28	1.35	1.28		
		STD DEV	0.15	0.12	0.14	0.06	0.00		
		N	8	8	8	8	8		

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

		MEANS	1.12	1.23	1.31	1.32	1.27		
		STD DEV	0.06	0.03	0.09	0.04	0.00		
		N	5	6	5	6	8		
		MEANS						1.42	1.47
		STD DEV						0.09	0.08
		N						15	5

THE FOLLOWING MEANS REPRESENT THE ELIMINATION OF ALL DATA OUTSIDE THE LIMITS OF THE PREVIOUS MEAN 'PLUS OR MINUS ONE STANDARD DEVIATION

		MEANS						1.44	1.48
		STD DEV						0.05	0.06
		N						10	3

APPENDIX C

VOLUMETRIC MOISTURE AT FLIGHT TIMES

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	02	1	2.0	2.4	4.7	13.0	8.7	24.0	26.0
8- 2	02	2	3.0	3.0	5.5	13.3	7.8	26.0	29.2
8- 2	02	3	3.0	3.4	5.0	10.0	9.9	28.0	30.2
8- 2	02	4	3.0	4.0	6.5	10.0	7.5	24.3	28.2
8- 2	02	5	4.0	4.3	8.2	22.5	14.5	28.5	26.2
8- 2	02	6	2.5	3.0	7.0	17.0	10.5	19.5	21.0
8- 2	02	7	1.0	2.0	5.0	15.0	6.2	21.0	23.2
8- 2	02	8	3.0	3.0	5.5	15.0	9.0	19.0	19.3
8- 2	04	1	30.0	30.6	31.5	30.0	30.0	23.0	24.4
8- 2	04	2	14.0	17.7	21.0	19.0	20.6	21.3	15.0
8- 2	04	3	20.1	21.0	22.0	23.0	21.5	24.2	19.5
8- 2	04	4	20.4	23.2	24.0	27.5	23.0	23.7	17.0
8- 2	04	5	25.0	26.0	26.3	22.6	25.0	18.0	20.5
8- 2	04	6	10.9	17.1	19.1	18.3	20.2	23.0	21.4
8- 2	04	7	13.0	15.4	16.5	15.9	14.1	18.6	19.4
8- 2	04	8	9.0	14.0	15.0	15.2	13.0	23.2	18.1
8- 2	06	1	2.0	3.1	4.4	17.1	.	15.0	18.0
8- 2	6	2	3.1	3.6	6.0	23.5	.	.	.
8- 2	6	3	2.4	3.7	6.3	15.7	.	19.0	.
8- 2	6	4	3.4	3.7	5.4	15.1	.	.	.
8- 2	06	5	2.4	2.9	4.4	15.3	.	17.3	.
8- 2	6	6	2.2	2.4	4.2	14.0	.	.	.
8- 2	6	7	2.9	3.0	7.9	17.0	.	16.3	18.0
8- 2	6	8	3.6	4.0	9.0	19.6	.	.	.
8- 2	6	9	4.6	7.5	6.7	17.0	.	21.5	.
8- 2	6	10	2.7	3.3	10.0	27.9	.	.	.
8- 2	6	11	2.9	5.0	6.0	16.6	.	19.4	.
8- 2	6	12	2.9	3.4	4.9	7.9	.	.	.
8- 2	6	13	2.9	3.1	3.6	12.4	.	15.6	.
8- 2	6	14	3.0	.	4.0	12.7	8.3	15.3	16.1
8- 2	6	15	3.1	3.2	6.1	16.0	7.7	18.9	16.6
8- 2	6	16	4.0	3.8	5.0	14.7	17.7	22.3	26.0
8- 2	6	17	4.6	4.3	7.1	14.7	16.9	22.7	19.9
8- 2	6	18	3.3	3.6	6.3	18.4	9.5	20.3	20.9
8- 2	6	19	7.5	5.7	8.0	15.4	13.7	21.0	23.0
8- 2	6	20	3.6	3.6	6.4	15.4	13.3	18.6	19.0
8- 2	6	21	3.7	3.9	5.6	12.4	12.1	17.4	19.2
8- 2	6	22	3.7	7.3	12.0	24.3	20.5	25.0	25.7
8- 2	6	23	3.4	3.0	9.4	18.5	13.5	20.5	21.9
8- 2	6	24	2.3	1.9	3.0	6.3	5.2	7.2	10.5
8- 2	6	25	2.5	2.0	4.2	11.6	13.4	21.4	20.0
8- 2	6	26	2.5	3.3	0.3	9.0	5.1	16.5	20.4
8- 2	6	27	2.7	3.5	7.2	15.5	9.9	17.0	16.0
8- 2	6	28	2.4	3.2	6.7	16.6	10.1	14.4	16.7
8- 2	6	29	2.0	3.3	7.0	16.2	11.1	16.3	14.0
8- 2	6	30	2.5	4.1	15.1	23.2	13.7	21.6	23.6
8- 2	6	31	2.9	4.1	7.6	14.5	10.6	15.6	16.1
8- 2	6	32	2.1	2.9	3.6	9.9	10.3	14.0	15.5
8- 2	6	33	4.1	5.1	10.2	10.5	12.0	19.4	10.6
8- 2	6	34	2.0	3.6	4.9	11.5	10.5	13.3	16.1
8- 2	6	35	5.3	9.3	20.2	31.0	21.7	31.6	30.5
8- 2	6	36	3.0	5.0	9.1	16.4	10.0	16.1	17.2
8- 2	6	37	4.5	4.1	9.0	16.9	10.7	20.0	19.9
8- 2	07	1	4.9	11.0	13.0	15.4	14.0	19.1	19.1
8- 2	07	2	5.4	11.3	16.0	10.0	16.0	23.3	25.0

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	07	3	5.0	10.0	13.7	17.7	13.7	20.5	22.5
8- 2	07	4	5.0	9.0	14.0	16.0	14.5	19.0	21.0
8- 2	07	5	5.5	8.4	12.3	15.0	13.0	16.3	18.6
8- 2	07	6	5.5	10.4	12.0	15.2	13.4	18.1	20.9
8- 2	07	7	4.0	8.6	12.0	13.6	10.9	17.0	19.3
8- 2	07	8	5.5	10.0	14.6	16.0	15.0	19.0	22.0
8- 2	08	1	2.0	2.6	3.7	7.0	5.7	13.0	14.0
8- 2	08	2	2.1	3.8	4.4	10.4	8.0	18.0	20.0
8- 2	08	3	2.8	5.2	6.8	10.9	9.8	17.0	18.5
8- 2	08	4	2.2	3.2	5.2	11.7	9.8	15.6	17.1
8- 2	08	5	2.0	4.9	8.8	13.0	10.0	17.2	19.3
8- 2	08	6	2.4	3.6	6.6	11.6	8.5	14.5	14.3
8- 2	08	7	2.7	4.4	7.0	10.7	8.9	17.0	19.7
8- 2	08	8	2.0	3.8	7.8	9.5	10.4	18.0	19.0
8- 2	1A	1	6.5	14.0	20.3	25.5	23.3	27.5	23.3
8- 2	1A	2	4.6	5.5	9.8	20.6	12.5	26.6	22.7
8- 2	1A	3	5.5	7.4	10.3	17.6	15.4	24.0	24.4
8- 2	1A	4	6.2	7.7	11.8	27.2	15.5	24.3	24.0
8- 2	1A	5	8.3	11.1	11.7	12.8	12.3	15.3	21.5
8- 2	1A	6	5.0	6.0	7.9	12.8	10.6	18.6	19.2
8- 2	1A	7	6.2	14.3	15.4	17.2	16.6	26.9	32.9
8- 2	1A	8	6.7	10.9	17.7	21.3	18.7	21.5	21.6
8- 2	10	1	2.5	2.5	4.0	10.5	8.0	15.3	15.0
8- 2	10	2	2.0	2.3	9.2	15.0	8.5	18.0	15.7
8- 2	10	3	1.8	2.5	7.0	10.3	11.2	20.9	18.2
3- 2	10	4	2.0	2.8	6.3	14.3	7.7	21.8	19.0
8- 2	10	5	2.3	2.5	8.3	18.0	8.3	22.3	19.8
8- 2	10	6	2.4	3.0	8.8	19.3	12.8	26.5	25.0
8- 2	10	7	2.3	3.0	5.2	14.2	7.9	22.8	20.8
8- 2	10	8	2.2	2.7	5.5	13.6	12.5	22.8	21.1
8- 2	13	1	21.1	22.9	24.3	23.4	23.1	19.2	14.8
8- 2	13	2	26.5	28.5	31.3	27.4	28.8	25.7	17.6
8- 2	13	3	24.3	25.4	27.6	26.0	26.5	28.1	19.6
8- 2	13	4	16.0	21.4	24.5	21.9	21.6	28.1	17.4
8- 2	13	5	5.4	8.0	9.2	10.0	8.8	12.8	13.0
8- 2	13	6	6.3	10.9	13.2	11.9	11.1	16.0	16.7
8- 2	13	7	6.0	10.0	12.3	14.0	13.0	18.0	17.0
8- 2	13	8	22.0	24.0	25.0	26.0	25.0	27.0	27.5
8- 2	14	1	21.9	23.7	26.8	26.3	.	29.5	.
8- 2	14	2	24.5	24.1	25.8	25.8	.	.	.
8- 2	14	3	16.4	20.7	25.1	25.8	.	24.5	.
8- 2	14	4	15.7	17.8	21.0	22.7	.	.	.
8- 2	14	5	16.6	21.6	21.4	19.7	.	25.7	.
8- 2	14	6	13.6	16.2	17.2	17.7	.	.	.
8- 2	14	7	19.1	18.9	21.9	22.1	.	22.8	21.7
8- 2	14	8	23.8	24.9	27.4	25.1	.	.	.
8- 2	14	9	28.7	29.8	31.2	32.1	.	32.2	.
8- 2	14	10	23.8	22.8	25.0	26.4	.	.	.
8- 2	14	11	14.6	15.0	18.7	20.3	.	21.1	.
8- 2	14	12	26.5	26.4	27.4	23.4	.	.	.
8- 2	14	13	17.8	18.2	20.5	21.4	.	21.7	.
8- 2	14	14	20.0	22.1	24.1	27.0	23.7	30.8	29.2
8- 2	14	15	14.3	17.9	20.4	23.3	19.3	24.0	24.9
8- 2	14	16	25.7	23.2	25.9	28.7	26.0	29.8	27.2
8- 2	14	17	10.6	20.2	22.3	23.7	22.5	25.0	21.9

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	14	18	31.9	30.8	32.6	33.6	33.4	33.2	30.6
8- 2	14	19	25.2	24.5	25.6	24.3	24.4	25.8	24.6
8- 2	14	20	30.3	28.0	30.9	30.8	28.6	24.0	20.2
8- 2	14	21	30.0	28.9	33.9	32.0	29.5	29.9	25.9
8- 2	14	22	29.7	27.8	30.3	32.8	28.9	25.5	19.2
8- 2	14	23	25.0	24.5	25.7	28.8	25.7	23.2	20.3
8- 2	14	24	17.3	21.7	22.9	25.9	22.6	22.4	17.2
8- 2	14	25	24.4	23.1	26.0	28.3	24.9	29.3	24.5
8- 2	14	26	6.4	11.1	11.8	13.8	14.2	18.6	14.1
8- 2	14	27	20.1	22.9	24.8	26.8	24.1	28.9	25.3
8- 2	14	28	17.7	18.3	20.5	21.3	20.7	25.9	24.1
8- 2	14	29	9.3	15.6	16.5	18.9	18.1	23.5	21.0
8- 2	14	30	24.6	23.7	25.5	22.7	21.7	25.8	21.8
8- 2	14	31	23.7	23.5	24.2	24.8	23.3	31.2	31.3
8- 2	14	32	23.1	21.9	23.5	23.0	24.0	23.7	20.8
8- 2	14	33	20.0	19.4	20.5	20.4	19.6	26.3	15.9
8- 2	14	34	24.7	23.8	26.4	29.0	25.3	26.1	21.7
8- 2	14	35	23.0	22.7	25.3	23.9	22.7	21.4	18.8
8- 2	14	36	38.2	40.4	44.3	41.7	38.5	28.2	27.0
8- 2	14	37	30.7	29.7	31.1	30.4	26.7	26.3	21.4
8- 2	15	1	6.5	12.7	15.0	16.4	15.0	20.0	20.0
8- 2	15	2	4.2	9.2	13.0	14.2	13.0	17.5	19.0
8- 2	15	3	5.5	11.0	15.5	17.0	13.0	21.8	25.5
8- 2	15	4	5.0	10.0	12.7	14.5	12.7	20.8	25.0
8- 2	15	5	9.0	13.8	16.2	20.0	16.2	23.3	26.0
8- 2	15	6	7.0	10.8	12.7	14.0	12.7	16.0	21.1
8- 2	15	7	7.3	13.4	18.0	19.1	18.0	21.3	21.3
8- 2	15	8	5.2	7.5	9.7	12.1	16.0	18.2	23.4
8- 2	17	1	3.9	3.9	5.8	9.4	9.0	20.0	22.2
8- 2	17	2	3.5	3.6	4.8	10.2	15.0	27.9	30.0
8- 2	17	3	3.8	4.0	8.2	17.3	12.5	22.7	28.4
8- 2	17	4	3.0	3.5	5.5	10.5	8.0	18.1	18.0
8- 2	17	5	4.9	6.1	10.7	12.5	13.4	24.0	20.1
8- 2	17	6	3.5	4.0	5.0	11.1	10.1	23.8	27.3
8- 2	17	7	4.4	5.1	7.3	13.0	9.3	19.4	19.2
8- 2	17	8	2.8	6.8	4.9	9.9	9.0	22.0	23.0
8- 2	2A	1	5.4	7.0	18.5	28.9	16.7	29.0	28.5
8- 2	2A	2	3.5	6.7	14.6	26.7	14.0	34.0	32.0
8- 2	2A	3	6.0	7.0	13.2	27.0	19.0	27.8	28.7
8- 2	2A	4	4.0	5.5	9.9	28.2	10.1	29.0	30.0
8- 2	2A	5	6.0	7.4	15.4	27.5	21.8	29.0	28.0
8- 2	2A	6	4.0	7.0	18.0	31.0	15.0	30.9	30.2
8- 2	2A	7	4.7	5.4	9.4	20.0	17.9	26.0	25.2
8- 2	2A	8	3.3	5.0	8.1	16.9	4.8	26.0	25.0
8- 2	1X	1	3.8	4.0	7.0	12.0	13.0	18.0	20.8
8- 2	1X	2	44.4	37.7	45.8	48.0	44.4	43.0	40.9
8- 2	1X	3	11.5	17.4	21.8	28.5	23.8	28.5	31.9
8- 2	1X	4	40.5	35.8	38.9	40.5	38.9	38.9	34.7
8- 2	1X	5	9.0	12.4	19.4	21.5	27.8	29.2	28.6
8- 2	1X	6	27.0	25.2	30.3	31.4	28.5	33.7	31.7
8- 2	1X	7	17.7	22.1	27.0	35.3	29.0	33.0	31.3
8- 2	1X	8	45.0	45.0	45.0	45.0	45.0	39.6	37.8
8- 2	19	1	4.5	5.4	6.5	13.0	12.0	21.0	21.0
8- 2	19	2	37.4	39.7	39.0	38.7	38.0	34.3	31.7
8- 2	19	3	7.3	12.0	24.4	28.2	10.0	30.0	31.0

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	19	4	7.0	15.0	24.0	12.2	20.0	28.0	29.8
8- 2	19	5	5.8	10.0	15.0	20.7	12.2	26.7	28.5
8- 2	19	6	3.4	5.1	6.8	12.1	8.9	19.9	22.7
8- 2	19	7	14.0	25.0	25.8	28.4	24.0	30.5	30.9
8- 2	19	8	9.8	14.4	18.7	23.0	18.0	26.0	28.7
8- 2	20	1	33.3	19.2	24.3	39.0	22.3	40.5	45.2
8- 2	20	2	31.1	29.8	35.1	42.6	27.6	33.1	26.7
8- 2	20	3	27.1	31.9	36.7	40.4	37.6	40.7	40.8
8- 2	20	4	33.9	23.2	24.1	28.3	26.4	23.7	22.9
8- 2	20	5	12.5	14.3	15.7	16.5	16.2	15.7	16.5
8- 2	20	6	18.1	14.6	16.9	22.2	18.6	16.2	15.1
8- 2	20	7	30.1	30.5	39.4	46.5	30.6	41.2	45.3
8- 2	20	8	34.9	33.5	31.8	34.9	.	33.1	36.7
8- 2	21	1	16.4	8.6	6.9	12.3	.	.	.
8- 2	21	2	15.7	12.1	6.1	10.8	.	.	.
8- 2	21	3	15.1	8.2	7.0	9.5	.	.	.
8- 2	21	4	16.2	8.0	8.2	8.7	.	.	.
8- 2	21	5	12.4	5.8	6.9	13.3	.	.	.
8- 2	21	6	15.4	7.5	7.7	12.2	.	.	.
8- 2	21	7	9.4	7.7	8.3	15.1	.	.	.
8- 2	21	8	16.1	8.7	9.3	20.0	.	.	.
8- 2	21	9	18.9	9.6	7.0	9.5	.	.	.
8- 2	21	10	20.9	7.1	7.7	10.8	.	.	.
8- 2	21	11	17.6	11.6	9.7	16.7	.	.	.
8- 2	21	12	21.5	9.0	8.7	12.1	.	.	.
8- 2	21	13	21.0	7.8	8.2	19.1	.	.	.
8- 2	21	14	17.3	8.3	6.4	9.5	.	24.8	23.5
8- 2	21	15	20.8	8.2	8.5	15.3	.	19.6	20.7
8- 2	21	16	13.7	13.6	5.9	10.2	.	21.9	27.7
8- 2	21	17	18.6	9.3	7.9	13.5	.	23.6	27.1
8- 2	21	18	5.6	7.5	7.4	10.0	.	18.8	20.2
8- 2	21	19	16.5	8.2	7.5	11.6	.	21.5	29.8
8- 2	21	20	10.8	7.2	5.8	7.8	.	17.2	20.2
8- 2	21	21	15.9	9.2	5.2	7.6	.	13.2	18.0
8- 2	21	22	10.5	8.4	4.7	6.9	.	13.5	19.1
8- 2	21	23	15.9	10.2	4.9	6.7	.	11.6	13.0
8- 2	21	24	18.1	14.1	7.4	8.6	11.2	16.8	20.9
8- 2	21	25	18.2	10.1	7.8	10.3	12.8	24.7	27.7
8- 2	21	26	15.5	12.3	7.3	10.4	15.1	19.8	22.1
8- 2	21	27	16.7	8.9	8.7	12.9	10.2	24.9	23.5
8- 2	21	28	12.3	8.9	10.2	13.1	14.2	28.7	21.1
8- 2	21	29	14.2	10.7	6.2	8.9	11.8	25.0	26.8
8- 2	21	30	13.5	10.4	9.3	12.3	14.4	22.2	23.9
8- 2	21	31	17.0	9.3	8.0	10.1	13.0	20.4	19.0
8- 2	21	32	11.4	9.9	7.5	9.0	13.3	17.0	17.4
8- 2	21	33	9.8	7.5	9.3	15.3	14.6	29.1	28.0
8- 2	21	34	10.9	11.3	8.4	10.3	13.2	25.4	26.5
8- 2	21	35	7.0	6.5	7.6	9.0	10.8	15.5	14.3
8- 2	21	36	11.3	7.1	7.2	10.3	.	24.3	29.1
8- 2	21	37	12.2	7.3	7.9	12.9	.	28.6	32.0
8- 2	22	1	35.0	32.3	31.1	29.5	29.5	27.0	25.6
8- 2	22	2	33.8	32.5	31.5	27.0	28.9	24.7	23.8
8- 2	22	3	34.5	33.0	33.0	29.3	32.1	19.0	18.0
8- 2	22	4	41.0	38.8	39.7	30.0	33.7	31.8	20.0
8- 2	22	5	7.1	16.0	16.8	17.0	16.0	21.0	18.8

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 2	22	6	8.9	17.0	18.4	19.8	17.3	20.2	21.4
8- 2	22	7	6.0	10.1	13.4	13.0	14.6	19.5	17.7
8- 2	22	8	5.8	12.0	15.0	16.0	13.1	19.8	15.5
8- 2	2X	1	5.0	4.6	6.9	13.6	13.6	24.0	29.5
8- 2	2X	2	5.0	5.0	5.7	13.5	11.4	26.2	28.3
8- 2	2X	3	4.8	5.5	8.6	19.5	14.5	28.9	31.0
8- 2	2X	4	4.9	5.2	6.3	16.6	14.7	24.4	25.2
8- 2	2X	5	5.0	5.0	7.0	17.0	11.0	32.0	33.0
8- 2	2X	6	5.0	5.0	9.4	25.3	14.2	30.1	30.8
8- 2	2X	7	7.2	5.3	8.8	25.9	15.0	34.6	37.2
8- 2	2X	8	4.7	4.1	6.1	24.3	14.2	35.1	35.6
8- 2	24	1	5.1	15.4	32.2	36.1	19.5	37.0	34.4
8- 2	24	2	5.4	6.1	8.5	20.8	13.1	25.7	27.4
8- 2	24	3	7.5	11.0	22.1	29.4	24.0	28.0	29.4
8- 2	24	4	5.0	11.0	17.0	22.0	19.8	19.0	22.8
8- 2	24	5	7.1	8.0	15.3	25.0	15.6	25.8	27.0
8- 2	24	6	4.2	5.5	9.8	20.0	17.5	23.8	26.7
8- 2	24	7	16.4	23.8	27.2	27.3	26.0	32.6	33.3
8- 2	24	8	35.0	36.0	37.3	38.3	37.3	36.0	35.6
8- 2	25	1	18.6	14.9	17.3	22.1	16.9	20.2	24.0
8- 2	25	2	17.3	24.4	29.3	34.3	28.0	35.1	36.8
8- 2	25	3	12.0	10.0	14.2	16.8	13.6	20.6	17.1
8- 2	25	4	7.6	8.8	15.4	20.5	13.7	.	19.4
8- 2	25	5	17.9	20.6	24.4	26.3	23.5	30.1	29.3
8- 2	25	6	10.5	15.7	19.1	23.0	19.3	21.5	19.1
8- 2	25	7	22.0	23.2	25.0	28.3	28.2	30.9	.
8- 2	25	8	28.8	30.3	37.0	39.3	30.4	33.6	33.7
8- 2	26	1	5.0	6.8	8.7	10.5	8.5	17.7	19.0
8- 2	26	2	4.5	5.4	8.0	9.4	8.8	15.2	16.3
8- 2	26	3	4.0	6.0	6.9	10.0	11.0	24.5	23.3
8- 2	26	4	4.3	5.8	7.2	9.7	8.8	24.3	24.3
8- 2	26	5	4.2	6.3	8.4	12.6	11.9	26.7	30.2
8- 2	26	6	3.8	5.4	7.6	12.5	9.9	23.0	27.3
8- 2	26	7	4.7	5.4	5.8	8.2	6.9	22.4	23.3
8- 2	26	8	5.1	5.1	5.6	7.4	7.9	15.0	15.6
8- 2	27	1	16.3	20.4	24.6	22.5	21.3	20.8	17.2
8- 2	27	2	25.0	26.4	26.9	25.4	26.0	28.5	28.0
8- 2	27	3	7.2	19.4	19.5	17.1	18.7	20.0	15.0
8- 2	27	4	13.8	21.8	22.5	22.1	20.5	24.0	14.7
8- 2	27	5	6.4	15.8	16.7	15.0	16.2	17.0	15.3
8- 2	27	6	8.1	23.3	23.6	24.2	22.7	26.8	25.6
8- 2	27	7	9.5	16.8	17.8	18.8	18.8	19.7	17.3
8- 2	27	8	10.3	22.6	26.4	27.9	21.5	29.1	27.1
8- 5	02	1	10.0	11.5	9.0	20.0	19.0	23.0	24.0
8- 5	02	2	11.2	13.8	9.5	15.0	16.8	28.6	29.9
8- 5	02	3	13.2	13.8	13.2	7.8	13.8	29.8	29.8
8- 5	02	4	12.0	13.8	9.0	11.0	14.5	24.3	28.0
8- 5	02	5	12.3	15.3	13.7	20.2	17.8	24.5	23.8
8- 5	02	6	9.0	12.0	9.1	17.0	12.0	18.2	19.8
8- 5	02	7	15.0	12.0	9.5	12.2	13.0	21.0	23.3
8- 5	02	8	10.0	10.5	7.8	11.3	11.4	17.0	19.4
8- 5	04	1	25.5	26.5	29.0	27.0	26.8	22.5	23.6
8- 5	04	2	18.0	20.0	23.0	21.9	22.4	21.5	15.2
8- 5	04	3	17.5	19.8	22.5	21.5	21.0	24.2	17.3
8- 5	04	4	18.9	20.0	21.8	21.7	21.3	21.9	15.5

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 5	04	5	21.2	21.0	23.0	20.0	21.0	18.0	21.6
8- 5	04	6	14.9	18.0	20.0	19.0	20.6	22.0	22.5
8- 5	04	7	27.0	27.0	26.5	24.0	27.0	19.4	19.0
8- 5	04	8	15.0	14.0	17.5	21.0	19.4	19.5	18.2
8- 5	06	1	10.3	12.4	13.4	12.4	.	.	.
8- 5	06	2	12.3	9.8	8.1	13.6	.	22.6	.
8- 5	06	3	10.9	13.9	7.0	16.6	.	.	.
8- 5	06	4	12.1	15.5	17.0	19.8	.	.	.
8- 5	06	5	11.6	13.3	7.4	17.1	.	.	.
8- 5	06	6	11.2	13.2	12.5	18.7	.	.	.
8- 5	06	7	10.6	13.8	9.4	14.0	.	.	.
8- 5	06	8	13.4	14.4	11.7	16.3	.	.	.
8- 5	06	9	15.0	23.2	11.0	12.0	.	.	.
8- 5	06	10	14.7	16.9	21.7	25.2	.	.	.
8- 5	06	11	13.1	15.8	15.0	12.2	.	.	.
8- 5	06	12	12.0	11.7	12.1	13.7	.	.	.
8- 5	06	13	11.0	16.1	16.	14.5	.	.	.
8- 5	06	14	10.9	13.0	11.5	12.9	10.5	14.4	15.7
8- 5	06	15	12.4	14.0	7.9	8.9	13.0	18.4	15.6
8- 5	06	16	15.0	14.3	18.1	18.4	18.6	22.3	24.0
8- 5	06	17	10.3	13.1	11.3	14.2	16.4	22.5	22.2
8- 5	06	18	14.3	16.5	9.6	11.1	13.7	22.1	22.2
8- 5	06	19	18.3	19.9	17.8	15.6	17.1	19.8	22.0
8- 5	06	20	15.2	17.9	13.6	12.6	12.6	18.2	20.2
8- 5	06	21	13.0	15.2	11.4	11.8	14.7	18.7	19.6
8- 5	06	22	17.8	19.7	16.2	24.2	16.3	24.2	23.2
8- 5	06	23	13.4	14.8	7.6	12.7	13.0	16.5	15.4
8- 5	06	24	8.1	9.9	6.7	5.5	6.8	7.4	10.4
8- 5	06	25	9.6	9.7	7.4	13.2	11.3	21.1	20.8
8- 5	06	26	6.7	11.0	11.5	7.6	11.1	12.4	19.7
8- 5	06	27	11.6	12.8	11.6	11.3	12.3	17.2	18.1
8- 5	06	28	9.5	10.6	4.8	12.1	9.1	12.5	15.9
8- 5	06	29	9.6	6.1	12.9	13.2	9.6	15.1	14.9
8- 5	06	30	15.8	16.4	15.4	20.6	17.1	21.7	24.4
8- 5	06	31	15.8	11.6	15.8	15.7	12.8	15.6	16.8
8- 5	06	32	11.4	12.6	11.8	9.5	12.1	13.1	15.0
8- 5	06	33	17.8	19.3	14.7	18.3	14.2	17.4	18.8
8- 5	06	34	15.6	16.9	14.9	14.2	12.5	12.9	15.0
8- 5	06	35	23.0	21.8	20.9	32.6	20.9	22.6	23.7
8- 5	06	36	24.9	22.7	18.2	13.4	15.7	16.2	17.8
8- 5	06	37	11.6	13.8	8.8	18.4	13.6	16.9	17.0
8- 5	07	1	8.5	13.4	16.2	19.1	17.8	18.9	18.9
8- 5	07	2	8.8	15.4	19.4	22.5	20.5	25.0	27.5
8- 5	07	3	12.0	17.7	20.0	20.0	20.0	21.0	22.3
8- 5	07	4	10.8	14.5	19.5	19.5	17.2	19.4	21.5
8- 5	07	5	9.0	14.0	17.7	18.1	16.1	18.1	20.0
8- 5	07	6	9.0	13.9	18.3	18.6	17.1	19.5	21.0
8- 5	07	7	9.8	14.0	16.3	15.6	13.3	15.6	17.3
8- 5	07	8	13.8	19.0	22.1	22.1	20.1	21.7	23.3
8- 5	08	1	8.0	8.8	8.3	11.2	9.0	14.6	16.5
8- 5	08	2	9.1	12.3	12.0	11.0	11.0	20.0	22.9
8- 5	08	3	10.0	10.3	11.9	15.4	11.2	14.8	19.5
8- 5	08	4	6.9	6.9	5.9	11.8	9.8	16.8	16.0
8- 5	08	5	10.0	6.3	8.5	14.0	10.0	17.0	18.1
8- 5	08	6	7.3	9.0	8.1	11.4	9.0	16.8	17.0

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 5	08	7	7.9	8.5	8.8	14.5	11.2	19.0	18.7
8- 5	08	8	5.4	6.5	6.5	10.4	10.7	20.7	22.0
8- 5	1A	1	6.0	11.3	26.0	29.8	23.2	27.4	23.2
8- 5	1A	2	5.4	6.2	8.5	19.7	10.6	25.9	22.1
8- 5	1A	3	7.5	15.4	17.3	22.8	21.7	24.4	26.3
8- 5	1A	4	4.8	5.8	9.4	24.3	12.3	23.7	21.5
8- 5	1A	5	5.1	7.0	12.7	16.8	13.9	20.6	24.7
8- 5	1A	6	5.8	8.3	10.2	16.0	12.7	19.0	19.9
8- 5	1A	7	6.0	10.1	12.2	16.5	14.3	25.9	30.6
8- 5	1A	8	7.1	8.7	15.0	25.3	15.0	23.0	21.0
8- 5	10	1	8.3	8.8	9.4	10.0	9.5	15.6	15.5
8- 5	10	2	12.5	14.3	15.2	15.8	15.0	17.6	15.9
8- 5	10	3	10.5	12.3	11.3	16.5	13.8	20.7	18.8
8- 5	10	4	9.1	9.2	6.7	12.5	10.3	21.5	19.0
8- 5	10	5	10.8	11.6	10.8	16.0	15.2	20.5	19.5
8- 5	10	6	8.9	10.0	8.0	19.0	14.2	22.2	20.3
8- 5	10	7	11.0	12.8	10.6	13.8	12.3	22.6	20.8
8- 5	10	8	10.9	12.2	12.8	21.5	15.3	23.0	22.0
8- 5	13	1	26.5	24.4	26.0	25.0	25.8	20.0	15.2
8- 5	13	2	30.5	31.2	33.2	29.6	30.5	26.0	17.6
8- 5	13	3	27.0	27.0	29.4	27.0	28.5	28.5	19.2
8- 5	13	4	19.4	23.5	25.8	23.5	24.0	20.1	17.3
8- 5	13	5	34.0	30.4	28.3	27.2	29.2	20.4	15.2
8- 5	13	6	36.0	34.0	33.0	30.2	31.5	24.5	19.3
8- 5	13	7	37.0	35.1	34.3	33.0	34.3	25.0	18.0
8- 5	13	8	47.0	47.0	43.0	38.0	39.0	29.5	30.7
8- 5	14	1	26.4	24.3	26.0	28.1	25.3	.	.
8- 5	14	2	25.1	27.0	28.9	28.9	27.9	.	.
8- 5	14	3	20.6	21.8	23.9	25.3	23.7	.	.
8- 5	14	4	19.1	20.8	22.3	25.3	21.8	.	.
8- 5	14	5	16.2	18.6	21.0	23.2	23.0	.	.
8- 5	14	6	17.6	17.4	18.9	18.8	18.4	.	.
8- 5	14	7	16.9	17.5	19.5	19.8	19.5	.	.
8- 5	14	8	20.6	20.7	22.3	24.5	22.6	.	.
8- 5	14	9	24.0	.	24.3	27.3	26.1	.	.
8- 5	14	10	22.4	21.9	22.6	26.3	23.4	.	.
8- 5	14	11	15.3	15.9	14.8	17.5	15.5	.	.
8- 5	14	12	20.6	20.7	23.0	24.4	21.8	.	.
8- 5	14	13	12.6	15.7	16.6	18.3	17.6	.	.
8- 5	14	14	17.6	21.3	24.0	26.1	25.9	32.5	29.0
8- 5	14	15	16.8	18.4	20.7	22.9	21.2	25.7	24.9
8- 5	14	16	16.4	19.3	21.7	23.9	22.1	27.0	25.7
8- 5	14	17	19.8	21.2	22.7	25.5	23.7	27.1	21.4
8- 5	14	18	29.0	27.8	30.4	31.3	30.1	32.5	.
8- 5	14	19	19.8	20.7	22.1	22.3	21.8	24.8	23.4
8- 5	14	20	25.5	25.6	27.6	28.3	26.7	24.7	21.1
8- 5	14	21	27.7	26.6	29.6	30.4	27.2	31.0	27.8
8- 5	14	22	23.3	24.1	26.0	27.0	25.3	26.8	19.7
8- 5	14	23	19.1	18.4	21.3	26.7	22.8	26.3	19.6
8- 5	14	24	25.2	26.9	27.6	27.9	24.8	25.0	20.0
8- 5	14	25	24.5	24.8	27.2	28.7	25.2	29.4	27.1
8- 5	14	26	9.9	12.3	14.2	18.1	15.0	19.2	14.5
8- 5	14	27	26.1	.	28.6	27.4	27.9	26.6	23.8
8- 5	14	28	19.2	20.5	20.5	24.0	21.0	26.8	25.8
8- 5	14	29	14.6	17.2	18.5	20.5	18.8	23.5	21.5

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

			DEPTH (CM)						
DATE	FIELD	POINT	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 5	14	30	20.5	19.5	20.4	21.1	21.5	25.2	23.4
8- 5	14	31	19.4	18.9	20.7	24.2	24.0	31.6	32.0
8- 5	14	32	21.1	20.3	22.0	22.6	20.7	25.4	21.2
8- 5	14	33	17.6	16.8	18.6	18.4	17.4	20.2	17.9
8- 5	14	34	20.7	20.4	21.5	21.7	22.5	24.4	22.1
8- 5	14	35	22.1	21.9	23.4	22.2	20.8	24.6	21.1
8- 5	14	36	35.9	35.4	34.0	32.3	31.7	29.2	27.5
8- 5	14	37	25.3	25.4	25.9	24.6	25.5	26.4	24.5
8- 5	15	1	8.4	14.8	16.3	18.5	17.0	18.6	21.9
8- 5	15	2	10.0	13.8	16.2	17.6	16.5	17.3	18.7
8- 5	15	3	15.2	18.6	22.0	22.0	20.8	23.0	25.4
8- 5	15	4	11.0	15.7	18.2	20.0	18.2	22.0	25.0
8- 5	15	5	14.0	18.4	21.0	22.7	21.0	22.3	24.2
8- 5	15	6	9.0	11.4	13.7	14.5	13.7	14.5	18.9
8- 5	15	7	12.5	17.0	20.0	21.8	19.0	22.9	25.0
8- 5	15	8	10.9	12.5	11.7	12.2	15.4	18.5	24.4
8- 5	17	1	6.0	5.8	7.0	10.0	9.0	22.8	24.1
8- 5	17	2	6.3	6.0	6.9	14.6	10.0	29.5	27.0
8- 5	17	3	5.8	6.0	8.2	17.7	14.8	23.4	31.0
8- 5	17	4	4.7	4.9	5.8	10.0	7.2	14.0	16.0
8- 5	17	5	7.1	7.1	10.0	15.6	11.7	20.5	22.8
8- 5	17	6	6.0	5.6	9.0	13.5	10.4	24.6	25.0
8- 5	17	7	5.8	6.2	9.1	13.8	10.9	22.8	23.2
8- 5	17	8	5.0	5.0	7.8	13.0	9.7	22.8	22.8
8- 5	2A	1	7.0	7.8	14.3	25.0	20.0	26.8	27.4
8- 5	2A	2	53.4	49.5	49.1	45.2	47.8	41.0	37.5
8- 5	2A	3	6.9	8.2	11.0	21.0	17.6	27.0	27.5
8- 5	2A	4	46.8	43.4	41.1	39.0	36.3	30.0	32.0
8- 5	2A	5	7.0	8.8	14.3	24.3	22.4	27.8	26.0
8- 5	2A	6	44.0	38.2	34.3	32.8	35.4	32.5	32.0
8- 5	2A	7	5.9	7.0	10.2	21.7	18.0	26.0	24.7
8- 5	2A	8	37.8	33.0	28.4	29.8	29.6	36.0	34.3
8- 5	1X	1	31.9	29.3	34.0	40.0	35.0	34.0	30.6
8- 5	1X	2	36.0	32.8	36.6	43.9	39.2	40.0	38.4
8- 5	1X	3	9.6	14.4	19.3	24.6	20.1	26.7	30.1
8- 5	1X	4	30.0	26.0	31.3	35.7	32.4	35.7	33.0
8- 5	1X	5	8.3	11.0	17.6	24.0	18.1	26.0	27.2
8- 5	1X	6	18.0	20.0	25.0	32.3	26.0	33.0	28.6
8- 5	1X	7	13.1	17.3	22.3	32.0	23.2	31.6	27.9
8- 5	1X	8	45.0	45.0	45.0	45.0	45.0	40.0	38.9
8- 5	19	1	31.8	33.0	32.4	34.5	34.0	31.8	30.5
8- 5	19	2	35.0	40.6	37.5	36.5	37.5	36.0	35.7
8- 5	19	3	9.2	16.0	22.4	25.0	22.0	27.8	28.5
8- 5	19	4	4.8	13.7	12.7	8.9	17.0	20.7	24.0
8- 5	19	5	10.0	14.0	20.1	25.0	19.0	29.7	31.4
8- 5	19	6	5.0	6.7	5.5	8.0	9.0	13.6	19.0
8- 5	19	7	14.1	24.0	24.2	27.1	20.0	29.8	30.5
8- 5	19	8	8.6	15.6	19.4	20.0	16.5	25.7	29.1
8- 5	20	1	21.6	20.9	23.6	27.9	27.4	29.9	29.6
8- 5	20	2	8.9	24.8	29.7	36.1	28.7	31.2	31.2
8- 5	20	3	22.1	25.2	31.3	38.3	26.9	35.7	34.9
8- 5	20	4	11.5	16.3	17.5	19.2	16.7	18.4	21.0
8- 5	20	5	25.0	22.2	22.9	26.0	26.4	26.2	20.5
8- 5	20	6	8.8	11.0	15.8	23.8	15.0	16.3	14.6
8- 5	20	7	47.7	44.6	38.0	59.6	48.5	46.1	49.3

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 5	20	8	49.1	46.6	42.6	45.7	44.3	43.8	40.8
8- 5	21	1	6.6	6.8	8.2	12.4	8.4	20.9	23.2
8- 5	21	2	4.2	5.9	4.5	5.0	5.7	22.8	19.1
8- 5	21	3	7.3	8.0	8.4	13.3	9.4	22.7	26.9
8- 5	21	4	7.5	8.2	11.7	15.3	12.4	21.0	21.5
8- 5	21	5	6.6	8.0	10.4	17.4	8.9	26.3	31.0
8- 5	21	6	5.0	5.1	5.3	8.1	6.9	14.0	14.8
8- 5	21	7	6.1	6.6	7.6	12.0	8.3	22.1	25.4
8- 5	21	8	4.7	5.1	5.7	11.1	7.0	16.3	19.9
8- 5	22	1	16.0	21.0	22.2	22.0	22.0	25.8	25.8
8- 5	22	2	19.0	23.0	24.0	21.8	21.8	23.2	22.9
8- 5	22	3	14.0	17.5	19.0	18.5	17.0	16.8	16.2
8- 5	22	4	27.2	32.0	32.0	27.1	30.5	29.2	27.2
8- 5	22	5	25.4	26.4	25.4	24.0	24.0	25.4	23.0
8- 5	22	6	20.1	23.4	25.2	24.4	23.9	23.8	23.0
8- 5	22	7	26.8	27.7	28.0	27.0	21.1	26.2	23.5
8- 5	22	8	25.2	28.0	24.5	23.6	25.0	21.0	15.8
8- 5	2X	1	5.0	4.6	7.0	12.7	13.9	25.0	29.5
8- 5	2X	2	5.0	5.0	6.1	13.8	10.0	26.2	28.3
8- 5	2X	3	4.8	5.5	8.6	19.4	14.5	28.5	30.6
8- 5	2X	4	4.9	5.2	6.6	17.2	14.7	24.4	25.2
8- 5	2X	5	5.0	5.0	7.0	16.7	11.0	32.2	33.7
8- 5	2X	6	5.0	5.0	9.1	24.6	13.3	30.0	31.0
8- 5	2X	7	6.6	5.5	9.1	26.0	15.2	34.4	36.7
8- 5	2X	8	44.0	41.0	40.1	42.0	39.8	37.6	37.6
8- 5	24	1	42.4	47.0	43.7	43.2	44.5	38.7	36.8
8- 5	24	2	39.0	40.7	42.0	43.4	39.9	27.5	27.5
8- 5	24	3	15.5	21.0	26.1	29.0	20.0	24.0	24.8
8- 5	24	4	10.8	16.0	24.2	29.0	22.0	25.9	23.6
8- 5	24	5	16.0	19.0	23.0	30.4	26.6	29.0	31.8
8- 5	24	6	11.0	15.0	19.0	26.7	21.6	28.1	28.1
8- 5	24	7	9.8	16.1	21.0	24.2	22.4	32.8	33.0
8- 5	24	8	21.6	26.0	29.4	31.5	30.0	34.0	34.9
8- 5	25	1	31.2	25.8	27.7	31.4	29.7	33.2	27.9
8- 5	25	2	38.4	33.7	38.6	45.5	36.8	37.7	36.4
8- 5	25	3	21.5	19.1	22.0	27.7	22.6	23.2	29.4
8- 5	25	4	21.5	20.9	23.1	30.4	14.4	23.8	32.0
8- 5	25	5	35.4	29.2	35.7	44.7	33.9	37.3	34.0
8- 5	25	6	26.3	25.1	28.0	35.7	31.2	28.5	26.4
8- 5	25	7	40.9	33.2	35.2	38.8	37.0	35.2	30.7
8- 5	25	8	52.5	40.7	32.0	36.9	44.2	42.9	41.1
8- 5	26	1	7.8	7.8	8.1	10.3	9.0	18.0	21.0
8- 5	26	2	5.8	6.6	7.3	9.8	9.7	15.2	14.8
8- 5	26	3	5.6	7.6	8.2	13.5	11.8	24.3	22.3
8- 5	26	4	6.6	7.9	9.4	12.8	10.0	26.5	24.6
8- 5	26	5	7.3	8.1	9.0	17.0	14.4	29.8	30.5
8- 5	26	6	6.9	7.9	9.2	16.4	11.0	26.2	31.1
8- 5	26	7	8.0	7.3	8.3	12.5	9.5	24.1	25.1
8- 5	26	8	5.6	5.9	6.6	8.9	7.3	17.1	16.5
8- 5	27	1	11.8	21.0	23.7	26.0	22.4	24.8	19.4
8- 5	27	2	12.3	17.8	20.0	21.6	18.7	23.8	23.1
8- 5	27	3	4.8	15.8	16.2	12.4	12.9	17.4	15.0
8- 5	27	4	8.4	16.1	20.8	19.8	15.0	22.3	14.4
8- 5	27	5	3.2	9.8	12.1	13.7	11.2	14.5	15.5
8- 5	27	6	32.1	36.0	35.6	33.2	34.2	33.9	28.8

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 5	27	7	26.0	27.0	27.4	24.9	26.2	21.0	23.2
8- 5	27	8	25.5	27.2	27.6	23.9	28.7	33.0	30.7
8- 8	02	1	5.5	9.4	14.5	20.9	16.5	23.0	23.0
8- 8	02	2	3.8	8.1	9.1	20.0	15.0	26.3	29.8
8- 8	02	3	11.0	10.0	12.5	6.5	15.4	30.2	29.8
8- 8	02	4	3.8	7.8	8.0	10.8	15.0	27.0	31.3
8- 8	02	5	6.0	7.0	8.5	19.5	16.3	26.6	23.8
8- 8	02	6	3.5	8.1	10.0	19.0	11.8	18.5	18.5
8- 8	02	7	4.5	7.8	7.0	14.5	13.5	22.0	24.3
8- 8	02	8	4.2	9.2	7.5	8.2	12.0	17.1	19.0
8- 8	04	1	32.0	31.5	31.5	31.5	32.0	24.3	23.6
8- 8	04	2	28.4	28.0	28.0	25.5	25.0	17.8	16.0
8- 8	04	3	24.0	23.0	23.9	22.3	23.3	21.6	15.5
8- 8	04	4	25.0	21.8	22.5	24.8	23.7	23.5	17.8
8- 8	04	5	17.0	20.3	21.5	20.8	21.1	21.4	21.3
8- 8	04	6	16.3	20.9	22.0	20.5	22.0	22.5	22.0
8- 8	04	7	15.2	17.0	18.0	18.0	17.2	19.2	19.2
8- 8	04	8	12.5	16.5	18.0	17.8	16.0	25.2	18.5
8- 8	06	1	4.1	6.1	11.5	11.5	.	.	.
8- 8	06	2	5.5	10.4	10.5	15.0	.	.	.
8- 8	06	3	4.8	7.0	9.6	3.3	.	.	.
8- 8	06	4	6.2	11.8	13.1	12.7	.	.	.
8- 8	06	5	5.2	7.3	9.7	8.7	.	.	.
8- 8	06	6	3.6	5.9	5.8	14.0	.	.	.
8- 8	06	7	4.6	6.0	6.7	8.4	.	.	.
8- 8	06	8	5.6	8.8	10.0	14.6	.	.	.
8- 8	06	9	11.8	17.1	13.4	15.2	.	.	.
8- 8	06	10	5.8	11.7	15.5	15.7	.	.	.
8- 8	06	11	6.4	12.2	14.9	15.9	.	.	.
8- 8	06	12	6.5	8.2	7.9	12.4	.	.	.
8- 8	06	13	6.6	11.1	13.2	12.4	.	.	.
8- 8	06	14	4.1	6.3	8.0	10.2	15.4	15.5	12.6
8- 8	06	15	5.1	8.6	10.1	.	12.4	17.5	.
8- 8	06	16	6.9	8.7	9.1	16.8	10.6	19.1	14.8
8- 8	06	17	4.4	6.6	8.3	16.4	15.1	15.2	22.3
8- 8	06	18	6.8	10.2	9.4	16.9	24.6	23.5	20.1
8- 8	06	19	7.3	13.2	17.5	23.3	15.5	19.6	22.0
8- 8	06	20	6.8	9.3	8.9	11.5	14.4	32.3	20.6
8- 8	06	21	6.5	9.2	10.1	9.8	11.1	16.6	18.3
8- 8	06	22	7.4	14.2	16.4	21.1	16.1	20.8	24.2
8- 8	06	23	6.2	8.6	10.4	10.5	12.6	16.8	19.6
8- 8	06	24	3.8	6.3	8.9	8.6	6.2	7.4	10.5
8- 8	06	25	8.5	9.1	7.7	11.8	.	20.5	19.4
8- 8	06	26	4.2	8.9	11.8	12.5	9.8	14.2	18.9
8- 8	06	27	4.9	9.9	11.8	14.7	10.7	16.8	17.1
8- 8	06	28	4.7	9.8	12.4	19.8	7.3	11.2	14.4
8- 8	06	29	5.4	10.8	8.8	14.1	10.2	15.9	13.7
8- 8	06	30	5.3	9.5	9.5	15.5	14.7	19.8	22.4
8- 8	06	31	6.6	12.6	14.8	16.5	11.3	14.0	16.9
8- 8	06	32	5.4	10.8	14.3	16.4	10.8	14.6	15.5
8- 8	06	33	7.4	11.3	10.8	13.0	12.7	16.9	16.5
8- 8	06	34	6.7	12.6	12.4	12.2	9.4	12.3	11.9
8- 8	06	35	8.5	16.7	19.0	22.5	22.4	25.0	26.1
8- 8	06	36	7.7	10.9	11.6	16.1	14.4	17.2	16.9
8- 8	06	37	7.0	12.1	14.8	17.4	11.3	16.6	23.6

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 8	07	1	5.4	11.0	14.5	18.3	17.0	17.0	17.9
8- 8	07	2	6.0	13.1	18.2	23.9	17.0	24.8	27.8
8- 8	07	3	6.8	14.3	18.0	19.4	16.7	19.9	21.7
8- 8	07	4	6.0	13.0	15.0	19.5	17.1	19.1	23.0
8- 8	07	5	5.5	12.2	17.0	17.8	16.3	18.0	18.0
8- 8	07	6	5.9	12.4	18.0	19.0	17.2	20.3	21.0
8- 8	07	7	3.8	9.1	12.8	14.3	10.8	21.0	19.0
8- 8	07	8	6.0	12.6	18.1	20.1	16.0	22.8	24.7
8- 8	08	1	8.0	5.6	10.0	14.5	9.4	15.9	17.4
8- 8	08	2	6.6	10.7	12.0	12.8	11.5	17.0	18.4
8- 8	08	3	5.7	8.2	9.1	12.7	9.5	15.2	17.5
8- 8	08	4	4.6	5.5	6.6	11.2	10.0	15.0	15.8
8- 8	08	5	2.0	5.0	7.5	11.0	8.6	20.9	21.3
8- 8	08	6	4.0	6.0	10.2	13.1	10.5	17.8	17.8
8- 8	08	7	4.8	5.6	8.6	14.2	10.0	18.6	17.8
8- 8	08	8	4.0	4.9	7.0	12.2	11.7	19.5	20.7
8- 8	1A	1	5.4	9.2	22.1	28.0	22.5	27.0	26.0
8- 8	1A	2	5.7	6.6	10.5	21.0	11.5	25.0	21.3
8- 8	1A	3	6.3	12.0	18.2	24.2	20.2	24.8	28.6
8- 8	1A	4	4.9	6.0	9.7	19.8	11.6	24.2	26.8
8- 8	1A	5	4.4	5.8	11.5	17.2	14.3	22.0	25.8
8- 8	1A	6	5.5	7.6	10.0	16.6	13.8	19.5	20.1
8- 8	1A	7	5.0	6.0	7.3	14.8	11.3	21.6	28.9
8- 8	1A	8	7.0	9.4	14.8	23.8	12.6	22.6	19.7
8- 8	10	1	4.0	5.7	6.5	9.3	7.7	17.2	16.2
8- 8	10	2	5.7	11.5	13.8	18.0	14.0	18.0	16.0
8- 8	10	3	4.5	7.7	9.5	16.8	13.0	20.8	18.2
8- 8	10	4	4.0	6.0	7.3	14.7	11.7	18.8	19.7
8- 8	10	5	6.8	10.0	17.6	19.0	15.7	21.0	21.8
8- 8	10	6	4.2	9.2	8.5	18.9	13.5	24.4	20.0
8- 8	10	7	4.6	9.1	9.2	10.5	10.0	21.0	20.0
8- 8	10	8	4.2	8.3	9.6	20.5	15.0	22.8	21.5
8- 8	13	1	30.5	29.0	29.0	27.0	27.5	17.5	14.5
8- 8	13	2	33.4	35.1	36.0	34.3	34.8	30.0	18.2
8- 8	13	3	36.5	33.8	32.6	29.3	30.8	20.0	18.4
8- 8	13	4	28.9	29.0	29.5	27.8	28.3	18.7	15.8
8- 8	13	5	35.0	32.8	30.8	29.9	31.2	22.7	15.5
8- 8	13	6	12.5	19.0	20.5	22.0	20.0	23.0	19.6
8- 8	13	7	16.0	19.8	21.0	22.0	21.0	20.0	19.5
8- 8	13	8	20.0	28.5	28.2	26.1	27.5	28.2	28.5
8- 8	14	1	11.1	19.8	23.0	25.2	21.4	26.8	24.7
8- 8	14	2	11.6	18.9	20.9	26.1	21.3	.	.
8- 8	14	3	8.5	18.2	21.5	24.9	19.7	.	.
8- 8	14	4	12.1	18.0	.	23.9	19.7	.	.
8- 8	14	5	8.0	16.2	19.4	24.0	20.7	.	.
8- 8	14	6	5.8	14.4	16.7	15.9	15.3	.	.
8- 8	14	7	11.3	13.0	14.7	18.7	14.9	.	.
8- 8	14	8	10.3	14.6	16.1	22.2	18.2	.	.
8- 8	14	9	9.5	15.2	18.4	.	21.3	.	.
8- 8	14	10	9.7	16.4	18.3	21.4	19.8	.	.
8- 8	14	11	8.8	12.6	14.3	17.5	12.5	.	.
8- 8	14	12	9.8	13.7	16.5	21.7	18.3	.	.
8- 8	14	13	7.7	12.6	13.5	17.8	13.4	.	.
8- 8	14	14	11.4	18.8	22.8	26.1	21.3	30.9	27.8
8- 8	14	15	.	14.8	18.3	21.4	18.9	24.3	24.7

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 8	14	16	7.2	15.3	20.2	23.0	22.2	28.5	30.0
8- 8	14	17	11.1	17.4	20.1	22.9	20.4	24.5	21.1
8- 8	14	18	13.0	18.9	21.3	24.3	21.9	28.5	26.3
8- 8	14	19	9.0	14.7	18.4	20.0	17.0	23.0	21.5
8- 8	14	20	11.5	17.5	18.8	21.9	18.4	22.6	18.8
8- 8	14	21	12.4	18.8	21.4	23.7	20.6	27.6	24.0
8- 8	14	22	15.1	18.0	20.1	23.0	20.2	26.0	21.5
8- 8	14	23	10.2	12.9	16.7	19.1	19.6	26.1	21.2
8- 8	14	24	18.5	21.7	24.2	26.6	21.0	25.0	21.0
8- 8	14	25	15.2	20.6	21.8	25.2	19.1	28.8	28.3
8- 8	14	26	8.9	11.5	13.3	16.2	12.9	17.3	13.6
8- 8	14	27	18.3	20.5	20.6	24.4	21.9	26.3	24.1
8- 8	14	28	8.1	15.2	17.3	19.7	16.7	24.5	23.7
8- 8	14	29	5.7	13.1	16.6	20.3	15.8	22.4	19.7
8- 8	14	30	12.3	14.6	17.1	19.2	16.1	23.1	20.3
8- 8	14	31	10.3	12.8	15.8	24.3	17.9	30.2	30.8
8- 8	14	32	12.4	14.8	15.4	19.3	16.8	25.7	22.1
8- 8	14	33	7.7	13.6	15.2	16.7	13.5	17.5	17.8
8- 8	14	34	10.8	13.0	16.4	18.8	15.4	21.7	20.2
8- 8	14	35	10.2	17.1	19.7	21.6	19.3	24.2	22.9
8- 8	14	36	19.2	23.0	26.1	28.5	23.6	29.2	32.2
8- 8	14	37	10.7	23.3	16.6	21.5	16.0	23.5	21.6
8- 8	15	1	6.8	12.5	16.6	19.2	15.3	16.2	21.3
8- 8	15	2	5.6	10.5	14.0	15.0	14.3	16.2	17.3
8- 8	15	3	8.0	14.0	19.0	21.0	18.0	23.0	24.2
8- 8	15	4	6.3	12.8	16.8	19.5	16.1	21.2	24.0
8- 8	15	5	40.1	36.4	32.4	34.5	32.4	29.5	31.7
8- 8	15	6	29.7	27.4	26.3	24.6	26.4	20.6	18.8
8- 6	15	7	33.0	30.0	28.5	26.5	27.5	25.8	27.1
8- 8	15	8	45.0	43.8	42.3	37.2	39.0	31.4	30.0
8- 8	17	1	4.4	5.0	6.8	11.9	9.5	22.5	22.8
8- 8	17	2	4.4	5.0	6.2	14.1	10.8	27.0	26.5
8- 8	17	3	4.0	6.0	8.7	20.0	13.5	25.1	30.7
8- 8	17	4	3.0	4.5	6.1	10.0	8.2	16.5	18.8
8- 8	17	5	5.2	6.8	8.7	16.0	12.2	24.1	21.0
8- 8	17	6	4.9	5.8	10.2	17.0	10.2	27.0	25.0
8- 8	17	7	4.9	5.9	7.7	9.8	11.0	22.5	23.5
8- 8	17	8	4.0	4.5	7.0	11.0	10.2	21.8	22.0
8- 8	2A	1	6.0	7.5	12.6	23.0	21.0	25.0	25.6
8- 8	2A	2	25.0	34.0	36.0	38.1	33.2	33.8	32.8
8- 8	2A	3	5.5	6.7	9.4	19.0	16.0	26.6	26.1
8- 8	2A	4	28.0	33.0	35.8	35.8	32.4	30.8	32.4
8- 8	2A	5	7.0	8.4	13.8	24.0	22.4	28.7	27.4
8- 8	2A	6	26.3	28.5	30.4	30.7	27.7	32.1	32.1
8- 8	2A	7	5.0	6.8	10.0	22.4	14.0	27.8	25.6
8- 8	2A	8	23.8	25.3	25.3	28.0	25.1	33.0	31.4
8- 8	1X	1	24.5	22.5	26.1	32.5	28.0	31.5	30.0
8- 8	1X	2	19.5	22.6	29.5	37.0	37.1	37.0	37.0
8- 8	1X	3	8.0	12.0	17.3	23.0	17.3	27.0	29.8
8- 8	1X	4	19.0	20.0	26.1	33.0	28.9	32.1	30.7
8- 8	1X	5	7.6	10.8	15.7	22.4	17.1	22.6	24.8
8- 8	1X	6	15.6	18.4	23.0	30.2	23.8	30.2	27.0
8- 8	1X	7	10.0	14.0	19.0	29.2	20.6	28.4	27.7
8- 8	1X	8	23.0	23.8	30.5	39.8	31.0	37.7	36.0
8- 8	19	1	20.0	25.6	25.6	28.5	27.5	28.5	27.0

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 8	19	2	18.8	32.8	27.5	33.2	30.0	32.8	33.9
8- 8	19	3	7.8	12.8	17.2	21.0	18.0	25.0	25.8
8- 8	19	4	6.8	8.0	12.1	17.1	13.2	12.5	21.0
8- 8	19	5	34.8	37.7	37.8	33.5	36.0	34.4	34.4
8- 8	19	6	29.8	34.0	30.0	27.0	28.6	28.6	30.7
8- 8	19	7	10.0	19.0	21.4	24.0	15.6	26.9	30.0
8- 8	19	8	4.6	10.1	16.6	16.6	15.0	21.8	26.7
8- 8	20	1	43.4	36.4	38.7	34.7	36.3	36.4	32.8
8- 8	20	2	34.6	29.7	33.5	39.7	34.5	32.9	28.9
8- 8	20	3	38.8	33.9	37.2	42.5	37.3	35.7	34.7
8- 8	20	4	27.5	23.0	25.9	32.3	25.7	26.3	24.6
8- 8	20	5	10.3	10.8	13.2	15.1	13.0	18.8	15.4
8- 8	20	6	14.1	12.4	13.9	16.3	17.6	15.9	13.3
8- 8	20	7	53.3	45.8	35.7	34.1	44.2	35.7	41.9
8- 8	20	8	42.2	36.9	38.2	44.8	37.7	42.9	44.4
8- 8	21	1	3.9	6.8	7.1	12.4	8.7	26.7	34.1
8- 8	21	2	3.4	4.2	4.9	8.5	9.0	22.6	30.2
8- 8	21	3	7.4	7.0	8.2	11.3	9.3	24.2	30.7
8- 8	21	4	6.8	7.2	7.8	10.5	8.9	24.3	33.0
8- 8	21	5	6.6	6.5	7.5	11.6	9.0	19.7	22.8
8- 8	21	6	4.3	3.8	4.8	7.1	4.8	12.4	15.7
8- 8	21	7	6.1	5.0	6.0	8.4	7.4	16.6	26.0
8- 8	21	8	4.0	4.4	4.8	6.0	6.1	.	.
8- 8	22	1	27.7	29.8	30.0	26.0	27.0	25.8	24.8
8- 8	22	2	28.0	28.0	28.0	24.7	25.0	23.4	22.8
8- 8	22	3	32.8	27.8	26.7	24.8	28.2	18.0	17.0
8- 8	22	4	24.2	28.8	27.6	27.6	29.4	29.2	25.0
8- 8	22	5	17.2	20.0	22.0	23.7	23.7	30.0	28.1
8- 8	22	6	9.0	15.0	20.8	19.0	18.2	23.0	27.0
8- 8	22	7	12.5	18.5	18.0	19.0	16.5	23.8	25.5
8- 0	22	8	21.5	24.0	22.3	22.2	26.3	27.0	16.2
8- 8	2X	1	5.0	4.6	6.8	10.0	14.3	26.2	29.5
8- 8	2X	2	5.0	5.0	6.5	14.2	10.6	26.2	28.3
8- 8	2X	3	4.8	5.5	8.6	18.2	14.5	28.1	30.2
8- 8	2X	4	4.9	5.2	6.9	17.8	14.7	24.4	25.2
8- 8	2X	5	5.0	5.0	7.0	16.4	11.0	32.4	34.2
8- 8	2X	6	5.0	5.0	8.7	23.9	12.4	30.0	31.2
8- 8	2X	7	6.2	5.5	9.5	26.0	15.4	31.1	36.3
8- 8	2X	8	29.5	35.0	35.0	39.4	35.3	37.5	37.5
8- 8	24	1	27.1	38.8	36.0	38.0	36.8	33.9	34.2
8- 8	24	2	24.0	34.0	34.0	34.0	31.1	32.5	34.0
8- 8	24	3	13.0	19.4	22.0	26.0	22.2	26.5	25.5
8- 8	24	4	8.0	14.0	19.6	23.7	20.0	23.7	26.0
8- 8	24	5	41.2	43.0	35.0	37.6	40.0	37.0	34.8
8- 8	24	6	31.1	33.3	38.0	32.8	35.7	34.3	32.2
8- 8	24	7	6.8	12.3	17.2	21.5	18.3	29.5	31.5
8- 8	24	8	13.0	21.0	24.5	27.5	25.8	31.9	33.4
8- 8	25	1	14.1	16.3	21.6	26.9	22.5	26.3	27.6
8- 8	25	2	74.6	48.5	42.9	44.8	43.8	37.0	35.2
8- 8	25	3	9.5	13.1	15.3	21.1	14.9	20.1	27.0
8- 8	25	4	37.9	36.3	42.6	53.8	39.0	31.4	24.5
8- 8	25	5	19.6	11.2	18.6	25.2	23.4	28.5	27.9
8- 8	25	6	10.3	15.0	18.0	24.1	19.8	22.3	21.0
8- 8	25	7	13.2	19.8	23.9	31.7	24.8	28.6	28.8
8- 8	25	8	18.8	22.0	28.4	40.8	31.7	31.3	34.6

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8- 8	26	1	6.8	6.0	9.0	9.9	8.0	19.6	22.0
8- 8	26	2	4.8	5.9	6.7	8.5	8.5	15.3	14.0
8- 8	26	3	4.1	6.5	8.1	13.5	11.9	23.7	21.6
8- 8	26	4	5.8	7.5	9.5	12.4	9.5	24.1	24.9
8- 8	26	5	6.6	7.5	9.5	20.1	13.0	30.9	30.6
8- 8	26	6	5.8	7.6	9.5	16.9	11.0	26.2	30.3
8- 8	26	7	9.5	8.6	10.4	13.5	14.0	23.7	25.7
8- 8	26	8	4.8	5.8	6.5	9.0	6.9	17.4	16.7
8- 8	27	1	22.0	26.5	29.2	28.0	27.3	27.5	24.0
8- 8	27	2	26.9	28.3	25.7	26.3	27.9	31.4	25.4
8- 8	27	3	17.2	20.7	24.4	20.4	18.3	21.3	20.2
8- 8	27	4	19.8	24.0	26.5	23.1	24.4	23.5	14.9
8- 8	27	5	12.0	15.9	16.8	16.3	15.0	16.2	16.5
8- 8	27	6	21.3	27.3	33.1	20.9	27.7	30.3	26.0
8- 8	27	7	11.3	18.9	19.8	21.3	19.3	25.1	25.2
8- 8	27	8	15.5	20.6	21.4	22.8	24.4	32.7	25.0
8-11	02	1	5.0	8.7	14.0	13.0	12.3	22.0	24.9
8-11	02	2	6.0	10.0	13.0	15.7	11.0	24.0	29.7
8-11	02	3	4.0	7.0	9.1	14.0	12.3	25.5	26.9
8-11	02	4	5.7	6.3	8.0	11.0	10.4	24.6	30.0
8-11	02	5	6.0	8.0	10.0	17.0	13.0	25.2	24.0
8-11	02	6	4.2	6.0	10.2	17.0	12.6	18.2	17.9
8-11	02	7	6.0	10.0	13.0	18.1	15.0	22.8	24.0
8-11	02	8	5.0	6.3	9.0	14.3	9.7	18.2	19.5
8-11	04	1	15.6	18.2	20.0	18.2	20.0	22.3	21.5
8-11	04	2	16.4	16.2	16.2	16.0	15.4	16.2	14.8
8-11	04	3	9.8	12.0	14.3	13.9	12.7	17.0	15.2
8-11	04	4	11.2	14.0	13.8	14.7	13.8	16.2	13.7
8-11	04	5	7.5	13.4	15.5	14.7	14.2	18.0	19.4
8-11	04	6	5.5	11.8	13.7	13.7	13.4	20.0	21.0
8-11	04	7	8.2	12.2	13.5	12.7	11.6	17.0	18.5
8-11	04	8	5.0	9.0	11.5	12.0	11.2	20.0	18.2
8-11	06	1	3.0	4.2	7.0	11.2	.	.	.
8-11	06	2	3.9	6.3	9.0	17.4	.	.	.
8-11	06	3	3.1	5.5	7.7	12.8	.	.	.
8-11	06	4	3.7	5.5	8.2	16.9	.	.	.
8-11	06	5	3.0	5.4	9.2	11.9	.	.	.
8-11	06	6	3.4	8.5	12.8	19.9	.	.	.
8-11	06	7	3.6	7.1	9.7	14.1	.	.	.
8-11	06	8	4.3	8.5	12.8	17.0	.	.	.
8-11	06	9	5.8	11.3	11.3	12.6	.	.	.
8-11	06	10	3.7	11.3	17.5	23.6	.	.	.
8-11	06	11	4.4	6.9	10.6	12.8	.	.	.
8-11	06	12	3.7	6.3	8.0	12.9	.	.	.
8-11	06	13	3.9	5.7	8.0	12.2	.	.	.
8-11	06	14	2.9	5.1	8.8	14.3	8.0	12.4	15.5
8-11	06	15	4.4	6.0	11.7	13.9	11.4	15.0	15.2
8-11	06	16	4.0	6.3	11.7	23.6	17.4	21.9	21.9
8-11	06	17	3.0	5.9	11.8	21.3	9.7	21.1	22.6
8-11	06	18	4.2	6.2	9.2	19.1	15.0	24.5	24.1
8-11	06	19	5.6	9.0	15.8	20.5	13.1	20.6	22.5
8-11	06	20	4.3	7.0	11.4	15.8	20.4	20.6	18.0
8-11	06	21	3.8	6.1	13.2	15.1	10.7	17.9	18.7
8-11	06	22	5.5	7.4	14.2	23.9	15.9	26.2	26.9
8-11	06	23	2.7	6.7	12.7	19.0	12.5	20.1	21.9

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-11	06	24	2.2	2.9	6.3	6.5	5.6	5.6	8.4
8-11	06	25	2.8	3.3	6.0	9.4	10.3	10.5	16.1
8-11	06	26	3.0	4.8	13.6	16.9	10.7	13.5	17.6
8-11	06	27	3.5	6.9	8.3	12.7	12.5	15.0	15.6
8-11	06	28	2.4	5.0	9.7	13.6	8.0	12.6	14.8
8-11	06	29	2.9	4.1	6.7	12.9	4.3	12.2	11.6
8-11	06	30	3.6	6.1	10.5	11.5	13.6	16.9	18.8
8-11	06	31	4.3	8.2	10.2	10.6	7.3	14.2	16.7
8-11	06	32	2.7	7.4	11.8	14.1	6.5	15.3	16.2
8-11	06	33	4.6	8.4	11.6	14.6	11.9	15.3	17.2
8-11	06	34	3.7	7.8	8.3	10.8	7.6	12.7	9.7
8-11	06	35	7.5	16.3	20.9	27.7	17.6	22.6	21.9
8-11	06	36	4.2	11.6	15.0	15.2	8.7	17.9	18.3
8-11	06	37	3.0	8.0	12.7	13.9	10.6	15.2	17.4
8-11	07	1	24.6	22.5	21.2	21.2	22.0	18.3	18.0
8-11	07	2	15.0	19.0	21.4	23.8	22.3	26.0	27.0
8-11	07	3	26.0	24.0	23.0	27.4	23.0	21.0	21.5
8-11	07	4	27.6	25.8	24.9	24.3	24.9	20.5	27.6
8-11	07	5	14.7	20.0	25.0	25.0	23.0	19.4	19.3
8-11	07	6	15.2	20.0	22.4	22.4	19.0	17.5	17.5
8-11	07	7	12.6	19.4	23.4	23.4	21.3	20.2	20.2
8-11	07	8	15.0	28.0	24.5	23.7	24.5	26.3	26.4
8-11	08	1	21.0	21.0	23.3	25.8	24.4	29.0	29.0
8-11	08	2	3.5	4.8	7.0	12.0	12.6	17.4	19.0
8-11	08	3	3.7	4.5	5.7	8.4	8.6	15.8	15.9
8-11	08	4	3.0	4.1	6.1	10.0	10.0	15.8	17.6
8-11	08	5	26.2	29.0	29.0	29.0	29.0	28.7	29.0
8-11	08	6	3.0	4.0	5.6	8.7	9.0	16.1	14.5
8-11	08	7	3.5	4.2	6.0	9.8	9.3	16.7	17.7
8-11	08	8	3.8	4.1	5.6	10.0	10.0	17.0	20.0
8-11	1A	1	5.1	7.0	14.7	24.4	21.1	26.4	22.8
8-11	1A	2	5.4	6.4	9.6	18.1	12.8	24.0	20.7
8-11	1A	3	4.3	8.6	15.9	21.6	17.4	22.5	23.7
8-11	1A	4	4.5	5.6	8.8	14.1	11.9	22.2	20.4
8-11	1A	5	4.1	5.6	10.4	16.3	14.0	21.0	24.0
8-11	1A	6	4.4	6.2	9.4	14.8	12.2	19.5	20.2
8-11	1A	7	4.7	7.5	9.6	17.3	15.2	20.4	26.6
8-11	1A	8	6.9	9.2	15.0	21.2	14.2	21.0	19.1
8-11	10	1	5.3	7.5	11.5	9.8	10.0	17.7	15.5
8-11	10	2	6.0	10.0	14.5	18.4	12.7	18.0	15.4
8-11	10	3	5.7	7.9	14.1	18.8	12.5	21.4	18.0
8-11	10	4	5.0	6.5	9.1	16.7	11.0	17.0	16.1
8-11	10	5	5.5	7.5	14.6	20.8	11.9	21.1	19.5
8-11	10	6	6.4	10.5	14.3	22.3	14.3	26.5	24.5
8-11	10	7	5.8	7.8	10.5	11.8	11.1	21.9	20.3
8-11	10	8	5.6	6.9	9.0	15.0	13.5	22.0	21.3
8-11	13	1	19.0	18.0	18.0	17.5	17.5	14.8	14.0
8-11	13	2	15.4	21.6	23.2	21.5	21.5	20.6	16.4
8-11	13	3	11.7	20.0	20.9	20.0	20.0	24.0	19.1
8-11	13	4	12.0	15.0	17.0	17.0	16.1	16.1	15.6
8-11	13	5	10.8	13.2	14.8	14.8	14.0	19.5	16.0
8-11	13	6	13.8	21.0	21.5	21.0	21.1	23.5	18.8
8-11	13	7	14.2	19.0	20.0	20.0	20.0	25.6	18.9
8-11	13	8	10.0	16.0	19.0	18.0	18.0	30.0	28.2
8-11	14	1	5.4	9.1	16.1	21.4	17.6	.	.

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-11	14	2	6.4	13.4	18.5	23.4	17.8	.	.
8-11	14	3	5.9	14.7	19.0	21.5	17.8	.	.
8-11	14	4	5.3	11.4	16.5	21.5	16.7	.	.
8-11	14	5	4.8	11.7	24.5	20.3	14.5	.	.
8-11	14	6	3.3	11.1	12.7	13.9	11.6	.	.
8-11	14	7	6.9	11.9	13.4	15.9	11.9	.	.
8-11	14	8	4.5	11.2	13.4	19.9	14.2	.	.
8-11	14	9	5.1	13.7	17.2	23.2	17.1	.	.
8-11	14	10	5.1	14.5	16.4	23.5	15.9	.	.
8-11	14	11	3.7	11.7	13.2	17.0	11.6	.	.
8-11	14	12	6.0	13.6	16.2	20.3	14.1	.	.
8-11	14	13	3.2	11.7	13.0	16.9	12.1	.	.
8-11	14	14	7.0	15.2	18.9	23.7	20.3	30.2	26.6
8-11	14	15	5.7	13.6	16.2	21.6	16.4	26.5	25.8
8-11	14	16	6.1	13.8	17.3	21.1	16.2	26.0	25.8
8-11	14	17	5.9	11.3	16.3	20.7	18.8	24.5	23.4
8-11	14	18	5.0	11.9	17.8	19.6	19.5	24.8	25.3
8-11	14	19	.	12.0	14.4	16.8	15.4	21.7	21.3
8-11	14	20	5.8	13.7	17.6	21.2	16.9	21.4	18.0
8-11	14	21	6.3	14.0	17.5	21.2	18.1	27.9	25.8
8-11	14	22	5.1	13.9	18.1	23.1	17.3	23.7	20.8
8-11	14	23	4.7	11.9	14.2	23.5	17.5	23.7	18.4
8-11	14	24	5.8	14.4	18.8	21.7	16.7	23.4	20.1
8-11	14	25	8.9	18.5	22.7	24.4	19.8	27.9	27.2
8-11	14	26	2.3	5.9	10.5	13.6	11.4	17.7	13.7
8-11	14	27	5.6	17.9	20.9	24.3	17.1	26.4	23.6
8-11	14	28	3.2	11.3	15.2	20.9	15.5	24.5	23.3
8-11	14	29	3.9	11.4	15.3	20.5	15.5	21.5	17.3
8-11	14	30	3.9	9.7	13.2	15.5	12.6	21.7	21.6
8-11	14	31	6.5	13.2	15.4	23.0	17.3	27.5	27.4
8-11	14	32	4.3	12.6	15.4	18.3	12.5	22.7	21.0
8-11	14	33	3.9	8.8	11.6	14.6	11.5	15.2	15.3
8-11	14	34	4.9	13.3	15.3	19.3	15.4	21.7	19.8
8-11	14	35	5.1	13.5	17.1	18.5	15.1	21.2	19.0
8-11	14	36	10.4	21.8	26.8	26.8	23.4	30.8	32.5
8-11	14	37	7.0	14.7	16.9	20.2	17.2	24.2	23.8
8-11	15	1	24.3	23.5	22.8	22.5	23.3	17.5	19.4
8-11	15	2	28.3	27.3	26.8	23.2	25.2	20.0	20.0
8-11	15	3	4.8	10.8	16.4	19.6	14.3	20.8	21.4
8-11	15	4	33.8	31.4	30.0	28.7	30.0	23.5	23.8
8-11	15	5	17.8	20.8	23.8	25.8	25.8	24.5	25.8
8-11	15	6	10.7	15.5	19.8	20.8	19.8	20 8	17.8
8-11	15	7	12.8	19.8	23.3	23.5	21.4	25.4	[illegible]
8-11	15	8	9.8	20.6	23.6	24.8	20.9	21.5	[illegible]
8-11	17	1	3.9	4.4	6.1	12.2	9.8	22.0	. [illegible]
8-11	17	2	3.8	4.2	5.8	13.4	11.8	26.8	[illegible]
8-11	17	3	4.7	5.5	9.8	19.4	13.8	24.8	2[illegible]
8-11	17	4	3.9	4.4	5.4	10.2	9.2	17.8	19.8
8-11	17	5	6.2	7.6	8.3	16.8	13.8	25.3	22.6
8-11	17	6	4.9	5.8	7.8	16.8	10.3	24.2	25.4
8-11	17	7	5.3	5.3	7.8	10.3	10.8	24.8	24.5
8-11	17	8	3.7	4.2	6.1	10.8	10.8	20.4	22.6
8-11	2A	1	6.8	7.6	11.2	21.8	17.5	24.8	24.9
8-11	2A	2	13.8	30.8	33.9	36.8	26.3	30.8	30.8
8-11	2A	3	5.8	6.8	8.1	17.8	14.8	27.4	26.8

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-11	2A	4	15.0	24.8	30.0	34.0	26.8	31.3	30.5
8-11	2A	5	6.0	7.7	13.1	24.4	18.4	27.5	27.8
8-11	2A	6	15.0	22.6	27.9	30.9	24.4	29.4	30.0
8-11	2A	7	4.4	6.0	9.5	21.8	15.3	27.5	26.0
8-11	2A	8	15.0	21.0	25.0	30.0	21.5	31.0	29.0
8-11	1X	1	17.2	17.2	22.4	27.7	21.0	28.6	28.2
8-11	1X	2	10.6	15.0	24.2	29.6	28.0	31.5	34.7
8-11	1X	3	7.0	9.9	15.2	20.7	14.7	24.0	27.0
8-11	1X	4	12.8	16.0	22.6	30.0	25.0	30.0	28.0
8-11	1X	5	6.7	9.0	14.0	21.2	15.1	22.4	22.5
8-11	1X	6	12.5	14.8	20.0	26.0	19.8	25.5	25.0
8-11	1X	7	8.0	11.0	16.0	26.5	17.0	24.5	24.2
8-11	1X	8	13.0	16.8	26.2	34.8	29.4	34.8	32.1
8-11	1?	1	9.0	17.5	22.1	24.9	22.8	27.1	26.3
8-11	19	2	9.8	17.3	20.7	29.5	26.7	28.5	30.7
8-11	19	3	7.9	12.8	17.2	21.0	17.8	22.8	23.9
8-11	19	4	6.8	10.3	18.0	15.2	19.4	24.6	25.5
8-11	19	5	21.0	26.0	30.4	30.4	29.4	32.1	32.9
8-11	19	6	15.7	22.1	21.0	21.0	23.8	27.1	28.2
8-11	19	7	6.8	11.5	17.0	22.0	16.5	26.0	26.7
8-11	19	8	4.2	7.0	13.0	16.8	14.0	19.8	23.0
8-11	20	1	19.7	19.7	22.5	28.5	27.3	36.1	36.7
8-11	20	2	6.0	20.7	28.5	34.7	27.7	33.1	30.5
8-11	20	3	11.4	22.4	26.2	31.1	25.0	29.8	31.3
8-11	20	4	38.1	29.7	31.7	30.3	18.4	30.2	23.8
8-11	20	5	19.1	17.3	19.5	23.3	18.3	12.8	11.0
8-11	20	6	19.0	16.5	18.3	20.4	17.4	13.9	13.3
8-11	20	7	47.4	35.7	41.1	49.1	35.7	41.4	42.2
8-11	20	8	47.0	38.5	42.2	38.9	35.7	38.7	40.9
8-11	21	1	4.8	6.9	9.0	12.8	9.6	29.2	33.8
8-11	21	2	1.9	3.0	3.9	5.9	6.2	16.2	26.0
8-11	21	3	4.9	7.0	9.8	12.9	8.3	27.7	32.9
8-11	21	4	4.8	6.2	8.1	9.2	8.0	21.1	26.2
8-11	21	5	4.5	6.5	8.6	9.4	7.1	19.0	20.3
8-11	21	6	2.7	4.3	4.3	.	4.3	14.4	18.1
8-11	21	7	3.9	6.0	7.2	9.0	6.5	18.7	25.2
8-11	21	8	4.5	6.8	8.1	9.9	7.0	20.4	21.0
8-11	22	1	17.6	17.7	19.0	17.0	17.0	21.0	22.0
8-11	22	2	17.0	24.5	24.5	19.3	19.0	21.7	24.0
8-11	22	3	8.0	14.8	14.8	15.6	13.0	16.0	17.1
8-11	22	4	30.0	34.5	36.0	29.0	31.4	22.5	16.0
8-11	22	5	17.2	23.1	20.5	21.3	19.8	26.6	25.0
8-11	22	6	27.0	30.5	29.8	29.3	29.3	31.0	28.9
8-11	22	7	16.0	20.5	22.4	20.0	16.3	23.6	25.4
8-11	22	8	23.9	27.5	28.4	29.0	27.1	30.5	22.8
8-11	2X	1	5.0	4.6	6.3	13.4	14.6	26.8	29.5
8-11	2X	2	5.0	5.0	7.0	14.5	11.2	26.2	28.3
8-11	2X	3	4.8	5.5	8.6	19.0	14.5	27.7	29.9
8-11	2X	4	4.9	5.2	7.2	18.5	14.7	24.4	25.2
8-11	2X	5	5.0	5.0	7.0	16.2	11.0	32.5	34.7
8-11	2X	6	5.0	5.0	8.3	23.3	11.4	29.5	31.5
8-11	2X	7	5.8	5.8	9.8	25.9	15.4	33.6	36.0
8-11	2X	8	17.6	24.8	28.3	38.9	30.8	35.3	35.6
8-11	24	1	12.6	26.3	29.8	34.0	25.2	30.4	32.0
8-11	24	2	12.5	26.0	27.9	29.6	25.0	29.6	29.6

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-11	24	3	6.0	11.0	14.4	20.2	15.3	24.0	24.0
8-11	24	4	4.0	7.1	11.0	13.6	12.6	16.0	20.9
8-11	24	5	31.6	36.7	35.0	36.2	33.7	35.0	32.6
8-11	24	6	14.0	21.0	24.0	25.9	27.7	29.0	30.0
8-11	24	7	5.3	10.0	15.0	19.5	18.0	28.3	32.0
8-11	24	8	8.0	16.2	21.5	24.8	23.0	31.1	31.4
8-11	25	1	9.6	16.7	19.6	22.3	15.8	20.2	24.5
8-11	25	2	23.8	29.5	33.3	43.0	33.2	37.8	33.9
8-11	25	3	13.0	15.2	17.4	23.3	18.9	22.4	30.4
8-11	25	4	10.2	17.2	19.5	25.2	18.1	20.0	17.6
8-11	25	5	26.6	24.2	29.2	36.8	30.6	36.5	30.3
8-11	25	6	25.0	19.7	22.4	28.3	23.3	25.4	24.0
8-11	25	7	26.9	25.6	29.1	36.2	27.6	29.6	26.5
8-11	25	8	34.4	30.4	35.4	46.5	35.4	32.8	35.3
8-11	26	1	4.8	7.1	9.3	12.4	11.4	20.5	16.6
8-11	26	2	4.6	6.5	7.9	10.0	8.6	12.9	15.0
8-11	26	3	3.5	6.0	8.1	14.4	10.3	24.5	22.0
8-11	26	4	5.1	6.8	13.0	20.0	9.5	23.0	25.0
8-11	26	5	5.0	6.3	10.4	19.0	11.3	30.2	30.6
8-11	26	6	4.0	6.7	9.2	14.8	10.0	22.7	27.6
8-11	26	7	6.1	7.2	8.0	11.0	16.3	24.0	26.9
8-11	26	8	3.0	5.0	6.3	8.6	7.0	16.6	17.2
8-11	27	1	17.1	22.2	25.8	25.0	24.2	24.2	23.0
8-11	27	2	12.5	19.1	20.7	20.0	17.2	22.3	22.3
8-11	27	3	34.0	33.6	33.8	25.0	32.1	24.6	20.1
8-11	27	4	12.4	18.2	20.1	17.0	19.0	17.7	21.8
8-11	27	5	22.2	20.8	21.2	19.5	20.4	20.0	16.3
8-11	27	6	19.3	26.0	23.6	24.0	20.0	22.0	25.0
8-11	27	7	19.5	24.4	24.9	25.4	24.0	26.8	25.7
8-11	27	8	17.6	24.0	25.3	22.1	19.6	24.2	17.2
8-14	02	1	4.0	7.4	15.5	16.1	9.7	26.4	26.4
8-14	02	2	3.9	4.8	10.0	15.8	11.0	25.0	28.7
8-14	02	3	3.0	4.8	7.5	9.3	7.5	26.2	28.2
8-14	02	4	4.1	5.1	9.0	13.0	8.0	24.4	28.0
8-14	02	5	4.3	5.3	8.0	10.6	12.0	19.0	21.0
8-14	02	6	2.7	4.0	9.0	18.1	10.3	19.3	20.9
8-14	02	7	3.0	4.5	8.0	18.1	11.0	21.3	23.0
8-14	02	8	3.5	5.4	10.8	15.0	7.3	18.8	20.1
8-14	04	1	6.0	11.0	12.7	11.3	12.6	21.0	21.4
8-14	04	2	27.0	28.0	29.0	25.5	26.0	17.5	13.8
8-14	04	3	26.7	24.1	23.4	23.4	24.2	19.2	15.4
8-14	04	4	25.5	22.5	24.6	23.4	24.1	17.2	13.1
8-14	04	5	20.0	22.6	25.0	23.4	22.1	21.0	19.9
8-14	04	6	21.5	25.7	24.5	20.9	20.6	24.1	20.3
8-14	04	7	15.0	16.5	13.0	15.0	15.0	16.0	19.2
8-14	04	8	22.5	21.0	19.9	21.3	20.5	25.5	17.5
8-14	06	1	20.6	18.8	17.8	15.4	.	16.0	.
8-14	06	2	25.7	21.3	15.1	20.1	.	.	.
8-14	06	3	26.6	22.3	23.0	12.9	.	18.9	18.3
8-14	06	4	26.8	24.5	22.6	20.0	.	.	.
8-14	06	5	22.1	19.7	20.6	13.8	.	18.5	.
8-14	06	6	19.8	17.1	16.4	17.7	.	.	.
8-14	06	7	21.3	19.1	18.5	15.9	.	18.3	17.9
8-14	06	8	21.1	20.1	18.4	16.9	.	.	.
8-14	06	9	18.1	22.1	18.4	11.4	.	17.4	.

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

			DEPTH (CM)						
DATE	FIELD	POINT	0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-14	06	10	14.0	18.7	21.4	25.0	.	.	.
8-14	06	11	13.3	17.6	13.7	15.5	.	18.7	20.0
8-14	06	12	12.6	17.2	11.7	13.1	.	.	.
8-14	06	13	12.7	16.7	8.5	13.0	.	17.4	.
8-14	06	14	22.6	19.7	20.9	17.6	19.3	15.4	24.1
8-14	06	15	27.2	22.7	22.6	12.7	22.5	17.8	16.6
8-14	06	16	29.6	26.4	21.2	21.2	25.6	22.8	24.4
8-14	06	17	22.7	19.4	18.5	18.8	21.1	22.0	23.0
8-14	06	18	27.9	24.6	21.0	21.6	22.8	23.5	22.4
8-14	06	19	30.1	27.5	23.1	17.1	25.0	20.6	22.9
8-14	06	20	24.2	22.3	21.0	16.4	19.4	17.7	21.1
8-14	06	21	22.4	20.9	22.0	21.4	19.8	18.6	19.0
8-14	06	22	17.0	20.0	14.3	20.7	19.3	23.8	24.9
8-14	06	23	16.2	18.2	17.2	14.3	18.0	19.8	19.5
8-14	06	24	19.2	16.8	15.4	13.7	15.8	7.6	10.6
8-14	06	25	21.0	18.2	17.4	18.6	16.4	21.3	22.7
8-14	06	26	21.2	18.7	17.5	9.5	12.7	11.4	19.5
8-14	06	27	25.2	21.1	20.3	18.6	20.3	17.8	17.4
8-14	06	28	25.5	16.0	14.4	13.7	14.5	15.5	16.1
8-14	06	29	22.2	19.3	19.8	16.5	20.6	17.0	15.3
8-14	06	30	21.2	19.0	18.8	17.8	19.3	21.7	23.2
8-14	06	31	22.5	21.1	20.3	16.7	17.1	16.3	17.5
8-14	06	32	11.2	13.8	15.1	12.5	14.8	14.7	15.7
8-14	06	33	17.7	19.8	15.4	13.2	15.5	17.3	18.2
8-14	06	34	12.0	16.6	15.9	16.2	12.4	15.1	16.5
8-14	06	35	10.8	27.1	25.5	21.6	22.7	22.6	24.7
8-14	06	36	17.6	21.1	19.5	14.9	18.4	19.6	16.6
8-14	06	37	10.4	13.2	16.7	17.6	16.4	18.3	24.6
8-14	07	1	8.5	14.0	18.6	20.0	15.7	18.6	17.9
8-14	07	2	7.1	14.0	18.7	22.4	19.4	25.0	26.0
8-14	07	3	8.9	17.0	20.8	21.3	18.8	22.3	23.8
8-14	07	4	7.5	12.5	18.0	20.0	18.0	20.7	27.2
8-14	07	5	7.3	13.4	19.0	20.8	17.3	18.0	16.8
8-14	07	6	7.0	13.5	17.5	19.0	16.0	18.4	19.7
8-14	07	7	5.9	11.7	16.8	19.0	17.9	21.4	24.0
8-14	07	8	8.7	15.6	18.8	18.8	18.8	23.5	27.0
8-14	08	1	4.7	11.0	13.4	16.6	12.3	20.7	20.7
8-14	08	2	2.9	3.4	5.5	8.9	10.2	15.7	17.5
8-14	08	3	3.5	4.0	5.0	7.9	7.9	15.0	16.8
8-14	08	4	2.7	2.8	5.6	9.0	8.0	16.4	18.2
8-14	08	5	15.5	17.8	19.0	22.3	20.4	24.2	25.0
8-14	08	6	2.8	3.2	5.3	8.5	7.5	14.2	15.7
8-14	08	7	4.2	6.0	7.6	11.0	9.5	17.4	19.5
8-14	08	8	2.8	3.7	5.3	11.2	9.2	20.2	21.0
8-14	1A	1	4.6	6.7	12.6	22.3	19.1	25.3	22.6
8-14	1A	2	5.0	5.7	7.4	15.7	12.2	22.9	19.8
8-14	1A	3	5.4	7.0	11.8	19.4	14.9	20.0	22.0
8-14	1A	4	4.9	5.5	7.7	13.0	11.8	21.1	18.2
8-14	1A	5	4.5	6.3	9.7	15.7	12.1	20.4	21.4
8-14	1A	6	4.4	5.3	7.4	12.2	10.3	17.6	19.0
8-14	1A	7	6.1	10.4	13.5	17.9	16.0	20.6	27.4
8-14	1A	8	6.2	7.9	12.3	20.6	14.1	21.2	19.2
8-14	10	1	3.8	5.5	11.8	17.0	11.8	17.3	15.0
8-14	10	2	4.0	6.3	12.8	17.8	10.5	17.0	15.5
8-14	10	3	3.8	4.8	12.7	19.7	10.8	21.8	17.7

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-14	10	4	3.8	5.8	10.8	19.0	8.3	17.7	17.2
8-14	10	5	3.3	4.6	13.0	21.3	11.2	23.5	19.5
8-14	10	6	3.8	8.2	13.7	20.9	10.3	23.2	24.4
8-14	10	7	4.3	5.4	11.2	17.1	14.5	22.9	20.2
8-14	10	8	4.2	6.6	13.2	18.9	14.3	22.8	21.1
8-14	13	1	15.2	13.0	14.0	13.0	12.5	13.8	14.0
8-14	13	2	9.4	14.0	15.7	14.4	14.0	15.3	16.8
8-14	13	3	6.2	12.5	15.0	15.3	14.5	18.3	17.3
8-14	13	4	5.0	7.7	10.2	10.0	8.4	14.5	14.9
8-14	13	5	5.0	8.2	9.1	10.0	9.5	12.0	12.8
8-14	13	6	7.0	12.8	14.7	14.0	13.0	17.0	17.0
8-14	13	7	6.0	10.8	12.3	14.0	13.0	18.0	17.0
8-14	13	8	21.5	27.5	27.5	25.0	26.2	25.0	25.7
8-14	14	1	4.4	5.6	11.8	17.5	16.8	.	.
8-14	14	2	4.7	8.5	15.2	19.3	16.5	.	.
8-14	14	3	5.2	9.5	15.5	20.3	14.9	.	.
8-14	14	4	5.3	10.6	16.8	19.5	15.6	.	.
8-14	14	5	4.6	7.5	12.1	16.0	14.4	.	.
8-14	14	6	3.3	8.7	12.3	15.1	12.4	.	.
8-14	14	7	3.2	9.9	12.6	15.7	13.7	.	.
8-14	14	8	3.7	9.7	13.7	18.3	15.1	.	.
8-14	14	9	4.1	11.5	15.4	22.3	17.9	.	.
8-14	14	10	3.8	11.0	15.1	19.8	15.2	.	.
8-14	14	11	2.7	7.1	10.6	14.5	11.8	.	.
8-14	14	12	3.3	6.4	10.6	14.9	12.5	.	.
8-14	14	13	2.9	7.0	11.1	16.7	11.1	.	.
8-14	14	14	4.7	8.2	16.4	21.9	17.7	35.0	29.6
8-14	14	15	4.1	8.4	16.0	18.8	14.2	22.9	23.5
8-14	14	16	4.6	9.0	16.1	20.8	14.8	27.3	26.1
8-14	14	17	4.8	11.6	17.3	20.9	14.7	24.8	24.4
8-14	14	18	4.2	7.4	15.4	19.8	18.9	26.5	24.2
8-14	14	19	3.6	6.3	10.7	13.4	10.7	21.2	20.7
8-14	14	20	5.1	10.3	15.2	18.5	20.0	18.8	19.2
8-14	14	21	4.6	10.2	16.5	20.6	15.2	26.9	24.9
8-14	14	22	4.4	8.9	14.7	19.7	15.7	23.9	20.1
8-14	14	23	3.6	10.4	13.9	19.6	15.1	24.1	19.2
8-14	14	24	4.4	7.0	13.7	15.8	12.6	20.7	19.9
8-14	14	25	4.6	10.1	16.8	21.2	13.2	26.7	25.0
8-14	14	26	2.0	5.2	9.4	8.2	.	16.6	13.2
8-14	14	27	5.3	9.4	16.9	20.5	15.9	22.9	22.3
8-14	14	28	4.0	6.6	13.9	18.6	13.3	24.1	23.8
8-14	14	29	3.6	8.5	14.6	20.4	14.9	28.7	24.9
8-14	14	30	3.7	8.5	.	14.2	10.9	20.5	19.8
8-14	14	31	4.2	11.4	14.7	22.2	13.4	28.9	24.9
8-14	14	32	3.0	6.9	11.8	17.9	11.6	22.0	19.1
8-14	14	33	3.5	10.3	14.0	14.9	10.9	17.1	14.5
8-14	14	34	6.1	11.7	14.0	16.9	13.0	18.9	18.3
8-14	14	35	3.4	7.0	12.5	15.2	12.7	20.2	19.0
8-14	14	36	5.3	17.4	21.4	24.3	19.3	23.7	26.6
8-14	14	37	4.1	10.8	15.8	19.4	16.1	22.8	19.5
8-14	15	1	7.0	9.2	19.0	19.8	19.3	18.6	19.5
8-14	15	2	7.6	14.6	18.8	20.0	16.0	16.8	19.8
8-14	15	3	15.8	20.8	24.8	25.1	23.0	24.0	25.8
8-14	15	4	14.5	18.2	21.0	22.2	21.5	24.4	24.4
8-14	15	5	14.9	19.5	23.8	25.0	21.0	22.2	23.8

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-14	15	6	5.0	9.3	14.5	12.9	16.7	18.2	17.5
8-14	15	7	6.8	13.7	19.1	20.8	17.8	22.5	25.7
8-14	15	8	5.0	10.0	14.2	16.1	12.1	15.8	19.4
8-14	17	1	3.5	3.9	7.5	11.8	4.9	23.0	24.3
8-14	17	2	3.3	4.4	6.2	13.0	9.0	28.0	27.0
8-14	17	3	3.7	4.7	8.8	19.0	12.0	23.0	29.1
8-14	17	4	2.9	3.5	4.8	9.0	7.0	12.4	15.5
8-14	17	5	5.0	6.5	10.0	15.5	11.8	24.9	24.2
8-14	17	6	4.0	4.8	6.2	12.0	9.6	23.0	25.9
8-14	17	7	4.8	5.1	6.6	10.9	10.8	21.0	20.5
8-14	17	8	3.7	4.2	5.8	9.3	8.2	20.9	23.4
8-14	2A	1	4.5	6.6	10.4	21.5	15.5	24.2	23.8
8-14	2A	2	7.6	24.0	29.6	33.0	26.6	30.8	29.8
8-14	2A	3	4.9	5.9	7.8	15.6	13.0	26.7	27.2
8-14	2A	4	9.4	18.0	27.0	32.0	26.6	30.9	30.4
8-14	2A	5	5.0	7.6	12.8	24.6	14.0	26.8	26.8
8-14	2A	6	5.9	16.0	28.0	33.2	25.0	28.5	28.6
8-14	2A	7	4.0	6.5	9.4	20.1	13.4	26.0	25.8
8-14	2A	8	7.5	17.8	26.7	32.4	24.5	29.7	27.5
8-14	1X	1	6.0	9.5	15.9	21.5	14.3	24.9	27.0
8-14	1X	2	6.7	11.0	19.4	25.0	24.4	28.4	34.0
8-14	1X	3	6.1	7.9	13.0	17.9	13.0	22.0	23.8
8-14	1X	4	9.0	12.3	19.5	26.0	20.3	27.5	26.7
8-14	1X	5	5.3	7.4	12.2	16.8	13.3	21.4	21.0
8-14	1X	6	9.5	11.8	17.0	22.1	16.2	24.4	24.0
8-14	1X	7	6.9	9.0	14.1	22.0	15.0	23.3	22.7
8-14	1X	8	9.2	13.8	24.0	30.4	26.0	31.8	30.6
8-14	19	1	6.0	13.8	20.2	22.0	17.0	24.0	25.7
8-14	19	2	7.3	14.3	19.0	25.0	17.0	25.0	27.0
8-14	19	3	40.0	40.0	40.0	40.0	40.0	40.0	39.8
8-14	19	4	26.7	30.0	28.5	31.8	28.5	27.5	29.0
8-14	19	5	8.0	16.4	21.9	27.7	23.5	30.8	30.0
8-14	19	6	5.5	10.0	16.6	16.0	15.5	25.3	26.0
8-14	19	7	5.9	8.0	13.9	18.4	16.0	24.5	24.0
8-14	19	8	3.9	6.0	9.7	14.0	14.9	20.9	21.7
8-14	20	1	23.9	25.0	29.1	36.2	28.5	37.8	33.0
8-14	20	2	16.5	22.8	26.8	33.6	26.3	26.3	26.6
8-14	20	3	16.5	27.9	34.5	45.8	31.9	34.8	36.2
8-14	20	4	4.7	11.0	14.9	18.2	14.3	19.3	21.0
8-14	20	5	5.6	9.8	12.2	15.5	13.6	23.2	15.5
8-14	20	6	4.5	7.6	10.2	12.2	11.9	19.0	15.6
8-14	20	7	8.1	22.7	27.2	33.8	25.5	37.8	39.8
8-14	20	8	17.4	23.5	24.5	34.4	27.2	34.5	38.1
8-14	21	1	5.5	7.7	8.8	14.1	7.6	28.2	35.6
8-14	21	2	2.4	2.5	3.0	6.4	4.9	14.4	20.5
8-14	21	3	5.8	5.8	8.4	14.0	8.2	28.4	33.4
8-14	21	4	4.5	4.8	6.8	9.7	7.1	25.0	30.6
8-14	21	5	5.4	5.7	7.9	10.7	7.4	16.8	20.2
8-14	21	6	3.0	3.5	5.6	8.6	4.9	11.7	14.8
8-14	21	7	6.4	5.8	7.2	12.8	7.5	22.3	27.3
8-14	21	8	5.4	5.3	7.7	12.6	7.7	20.9	27.8
8-14	22	1	26.8	24.7	22.7	20.1	20.5	19.7	19.0
8-14	22	2	22.9	24.2	24.9	22.2	21.2	22.2	19.0
8-14	22	3	23.2	19.7	17.9	20.7	17.0	17.5	19.7
8-14	22	4	23.5	29.0	29.8	25.0	26.0	21.8	19.0

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-14	22	5	11.3	19.0	16.1	18.0	15.0	22.2	18.0
8-14	22	6	22.2	24.6	26.0	25.0	24.8	27.8	24.8
8-14	22	7	8.3	13.0	16.7	21.0	26.2	29.3	27.0
8-14	22	8	18.0	25.0	25.7	29.8	25.0	28.2	19.8
8-14	2X	1	5.0	4.6	6.4	16.1	15.0	27.0	29.5
8-14	2X	2	5.0	5.0	7.4	14.9	11.8	26.2	28.3
8-14	2X	3	4.8	5.5	8.6	18.9	14.5	27.3	29.5
8-14	2X	4	4.9	5.2	7.5	19.1	14.7	24.4	25.2
8-14	2X	5	5.0	5.0	7.0	16.2	11.0	32.7	35.3
8-14	2X	6	5.0	5.0	8.0	22.8	18.6	29.1	31.6
8-14	2X	7	5.6	6.4	10.2	25.8	15.6	32.9	35.3
8-14	2X	8	8.5	16.5	22.2	35.2	25.8	34.7	34.7
8-14	24	1	7.7	17.0	25.5	30.8	26.0	29.3	29.2
8-14	24	2	8.1	18.9	23.0	27.1	22.2	26.0	28.4
8-14	24	3	45.0	47.5	46.0	46.0	46.0	46.0	39.2
8-14	24	4	45.0	42.7	40.9	41.1	42.0	39.1	38.2
8-14	24	5	26.0	35.0	36.5	37.0	33.3	34.4	32.2
8-14	24	6	7.6	14.0	19.8	21.7	23.0	27.8	29.3
8-14	24	7	4.7	8.3	13.0	17.7	15.2	28.7	29.4
8-14	24	8	6.5	13.4	19.0	22.6	20.4	31.0	32.2
8-14	25	1	27.9	24.5	28.7	34.7	29.5	30.8	30.0
8-14	25	2	31.7	30.9	35.5	45.7	35.3	35.1	40.3
8-14	25	3	18.3	17.1	20.6	25.2	22.2	22.5	27.0
8-14	25	4	15.2	19.1	21.9	25.6	22.4	18.6	16.8
8-14	25	5	35.1	28.7	35.3	40.6	35.1	36.7	30.6
8-14	25	6	29.2	26.8	27.5	29.6	25.7	20.2	20.7
8-14	25	7	45.0	36.0	37.9	38.1	33.3	30.7	31.1
8-14	25	8	16.6	29.8	39.1	44.4	34.3	35.6	37.9
8-14	26	1	4.0	6.6	8.6	11.5	9.3	19.5	19.9
8-14	26	2	4.2	5.8	7.7	9.6	8.2	13.9	13.4
8-14	26	3	4.0	5.5	7.7	11.5	8.0	20.8	22.6
8-14	26	4	4.8	6.4	9.5	12.5	8.9	23.7	24.7
8-14	26	5	5.0	7.0	9.3	14.4	9.5	29.4	30.5
8-14	26	6	4.3	6.7	8.3	13.8	9.1	24.3	29.6
8-14	26	7	5.8	7.7	10.0	17.0	12.9	27.0	29.1
8-14	26	8	3.8	5.0	6.5	9.7	8.0	17.4	17.2
8-14	27	1	10.2	20.6	17.1	17.0	18.2	16.4	15.7
8-14	27	2	16.6	23.4	26.0	24.8	21.7	29.2	22.9
8-14	27	3	10.8	16.3	17.3	15.9	15.1	18.5	16.0
8-14	27	4	17.3	24.2	21.7	16.3	19.0	20.2	19.6
8-14	27	5	5.8	11.8	13.8	14.8	12.5	16.0	15.2
8-14	27	6	12.0	20.4	21.0	23.0	17.5	27.9	25.6
8-14	27	7	9.0	16.0	16.4	17.4	15.5	22.0	22.5
8-14	27	8	7.8	17.0	18.9	19.8	16.5	23.9	20.0
8-17	02	1	3.0	4.0	16.0	25.0	9.2	25.8	24.5
8-17	02	2	3.5	7.0	12.0	18.0	9.9	25.0	25.0
8-17	02	3	3.0	5.1	7.3	9.0	6.5	29.5	30.4
8-17	02	4	4.0	4.8	7.0	14.0	8.2	26.0	29.0
8-17	02	5	4.3	5.2	9.2	16.0	12.0	24.0	25.1
8-17	02	6	2.8	4.1	6.9	15.5	12.2	19.5	20.5
8-17	02	7	3.0	4.0	7.0	16.0	8.5	21.5	24.2
8-17	02	8	3.0	4.3	8.0	14.8	6.0	18.5	19.9
8-17	04	1	23.3	21.8	20.5	20.6	21.1	19.0	21.3
8-17	04	2	8.4	13.0	14.5	14.0	15.0	13.5	13.2
8-17	04	3	9.3	13.3	14.8	14.6	13.7	17.1	15.4

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-17	04	4	10.0	12.3	14.2	13.1	12.6	9.0	13.0
8-17	04	5	7.3	10.7	15.6	15.0	14.5	20.8	22.0
8-17	04	6	6.0	9.0	11.8	12.2	12.1	22.0	20.4
8-17	04	7	5.6	7.5	10.0	12.0	10.0	15.4	19.5
8-17	04	8	5.0	9.5	12.2	14.1	12.0	16.8	16.5
8-17	06	1	3.7	8.4	11.5	11.8	.	.	.
8-17	06	2	5.1	14.0	16.8	19.0	.	.	.
8-17	06	3	4.8	11.4	14.0	10.8	.	.	.
8-17	06	4	5.9	12.0	16.9	20.6	.	.	.
8-17	06	5	5.1	10.3	14.0	12.4	.	.	.
8-17	06	6	3.8	9.1	12.8	14.9	.	.	.
8-17	06	7	5.1	13.2	15.9	19.0	.	.	.
8-17	06	8	4.7	10.5	16.8	18.4	.	.	.
8-17	06	9	12.0	18.7	18.4	16.9	.	.	.
8-17	06	10	5.1	11.1	16.3	18.6	.	.	.
8-17	06	11	4.7	12.8	16.6	16.9	.	.	.
8-17	06	12	4.1	8.2	14.2	11.2	.	.	.
8-17	06	13	4.1	9.6	14.5	14.3	.	.	.
8-17	06	14	4.4	11.2	13.6	14.9	10.0	14.4	13.9
8-17	06	15	6.8	15.1	16.7	16.7	13.7	18.2	15.6
8-17	06	16	5.1	11.3	14.3	18.6	11.7	16.9	15.4
8-17	06	17	7.7	18.1	20.4	23.7	18.8	21.4	22.4
8-17	06	18	7.1	14.0	15.3	19.2	19.7	24.0	23.7
8-17	06	19	13.2	18.3	18.7	23.3	18.0	20.6	20.7
8-17	06	20	5.8	13.2	14.9	13.5	14.9	20.1	20.1
8-17	06	21	5.4	12.3	15.2	15.7	12.7	16.0	16.6
8-17	06	22	6.0	17.3	20.3	21.3	16.9	23.7	25.0
8-17	06	23	6.9	14.5	16.6	17.7	14.1	18.2	7.6
8-17	06	24	3.2	8.9	9.5	10.0	8.6	6.7	9.7
8-17	06	25	6.3	12.4	13.7	24.0	15.7	22.1	20.4
8-17	06	25	3.9	10.2	9.8	12.6	10.0	13.6	20.5
8-17	06	27	4.2	11.9	11.5	16.0	12.6	15.1	14.2
8-17	06	28	4.0	10.1	13.3	13.7	14.6	15.7	13.9
8-17	06	29	3.2	9.6	12.0	11.1	10.1	12.2	14.0
8-17	06	30	4.1	14.8	15.4	17.7	14.3	18.8	21.8
8-17	06	31	4.9	12.7	16.0	17.2	12.6	14.8	16.0
8-17	06	32	2.9	9.4	13.2	12.3	12.5	14.3	15.1
8-17	06	33	5.1	12.9	16.5	14.1	14.1	16.8	17.9
8-17	06	34	4.6	10.9	14.4	10.7	10.9	11.1	13.3
8-17	06	35	6.8	18.8	22.2	21.3	23.4	22.3	22.8
8-17	06	36	5.1	14.1	16.3	14.1	12.1	13.8	15.0
8-17	06	37	3.4	9.9	14.3	11.5	14.5	16.6	16.3
8-17	07	1	5.0	11.8	17.0	19.8	15.0	16.7	17.8
8-17	07	2	4.4	12.0	17.0	22.0	18.0	23.0	25.6
8-17	07	3	5.8	14.7	19.7	20.3	16.6	20.3	23.2
8-17	07	4	4.5	10.9	17.0	21.0	15.9	19.8	25.0
8-17	07	5	4.3	8.8	14.8	14.8	16.9	16.0	16.8
8-17	07	6	4.0	11.4	15.0	18.0	15.0	18.4	20.6
8-17	07	7	3.3	6.8	11.8	13.4	12.8	17.8	20.8
8-17	07	8	5.0	11.0	16.9	17.0	15.0	20.5	23.0
8-17	08	1	2.4	7.1	11.0	12.4	11.0	15.5	19.0
8-17	08	2	2.8	3.1	5.0	9.5	9.0	13.9	19.6
8-17	08	3	2.8	3.3	4.2	8.4	9.5	15.5	16.9
8-17	08	4	2.0	2.3	3.3	8.6	8.6	15.4	16.0
8-17	08	5	5.9	12.2	14.0	17.5	13.8	20.8	19.8

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-17	08	6	2.1	2.8	3.9	5.7	6.3	13.3	14.2
8-17	08	7	4.7	11.0	14.0	16.4	10.4	21.0	20.0
8-17	08	8	2.6	3.2	4.5	9.1	8.1	17.6	19.5
8-17	1A	1	4.2	5.8	10.3	19.0	16.9	24.0	21.6
8-17	1A	2	3.9	4.8	6.7	14.6	12.1	21.6	18.7
8-17	1A	3	5.3	5.9	9.5	19.2	14.3	19.5	21.3
8-17	1A	4	4.4	6.1	7.7	15.3	13.8	21.1	19.3
8-17	1A	5	4.0	5.3	8.3	14.0	10.6	20.9	21.7
8-17	1A	6	4.1	4.7	6.5	11.6	9.8	16.7	18.5
8-17	1A	7	4.8	6.7	10.0	13.3	11.3	16.1	25.0
8-17	1A	8	5.6	6.4	9.5	19.6	14.5	22.7	19.8
8-17	10	1	2.8	4.3	6.5	16.0	12.0	18.2	15.5
8-17	10	2	3.5	5.3	12.5	17.2	10.1	17.2	16.3
8-17	10	3	2.8	4.0	12.3	21.3	9.2	23.8	19.7
8-17	10	4	3.6	5.4	11.0	19.3	8.0	19.3	19.3
8-17	10	5	3.3	4.5	15.0	20.9	11.8	23.3	19.4
8-17	10	6	3.6	7.5	14.5	21.2	10.8	25.0	24.0
8-17	10	7	3.8	4.4	6.3	11.1	10.0	23.0	21.3
8-17	10	8	3.9	5.3	13.2	22.0	14.0	23.3	21.6
8-17	13	1	20.0	21.5	20.5	18.5	18.5	14.8	14.5
8-17	13	2	22.8	22.8	23.4	22.8	22.8	18.6	17.0
8-17	13	3	20.0	24.3	22.5	20.0	21.3	16.8	17.3
8-17	13	4	15.0	22.0	20.8	19.0	19.0	15.5	13.2
8-17	13	5	21.2	21.2	20.0	19.0	20.0	12.2	12.3
8-17	13	6	25.0	22.5	22.5	22.5	22.5	15.3	18.8
8-17	13	7	15.0	20.0	20.0	23.7	21.0	17.8	17.8
8-17	13	8	45.0	42.5	37.0	32.0	34.0	22.5	24.5
8-17	14	1	4.4	6.1	12.9	19.2	12.3	.	.
8-17	14	2	4.3	6.2	12.9	17.1	14.6	.	.
8-17	14	3	4.4	6.4	14.3	22.3	16.4	.	.
8-17	14	4	4.1	6.9	14.3	17.8	12.6	.	.
8-17	14	5	4.0	6.5	15.1	19.5	11.4	.	.
8-17	14	6	2.5	3.6	7.0	11.7	8.2	.	.
8-17	14	7	2.6	4.4	9.2	14.7	11.8	.	.
8-17	14	8	3.2	5.2	11.7	16.8	10.1	.	.
8-17	14	9	3.3	7.9	14.2	22.2	15.0	.	.
8-17	14	10	3.6	6.8	12.4	16.8	10.9	.	.
8-17	14	11	2.4	5.7	9.4	13.7	8.3	.	.
8-17	14	12	2.8	5.1	9.8	13.2	9.8	.	.
8-17	14	13	2.8	6.0	11.4	16.6	10.3	.	.
8-17	14	14	4.3	6.3	15.5	21.1	15.3	29.9	27.5
8-17	14	15	4.1	4.5	10.9	17.3	13.2	22.3	22.5
8-17	14	16	3.9	4.8	10.9	19.8	15.2	26.8	25.3
8-17	14	17	3.9	5.5	14.7	22.5	12.2	24.4	22.1
8-17	14	18	4.2	5.2	12.7	20.9	16.5	28.2	27.6
8-17	14	19	3.0	5.3	12.3	18.1	11.1	20.2	19.6
8-17	14	20	3.7	5.7	12.8	16.1	12.1	20.1	17.8
8-17	14	21	3.7	7.3	14.8	20.0	14.4	28.8	24.7
8-17	14	22	4.3	7.0	12.6	19.5	12.0	23.4	19.7
8-17	14	23	3.7	5.6	12.5	22.5	14.2	23.2	17.8
8-17	14	24	4.2	5.8	9.3	13.3	9.3	16.1	16.5
8-17	14	25	4.6	7.1	14.3	20.2	13.7	25.7	25.6
8-17	14	26	1.9	2.4	6.9	9.6	5.8	16.2	13.4
8-17	14	27	4.8	8.8	14.8	17.8	13.1	21.8	19.8
8-17	14	28	3.4	5.7	13.6	18.7	12.8	23.4	23.6

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-17	14	29	3.5	5.5	13.8	20.7	11.3	25.2	21.2
8-17	14	30	3.0	7.2	13.3	15.8	11.6	18.6	19.7
8-17	14	31	3.3	8.5	14.6	22.2	13.1	28.1	27.0
8-17	14	32	3.0	6.3	13.4	18.9	10.0	22.7	20.3
8-17	14	33	3.0	7.0	12.2	14.2	10.4	16.9	14.4
8-17	14	34	2.7	4.5	9.8	13.9	10.1	18.8	16.0
8-17	14	35	3.1	5.3	10.5	17.2	12.0	24.3	24.1
8-17	14	36	5.3	10.4	19.5	24.0	16.0	25.3	30.2
8-17	14	37	3.0	7.5	13.3	18.2	13.2	22.3	20.6
8-17	15	1	4.5	12.0	18.5	18.0	16.5	20.3	23.3
8-17	15	2	4.0	10.0	15.0	17.5	13.0	15.3	16.6
8-17	15	3	7.0	15.0	19.3	23.0	21.3	22.6	29.4
8-17	15	4	6.0	14.0	17.0	20.0	17.0	22.0	24.1
8-17	15	5	7.2	16.0	20.5	24.3	19.7	23.0	23.7
8-17	15	6	3.0	6.6	11.0	14.0	11.5	15.5	17.4
8-17	15	7	3.0	10.0	15.0	18.2	14.7	19.7	23.0
8-17	15	8	4.0	7.9	12.5	14.1	10.9	14.1	19.0
8-17	17	1	3.3	3.8	6.5	10.0	8.5	21.2	26.0
8-17	17	2	3.0	4.2	7.0	13.6	10.5	30.7	28.0
8-17	17	3	3.4	4.0	6.0	17.0	10.6	24.0	29.5
8-17	17	4	2.2	3.2	5.0	7.0	6.1	10.9	13.0
8-17	17	5	5.0	5.4	8.0	14.7	9.5	21.4	22.6
8-17	17	6	3.2	4.3	7.0	11.0	9.0	22.0	24.0
8-17	17	7	4.9	5.1	4.9	10.9	10.6	17.0	20.0
8-17	17	8	3.2	4.0	5.5	9.0	7.3	19.2	23.0
8-17	2A	1	4.0	5.0	10.0	21.2	16.0	25.4	24.0
8-17	2A	2	6.0	19.0	30.0	30.4	26.2	31.9	29.0
8-17	2A	3	4.7	6.0	7.0	14.0	12.4	25.6	26.5
8-17	2A	4	7.7	15.5	26.0	28.0	23.2	30.0	30.4
8-17	2A	5	6.0	4.2	12.0	22.6	4.6	22.0	24.0
8-17	2A	6	5.0	11.0	24.0	31.7	17.5	27.1	28.3
8-17	2A	7	4.1	6.0	9.4	19.0	14.0	24.0	23.2
8-17	2A	8	4.3	14.0	23.5	30.7	24.0	29.4	27.0
8-17	1X	1	4.9	7.0	9.0	15.0	13.3	19.0	24.7
8-17	1X	2	5.9	9.5	15.0	22.3	22.0	25.5	34.0
8-17	1X	3	4.4	6.0	9.0	15.2	12.0	19.4	21.0
8-17	1X	4	7.4	9.7	17.0	24.3	17.0	24.9	25.0
8-17	1X	5	5.0	5.6	10.3	16.5	12.5	19.9	21.3
8-17	1X	6	5.6	7.0	12.4	19.0	15.6	22.7	21.3
8-17	1X	7	6.2	8.0	13.0	21.0	18.4	24.0	24.2
8-17	1X	8	8.0	12.0	22.5	27.7	23.2	30.6	30.0
8-17	19	1	5.0	12.5	19.0	20.0	15.0	22.5	25.0
8-17	19	2	6.3	13.4	18.0	19.0	16.0	22.9	24.1
8-17	19	3	29.0	34.0	32.5	37.0	35.0	34.7	34.0
8-17	19	4	17.9	23.0	22.0	25.0	21.5	23.0	26.0
8-17	19	5	6.4	14.2	21.5	26.3	21.0	30.0	28.2
8-17	19	6	3.7	8.9	16.2	15.6	15.0	25.0	23.0
8-17	19	7	5.0	6.6	12.5	17.1	12.1	25.0	25.0
8-17	19	8	3.0	4.4	6.5	10.0	12.2	20.5	23.1
8-17	20	1	8.7	14.7	17.0	22.4	16.2	26.4	25.9
8-17	20	2	48.1	30.9	39.9	43.4	36.0	20.2	26.4
8-17	20	3	39.3	3.4	35.5	35.6	39.3	38.6	20.9
8-17	20	4	32.7	21.0	26.3	29.1	20.0	18.3	32.6
8-17	20	5	10.0	12.3	15.2	20.0	14.2	15.2	11.4
8-17	20	6	10.5	12.2	14.1	16.1	15.7	15.9	13.0

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-17	20	7	32.5	39.4	45.1	45.3	21.4	28.5	38.2
8-17	20	8	28.3	35.0	36.7	33.9	37.3	38.4	39.8
8-17	21	1	4.8	5.7	6.9	9.0	9.9	28.3	33.2
8-17	21	2	2.5	2.9	4.2	5.4	3.6	11.9	24.2
8-17	21	3	4.6	5.3	7.0	8.0	7.3	29.3	36.4
8-17	21	4	4.9	5.3	7.3	10.1	6.5	22.0	28.1
8-17	21	5	4.5	5.5	6.7	9.5	6.9	20.8	23.9
8-17	21	6	2.7	2.8	3.8	6.0	4.5	13.2	15.4
8-17	21	7	4.5	4.6	6.2	6.3	6.1	18.6	24.7
8-17	21	8	4.5	4.8	6.7	9.0	6.6	20.5	26.7
8-17	22	1	6.0	11.3	12.1	13.1	12.0	16.0	15.1
8-17	22	2	9.3	14.0	17.5	17.5	17.0	17.5	16.5
8-17	22	3	7.0	14.0	13.0	14.0	13.0	20.5	24.5
8-17	22	4	11.1	23.1	23.4	23.4	21.0	25.0	23.6
8-17	22	5	18.2	26.7	27.9	26.1	22.5	25.0	20.4
8-17	22	6	15.0	25.8	26.3	26.8	25.3	27.8	27.8
8-17	22	7	16.4	25.3	25.6	25.6	24.0	26.0	18.4
8-17	22	8	14.0	22.0	22.5	22.5	22.0	24.0	16.0
8-17	2X	1	5.0	4.6	10.2	19.4	15.2	26.5	29.5
8-17	2X	2	5.0	5.0	7.8	15.2	12.4	26.2	28.3
8-17	2X	3	4.8	5.5	8.6	18.7	14.5	26.7	29.2
8-17	2X	4	4.9	5.2	7.7	19.7	14.7	24.4	25.2
8-17	2X	5	5.0	5.0	7.0	16.1	11.0	32.7	35.8
8-17	2X	6	5.0	5.0	7.8	21.1	9.7	28.2	31.5
8-17	2X	7	6.0	8.0	10.6	25.8	15.8	32.0	34.5
8-17	2X	8	6.2	14.0	20.5	34.5	23.0	35.0	35.0
8-17	24	1	7.0	13.0	23.3	28.0	22.8	27.3	27.3
8-17	24	2	11.6	12.8	18.5	25.5	21.2	28.0	28.3
8-17	24	3	25.1	34.0	33.0	37.5	36.4	36.2	36.0
8-17	24	4	24.0	34.0	34.7	36.0	32.7	32.7	31.6
8-17	24	5	23.0	34.5	36.9	38.0	33.1	33.1	33.0
8-17	24	6	4.9	10.0	16.9	19.3	18.5	26.1	29.1
8-17	24	7	4.0	7.4	12.0	16.8	15.1	25.1	26.0
8-17	24	8	5.6	11.9	17.0	21.1	18.2	29.0	32.6
8-17	25	1	8.9	13.4	15.5	21.0	17.9	28.2	28.0
8-17	25	2	17.5	25.5	28.9	34.8	26.9	32.9	33.8
8-17	25	3	4.4	9.2	13.5	17.7	12.6	16.0	21.1
8-17	25	4	4.6	12.9	16.8	22.6	15.0	22.8	19.2
8-17	25	5	10.9	14.2	18.2	24.1	23.8	32.0	29.2
8-17	25	6	8.2	16.9	19.8	25.2	17.2	22.4	21.0
8-17	25	7	14.5	22.1	28.3	34.4	25.4	28.9	29.8
8-17	25	8	16.0	26.0	30.7	37.8	29.1	29.7	28.2
8-17	26	1	3.8	6.5	10.0	11.6	9.0	21.0	23.0
8-17	26	2	4.1	5.5	7.4	10.0	7.2	14.3	15.0
8-17	26	3	4.2	5.4	7.0	10.0	7.3	21.1	23.6
8-17	26	4	4.6	6.5	8.4	11.5	8.4	23.1	24.2
8-17	26	5	5.1	6.1	8.2	12.0	8.7	26.0	27.5
8-17	26	6	5.0	6.5	8.1	13.3	8.3	24.6	28.9
8-17	26	7	5.4	6.3	9.2	16.1	11.2	23.3	26.8
8-17	26	8	3.9	5.3	7.0	10.5	8.5	17.4	18.0
8-17	27	1	4.8	10.0	14.9	11.8	12.3	12.5	14.4
8-17	27	2	6.5	11.7	16.0	16.8	15.5	24.0	23.0
8-17	27	3	3.7	7.2	10.0	9.8	9.0	12.2	11.7
8-17	27	4	7.0	9.9	13.8	12.8	11.9	12.4	11.2
8-17	27	5	2.6	6.3	10.6	12.8	10.0	15.0	15.6

VOLUMETRIC SOIL MOISTURE (NORMALIZED TO FLIGHT DAYS)

DATE	FIELD	POINT	DEPTH (CM) 0-2	2-5	5-9	9-15	0-15	15-30	30-45
8-17	27	6	8.0	17.0	19.8	20.9	15.5	26.7	28.0
8-17	27	7	6.3	10.0	10.5	14.0	11.0	19.3	22.0
8-17	27	8	5.0	14.1	15.5	19.8	14.8	24.9	21.4

APPENDIX D

VOLUMETRIC MOISTURE FOR USE WITH MMS

VOLUMETRIC MOISTURE FOR USE WITH MMS

SOIL MOISTURE AVERAGED OVER ENTIRE FIELD

DATE	FIELD	#POINTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
802	02	8	2.7	3.2	6.0	14.8	9.3	23.9	25.4
802	04	8	17.9	20.6	21.9	21.5	21.0	21.9	19.4
802	6	37	3.3	4.1	7.3	16.2	12.0	18.4	19.3
802	07	8	5.2	9.9	13.5	16.1	13.9	19.0	21.1
802	08	8	2.3	3.9	6.3	10.6	9.0	16.3	17.7
802	1A	8	6.1	9.6	13.1	19.4	15.6	23.1	23.7
802	10	8	2.2	2.7	6.8	14.4	9.6	21.3	19.3
802	13	8	15.9	18.9	20.9	20.1	19.6	20.8	17.9
802	14	37	22.1	22.9	25.0	25.5	24.5	26.0	22.8
802	15	8	6.2	11.0	14.1	15.9	14.6	19.9	22.7
802	17	8	3.7	4.6	6.5	11.7	10.8	22.2	23.5
802	2A	8	4.6	6.4	13.4	25.8	14.9	29.0	28.4
802	1X	8	24.9	24.9	29.4	32.8	31.3	33.0	32.2
802	19	8	11.1	15.8	20.0	22.0	17.9	27.0	28.0
802	20	8	27.6	24.6	28.0	33.8	25.6	30.5	31.1
802	21	37	14.9	9.1	7.5	11.[illegible]	13.5	21.1	23.0
802	22	8	21.5	24.0	24.9	22.7	23.1	22.9	20.1
802	2X	8	5.2	5.0	7.3	19.5	13.6	29.4	31.3
802	24	8	10.7	14.6	21.1	2[illegible].4	21.6	28.5	29.6
802	25	8	16.8	18.5	22.7	26.3	21.7	27.4	25.5
802	26	8	4.4	5.8	7.3	10.0	9.2	21.1	22.4
802	27	8	12.1	20.8	22.2	21.6	20.6	23.2	20.0
805	02	8	11.6	12.7	10.1	14.3	14.6	23.3	24.4
805	04	8	19.7	20.8	22.9	22.0	22.4	21.1	19.1
805	06	37	13.3	14.7	12.3	15.0	13.5	17.7	18.7
805	07	8	10.0	15.2	19.7	19.4	17.8	19.9	21.6
805	08	8	8.1	8.6	8.6	12.5	10.2	17.5	18.8
805	1A	8	6.0	9.1	13.9	21.4	15.5	23.7	23.7
805	10	8	10.2	11.4	10.6	15.6	13.2	20.5	19.0
805	13	8	32.2	31.6	31.6	29.2	30.2	24.2	19.1
805	14	37	20.9	21.3	23.1	24.5	23.0	26.5	23.3
805	15	8	11.4	15.3	17.4	18.7	17.7	19.9	22.9
805	17	8	5.8	9.8	8.0	13.5	10.5	22.5	23.9
805	1A	8	26.1	24.5	25.3	29.8	28.4	30.9	30.2
805	1X	8	24.0	24.5	28.9	34.7	29.9	33.4	31.8
805	19	8	14.8	20.4	21.8	23.1	21.9	26.9	28.6
805	20	8	24.3	26.4	27.7	34.6	29.2	30.9	30.2
805	21	8	6.0	6.7	7.7	11.8	8.4	20.7	22.7
805	22	8	21.7	24.9	25.0	23.5	22.9	23.9	22.2
805	2X	8	10.0	9.6	11.7	21.5	16.5	29.8	31.6
805	24	8	20.7	25.1	29.5	32.2	28.4	29.9	30.1
805	25	8	33.5	28.5	30.3	36.4	31.2	32.7	32.2
805	26	8	6.7	7.4	9.3	12.6	10.3	22.6	23.1
805	27	8	15.4	21.4	22.8	21.9	21.2	23.8	21.[illegible]
808	02	8	5.3	8.4	9.6	14.9	14.4	23.8	24.9
808	04	8	21.3	22.4	23.2	22.6	22.5	21.9	19.2
808	06	37	6.1	10.0	11.3	14.1	13.3	17.6	18.2
808	07	8	5.7	12.2	16.4	19.0	16.0	20.4	21.6
808	08	8	5.0	6.4	8.9	12.7	10.1	17.5	18.3
808	1A	8	5.5	7.8	13.0	20.7	14.7	23.3	24.6
808	10	8	4.7	8.4	10.2	16.0	12.6	20.5	19.2
808	13	8	26.6	28.4	28.4	27.3	27.6	24.3	18.7
808	14	37	10.9	16.3	18.5	21.8	18.5	25.1	23.2
808	15	8	21.8	23.4	24.5	24.7	23.6	23.0	24.1
808	17	8	4.3	5.4	7.7	13.7	10.7	23.3	23.8
808	2A	8	15.8	18.8	21.7	27.6	24.0	29.7	29.2
808	1X	8	15.9	18.0	23.4	30.9	25.5	30.8	30.4
808	19	8	16.3	22.4	23.4	25.1	23.0	26.3	28.7
808	20	8	33.0	28.6	29.5	32.4	30.8	30.6	29.4
808	21	8	5.3	5.6	6.4	9.5	7.9	20.9	27.5
808	22	8	21.6	24.0	24.4	23.4	24.3	24.9	23.3
808	2X	8	8.2	8.8	11.1	20.7	16.0	29.5	31.5
808	24	8	20.5	27.0	28.3	30.1	28.6	31.2	31.4
808	25	8	24.7	22.8	26.4	33.5	27.5	28.2	28.3
808	26	8	6.0	6.9	8.6	13.0	10.3	22.6	23.2

SOIL MOISTURE AVERAGED OVER ENTIRE FIELD
(NORMALIZED TO FLIGHT TIME)

DATE	FIELD	#POINTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
809	27	8	18.2	22.8	24.6	23.4	23.0	26.0	22.1
811	02	8	5.3	7.8	10.8	15.2	12.1	22.5	24.6
811	04	9	9.9	13.3	14.8	14.5	14.0	18.3	17.9
811	06	37	3.8	7.0	10.9	15.4	11.2	17.0	17.9
811	07	8	19.8	22.3	23.2	23.9	22.5	21.1	22.2
811	08	8	8.5	9.5	11.0	14.2	14.1	19.5	20.3
811	1A	9	4.9	7.1	11.7	18.5	14.8	22.1	22.2
811	10	9	5.7	8.1	12.2	16.7	12.1	20.7	18.9
811	13	9	13.4	18.0	19.3	19.0	18.5	21.6	18.4
811	14	37	5.4	12.9	16.6	20.3	15.9	24.0	22.3
811	15	8	17.5	21.0	23.0	23.4	22.4	21.6	22.1
811	17	8	4.5	5.2	6.9	13.4	10.8	23.0	24.2
811	2A	8	9.9	15.7	19.8	27.0	20.5	28.5	28.0
811	1X	8	11.0	13.7	20.1	27.1	21.2	27.7	27.7
811	19	9	10.1	15.6	19.9	22.6	21.3	26.0	27.1
811	20	8	26.0	25.1	28.7	32.0	25.7	29.5	28.7
811	21	8	4.0	5.8	7.4	9.9	7.1	20.8	25.4
811	22	8	19.6	24.1	24.4	22.6	21.6	24.1	22.6
811	2X	8	6.6	7.6	10.3	21.2	15.4	29.5	31.3
811	24	8	11.7	19.3	22.4	25.5	22.5	27.9	29.1
811	25	8	21.1	22.3	25.9	32.7	25.4	28.1	28.1
811	26	8	4.6	6.4	9.1	13.8	10.6	21.9	22.9
811	27	8	19.3	23.5	24.3	22.2	22.1	22.7	21.4
814	02	9	3.6	5.2	9.8	14.5	9.6	22.5	24.5
814	04	8	20.5	21.4	21.5	20.5	20.6	20.2	17.6
814	06	37	20.3	20.0	19.2	16.6	18.7	18.1	19.7
814	07	8	7.6	14.0	18.5	20.2	17.7	21.0	22.8
814	08	8	4.9	6.5	9.3	11.9	10.6	18.0	19.3
814	1A	8	5.1	6.8	10.3	17.1	13.8	21.1	21.2
814	10	8	3.9	5.9	12.4	19.0	11.4	20.7	18.8
814	13	8	9.4	13.2	14.9	14.5	13.9	16.8	16.9
814	14	37	4.1	9.0	14.3	19.2	14.5	23.5	21.8
814	15	8	8.5	14.4	19.4	20.2	18.4	20.3	22.0
814	17	8	3.9	4.6	7.0	12.6	9.2	22.0	23.7
814	2A	8	6.1	12.8	19.0	26.5	19.8	27.9	27.5
814	1X	8	7.3	10.3	16.9	23.0	17.8	25.5	26.2
814	19	8	12.9	17.3	21.2	24.4	21.5	27.2	27.9
814	20	8	12.1	18.7	22.4	28.7	22.4	29.1	28.2
814	21	8	4.8	5.1	6.9	11.1	6.9	21.2	26.3
814	22	8	19.4	22.4	22.4	22.6	22.0	23.6	20.7
814	2X	8	5.5	6.6	9.7	21.1	14.9	29.3	31.2
814	24	8	18.8	24.6	24.0	30.5	28.5	32.7	32.3
814	25	8	27.4	26.6	30.8	35.5	29.7	28.8	29.3
814	26	9	4.5	5.3	8.4	12.5	9.2	22.0	23.4
814	27	9	11.2	18.7	19.0	18.8	17.0	21.8	19.7
817	02	8	3.3	4.8	9.2	16.0	9.1	23.7	24.9
817	04	8	9.4	12.1	14.2	14.4	13.9	16.7	17.7
817	06	37	5.3	12.5	15.2	16.1	14.0	16.9	17.2
817	07	8	4.5	10.9	16.1	18.3	15.6	19.1	21.6
817	08	8	3.2	5.6	7.5	11.0	9.6	16.7	18.1
817	1A	8	4.5	5.7	8.6	15.8	12.9	20.3	20.7
817	10	8	3.4	5.1	11.4	19.6	10.7	21.6	19.6
817	13	8	23.0	24.6	23.3	22.2	22.4	16.9	16.9
817	14	37	3.6	6.1	12.5	17.9	12.2	23.0	21.5
817	15	8	4.9	11.5	16.3	18.6	15.6	19.1	22.2
817	17	8	3.5	4.2	6.5	11.8	9.0	21.0	23.3
817	2A	9	5.4	10.1	18.0	24.9	17.4	27.0	26.6
817	1X	8	5.0	9.2	13.7	20.2	16.7	23.3	25.2
817	19	9	9.5	14.7	18.5	21.3	18.6	25.5	26.0
817	20	8	26.4	26.0	28.8	30.7	25.0	26.2	26.0
817	21	8	4.1	4.6	6.1	7.9	6.4	20.6	26.6
817	22	8	12.1	20.3	21.0	21.1	19.6	22.7	20.1
817	2X	8	5.2	6.5	10.0	21.3	14.5	29.0	31.1
817	24	8	13.1	19.7	24.0	27.8	24.7	29.7	30.5
817	25	8	10.6	17.5	21.5	27.2	21.0	26.6	26.3
817	26	9	4.5	6.0	8.2	11.9	8.6	21.3	23.4
817	27	8	5.5	10.8	13.8	14.8	12.5	18.4	18.4

APPENDIX E

VOLUMETRIC MOISTURE FOR USE WITH LINE SENSORS

VOLUMETRIC MOISTURE FOR USE WITH LINE SENSORS

SOIL MOISTURE AVERAGED UNDER LINE SENSORS

DATE	FLD	LN	PASS	#PTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
802	02	1	1	4	2.5	3.0	5.7	15.5	9.8	25.6	26.4
802	02	1	2	8	2.7	3.2	6.0	14.8	9.3	23.9	25.4
802	04	1	1	4	22.0	23.2	24.1	22.9	22.6	20.9	20.9
802	04	1	2	8	17.9	20.6	21.9	21.5	21.0	21.9	19.4
802	6	1	1	27	3.0	4.0	7.3	16.2	11.1	17.5	18.3
802	6	1	2	27	3.0	4.0	7.3	16.2	11.1	17.5	18.3
802	07	1	1	5	5.2	9.9	13.6	15.1	13.9	19.2	21.2
802	07	1	2	6	5.2	9.9	13.6	15.1	13.9	19.2	21.2
802	08	1	1	8	2.3	3.9	6.3	10.6	9.0	16.3	17.7
802	08	1	2	8	2.3	3.9	6.3	10.6	9.0	16.3	17.7
802	1A	1	1	8	6.1	9.6	13.1	19.4	15.6	23.1	23.7
802	1A	1	2	8	6.1	9.6	13.1	19.4	15.6	23.1	23.7
802	10	2	1	8	2.2	2.7	6.8	14.4	9.6	21.3	19.3
802	10	2	2	8	2.2	2.7	6.8	14.4	9.6	21.3	19.3
802	13	2	1	4	14.2	16.6	18.3	18.3	17.8	19.3	16.1
802	13	2	2	8	15.9	18.9	20.9	20.1	19.6	20.8	17.9
802	14	2	1	23	22.3	23.0	25.3	25.8	26.2	26.4	24.2
802	14	2	2	25	21.1	22.1	24.2	24.6	23.4	25.9	22.9
802	15	2	1	4	7.1	12.7	16.2	18.1	15.5	21.6	23.2
802	15	2	2	4	7.1	12.7	16.2	18.1	15.5	21.6	23.2
802	17	2	1	8	3.7	4.6	6.5	11.7	10.8	22.2	23.5
802	17	2	2	4	4.2	4.8	9.0	13.0	11.0	21.5	22.5
802	2A	2	1	4	4.6	6.4	13.4	25.8	14.9	29.0	28.4
802	2A	2	2	8	4.6	6.4	13.4	25.8	14.9	29.0	28.4
802	1X	1	1	4	25.0	23.7	28.4	32.3	30.0	32.1	32.1
802	1X	1	2	4	25.0	23.7	28.4	32.3	30.0	32.1	32.1
802	1X	2	1	4	24.7	26.2	30.4	33.3	32.6	33.9	32.3
802	1X	2	2	4	24.7	26.2	30.4	33.3	32.6	33.9	32.3
802	1X	3	1	8	24.9	24.9	29.4	32.8	31.3	33.0	32.2
802	1X	3	2	8	24.9	24.9	29.4	32.8	31.3	33.0	32.2
802	19	3	1	8	11.1	15.8	20.0	22.0	17.9	27.0	28.0
802	19	3	2	8	11.1	15.8	20.0	22.0	17.9	27.0	28.0
802	20	3	1	6	28.2	26.5	30.5	36.6	26.9	34.0	35.2
802	20	3	2	8	27.6	24.6	28.0	33.8	25.6	30.5	31.4
802	21	3	1	20	15.5	8.6	7.7	12.5	13.4	24.0	24.5
802	21	3	2	19	16.9	9.7	7.4	12.5		17.9	21.7
802	22	3	1	8	21.5	24.0	24.9	22.7	23.1	22.9	20.1
802	22	3	2	4	22.4	25.1	25.1	23.2	23.2	24.1	20.2
802	2X	1	1	4	4.9	5.1	6.9	15.8	13.5	25.9	28.5
802	2X	1	2	4	4.9	5.1	6.9	15.8	13.5	25.9	28.5
802	2X	2	1	4	5.5	4.8	7.8	23.1	13.6	32.9	34.1
802	2X	2	2	4	5.5	4.8	7.8	23.1	13.6	32.9	34.1
802	2X	4	1	8	5.2	5.0	7.3	19.5	13.6	29.4	31.3
802	2X	4	2	8	5.2	5.0	7.3	19.5	13.6	29.4	31.3
802	24	4	1	4	12.4	14.6	18.1	25.3	21.9	26.1	28.1
802	24	4	2	8	10.7	14.6	21.1	27.4	21.6	28.5	29.6
802	25	4	1	8	16.8	18.5	22.7	26.3	21.7	27.4	25.6
802	25	4	2	5	17.5	19.5	23.8	27.9	22.7	28.3	26.5
802	26	4	1	8	4.4	5.8	7.3	10.0	9.2	21.1	22.4
802	26	4	2	8	4.4	5.8	7.3	10.0	9.2	21.1	22.4
802	27	4	1	8	12.1	20.8	22.2	21.6	20.6	23.2	20.0
802	27	4	2	8	12.1	20.8	22.2	21.6	20.6	23.2	20.0

SOIL MOISTURE AVERAGED UNDER LINE SENSORS
(SCATTEROMETERS AND PASSIVE RADIOMETERS)

DATE	FLD	LN	PASS	#PTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
805	02	1	1	4	10.5	12.3	8.8	13.6	13.7	22.0	24.1
805	02	1	2	8	11.6	12.7	10.1	14.3	14.6	23.3	24.4
805	04	1	1	4	16.7	18.0	20.6	20.9	20.9	21.2	17.8
805	04	1	2	4	16.7	18.0	20.6	20.9	20.9	21.2	17.8
805	06	1	1	25	13.0	14.5	12.4	15.7	14.1	18.8	18.9
805	06	1	2	25	13.0	14.6	12.4	15.7	14.1	18.8	18.8
805	07	1	1	4	10.4	15.7	19.8	20.7	18.7	21.4	23.3
805	07	1	2	8	10.0	15.2	18.7	19.4	17.8	19.9	21.6
805	08	1	1	4	7.2	8.7	8.1	11.1	10.1	18.6	19.5
805	08	1	2	8	8.1	8.6	8.6	12.5	10.2	17.5	18.8
805	1A	1	1	4	5.8	7.2	10.8	21.3	12.6	22.9	21.1
805	1A	1	2	4	5.9	7.2	10.8	21.3	12.6	22.9	21.1
805	10	2	1	8	10.2	11.4	10.6	15.6	13.2	20.5	19.0
805	10	2	2	8	10.2	11.4	10.6	15.6	13.2	20.5	19.0
805	13	2	1	8	32.2	31.6	31.6	29.2	30.2	24.2	19.1
805	13	2	2	6	32.7	32.5	32.5	29.9	30.7	24.2	19.7
805	14	2	1	19	20.0	20.4	22.2	24.2	22.4	27.0	23.4
805	14	2	2	20	20.4	20.4	22.3	23.7	22.3	26.0	24.0
805	15	2	1	8	11.4	15.3	17.4	18.7	17.7	19.9	22.9
805	15	2	2	8	11.4	15.3	17.4	18.7	17.7	19.9	22.9
805	17	2	1	8	5.8	5.8	9.0	13.5	10.5	22.5	23.9
805	17	2	2	4	5.5	5.4	7.4	12.8	9.3	22.7	22.7
805	2A	2	1	8	26.1	24.5	25.3	29.8	28.4	30.9	30.2
805	2A	2	2	8	26.1	24.5	25.3	29.8	28.4	30.9	30.2
805	1X	1	1	4	26.9	25.6	30.3	36.0	31.7	34.1	33.0
805	1X	1	2	4	26.9	25.6	30.3	36.0	31.7	34.1	33.0
805	1X	2	1	4	21.1	23.3	27.5	33.3	28.1	32.6	30.6
805	1X	2	2	4	21.1	23.3	27.5	33.3	28.1	32.6	30.6
805	1X	3	1	8	24.0	24.5	29.9	34.7	29.9	33.4	31.8
805	1X	3	2	9	24.0	24.5	28.9	34.7	29.9	33.4	31.9
805	19	3	1	4	16.3	21.8	24.8	27.9	23.8	29.8	30.2
805	19	3	2	3	14.8	20.4	21.8	23.1	21.9	26.9	28.6
805	20	3	1	6	29.1	30.7	31.3	38.9	33.7	35.5	34.4
805	20	3	2	6	29.1	30.7	31.3	38.9	33.7	35.5	34.8
805	21	3	1	6	5.9	6.7	7.5	11.9	7.9	21.7	24.2
805	21	3	2	5	5.9	6.7	7.5	11.9	7.9	21.7	24.2
805	22	3	1	5	21.1	23.9	24.8	22.8	21.7	23.1	21.2
805	22	3	2	8	21.7	24.9	25.0	23.5	22.9	23.9	22.2
805	2X	1	1	4	4.9	5.1	7.1	15.8	13.3	26.0	28.4
805	2X	1	2	4	4.9	5.1	7.1	15.8	13.3	26.0	28.4
805	2X	2	1	4	15.1	14.1	16.3	27.3	19.8	33.5	34.7
805	2X	2	2	4	15.1	14.1	16.3	27.3	19.8	33.5	34.7
805	2X	4	1	4	5.3	5.1	7.9	18.7	13.6	30.0	32.6
805	2X	4	2	4	10.0	9.6	11.7	21.5	16.5	29.8	31.6
805	24	4	1	4	20.7	25.8	28.4	31.7	28.4	30.9	31.5
805	24	4	2	4	20.7	25.8	28.4	31.7	28.4	30.9	31.6
805	25	4	1	4	32.2	26.8	30.1	35.6	30.8	32.2	30.5
805	25	4	2	8	33.5	28.5	30.3	36.4	31.2	32.7	32.2
805	26	4	1	4	7.2	7.7	9.4	13.3	11.2	24.0	24.7
805	26	4	2	8	6.7	7.4	8.3	12.6	10.3	22.6	23.1
805	27	4	1	4	11.2	18.6	19.8	19.2	18.2	19.4	18.3
805	27	4	2	9	15.4	21.4	22.8	21.9	21.2	23.8	21.2

SOIL MOISTURE AVERAGED UNDER LINE SENSORS
(SCATTEROMETERS AND PASSIVE RADIOMETERS)

DATE	FLD	LN	PASS	#PTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
808	02	1	1	4	3.8	8.3	8.6	14.5	13.4	22.2	24.6
808	02	1	2	4	3.8	8.3	8.6	14.5	13.4	22.2	24.6
808	04	1	1	8	21.3	22.4	23.2	22.6	22.5	21.9	19.2
809	04	1	2	4	20.5	21.8	22.6	22.1	21.7	22.2	18.6
808	06	1	1	25	6.2	10.1	11.4	13.7	13.2	17.9	19.6
809	06	1	2	23	6.0	9.5	10.9	13.5	15.6	20.1	19.4
809	07	1	1	4	6.0	12.8	17.3	20.6	16.8	21.7	24.1
808	07	1	2	4	6.0	12.8	17.3	20.6	16.8	21.7	24.1
808	09	1	1	4	4.8	6.8	8.9	12.3	10.9	17.3	18.2
809	09	1	2	8	5.0	5.4	8.9	12.7	10.1	17.5	18.3
808	1A	1	1	4	5.8	7.4	11.2	20.3	12.4	22.8	22.0
808	1A	1	2	8	5.5	7.8	13.0	20.7	14.7	23.3	24.6
809	10	2	1	8	4.7	8.4	10.2	16.0	12.6	20.5	19.2
808	10	2	2	8	4.7	8.4	10.2	16.0	12.6	20.5	19.2
808	13	2	1	5	23.5	26.7	27.4	26.5	26.5	24.2	19.3
809	13	2	2	6	23.5	26.7	27.4	26.5	26.5	24.2	19.3
809	14	2	1	32	10.8	16.1	18.1	21.5	18.1	24.6	22.8
808	14	2	2	32	10.8	16.1	18.1	21.5	18.1	24.6	22.8
808	15	2	1	5	21.1	22.9	24.1	23.7	23.1	21.9	23.1
809	15	2	2	8	21.8	23.4	24.5	24.7	23.6	23.0	24.3
809	17	2	1	4	4.1	4.9	7.4	13.0	9.8	23.1	23.1
809	17	2	2	8	4.3	5.4	7.7	13.7	10.7	23.3	23.9
809	2A	2	1	8	15.8	18.8	21.7	27.6	24.0	29.7	29.2
808	2A	2	2	4	25.8	30.2	31.9	33.1	29.6	32.4	32.2
809	1X	1	1	4	17.8	19.5	24.7	31.4	27.8	31.9	31.9
809	1X	1	2	4	17.8	19.5	24.7	31.4	27.8	31.9	31.9
809	1X	2	1	4	14.0	16.5	22.0	30.4	23.1	29.7	28.9
808	1X	2	2	4	14.0	16.5	22.0	30.4	23.1	29.7	28.9
808	1X	3	1	8	15.9	19.0	23.4	30.9	25.5	30.8	30.4
808	1X	3	2	4	12.5	14.6	19.5	26.8	20.7	27.4	28.1
808	19	3	1	8	16.3	22.4	23.4	25.1	23.0	26.3	28.7
809	19	3	2	4	17.9	23.8	25.3	26.8	24.3	28.7	29.3
809	20	3	1	8	33.0	28.6	29.5	32.4	30.8	30.6	29.4
809	20	3	2	6	37.1	32.2	32.7	35.1	33.8	33.7	32.6
808	21	3	1	8	5.3	5.6	6.4	9.5	7.9	20.9	27.5
809	21	3	2	4	6.0	6.3	7.2	10.9	8.6	21.8	28.4
809	22	3	1	8	21.6	24.0	24.4	23.4	24.3	24.9	23.3
809	22	3	2	4	22.5	24.0	24.2	23.4	23.8	24.2	23.8
809	2X	1	1	4	4.9	5.1	7.2	15.0	13.5	26.2	28.3
809	2X	1	2	4	4.9	5.1	7.2	15.0	13.5	26.2	28.3
809	2X	2	1	4	11.4	12.6	15.0	26.4	18.5	32.7	34.9
809	2X	2	2	4	11.4	12.6	15.0	26.4	18.5	32.7	34.9
808	2X	4	1	8	8.2	8.8	11.1	20.7	16.0	29.5	31.5
809	2X	4	2	4	5.2	5.1	8.0	17.6	13.8	29.4	32.5
809	24	4	1	8	20.5	27.0	28.3	30.1	28.6	31.2	31.4
809	24	4	2	4	22.0	28.4	27.5	30.8	29.1	31.7	31.5
808	25	4	1	4	14.1	15.1	19.8	26.2	21.4	25.9	27.8
809	25	4	2	4	14.1	15.1	19.8	26.2	21.4	25.9	27.8
808	26	4	1	4	6.7	7.1	9.2	14.2	11.7	24.5	25.0
809	26	4	2	4	6.7	7.1	9.2	14.2	11.7	24.5	25.0
809	27	4	1	4	15.6	20.5	22.5	21.5	20.0	22.5	21.5
809	27	4	2	4	15.6	20.5	22.5	21.5	20.0	22.5	21.5

SOIL MOISTURE AVERAGED UNDER LINE SENSORS (SCATTEROMETERS AND PASSIVE RADIOMETERS)

DATE	FLD	LN	PASS	#PTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
811	02	1	1	4	5.2	7.1	10.0	14.7	10.9	21.2	24.3
811	02	1	2	4	5.2	7.1	10.0	14.7	10.9	21.2	24.3
811	04	1	1	8	9.9	13.3	14.8	14.5	14.0	18.3	17.8
811	04	1	2	4	9.5	12.7	13.8	14.1	13.4	18.1	16.9
811	06	1	1	23	3.9	5.9	11.0	16.6	13.4	20.0	20.9
811	06	1	2	23	3.9	5.9	11.0	16.6	13.4	20.0	20.9
811	07	1	1	8	18.8	22.3	23.2	23.9	22.5	21.1	22.2
811	07	1	2	4	18.2	23.2	23.3	23.5	22.7	22.6	24.6
811	08	1	1	8	8.5	9.5	11.0	14.2	14.1	19.6	20.3
811	08	1	2	8	8.5	9.5	11.0	14.2	14.1	19.6	20.3
811	1A	1	1	8	4.9	7.1	11.7	18.5	14.8	22.1	22.2
811	1A	1	2	4	5.3	6.8	10.7	17.0	12.8	21.7	20.1
811	10	2	1	8	5.7	8.1	12.2	16.7	12.1	20.7	18.8
811	10	2	2	4	5.7	8.5	11.7	18.1	12.9	20.9	19.3
811	13	2	1	8	13.4	18.0	19.3	19.0	18.5	21.6	18.4
811	13	2	2	6	14.1	18.4	19.8	19.6	19.0	21.8	18.6
811	14	2	1	25	5.4	12.8	16.4	20.3	15.7	24.0	22.3
811	14	2	2	20	5.3	12.9	16.5	20.2	15.3	23.4	21.8
811	15	2	1	8	17.5	21.0	23.0	23.4	22.4	21.6	22.1
811	15	2	2	6	19.7	22.9	24.1	23.8	23.3	21.3	21.8
811	17	2	1	8	4.5	5.2	6.9	13.4	10.8	23.0	24.2
811	17	2	2	4	4.1	4.6	6.3	12.4	10.1	22.1	23.4
811	2A	2	1	4	14.5	24.6	29.2	32.7	24.7	30.4	29.9
811	2A	2	2	4	14.5	24.6	29.2	32.7	24.7	30.4	29.9
811	1X	1	1	4	11.9	14.5	21.1	27.0	22.2	28.5	29.5
811	1X	1	2	4	11.9	14.5	21.1	27.0	22.2	28.5	29.5
811	1X	2	1	4	10.0	12.9	19.0	27.1	20.3	26.8	25.9
811	1X	2	2	6	10.0	12.9	19.0	26.5	20.2	26.9	26.5
811	1X	3	1	4	9.7	11.8	16.9	24.0	16.9	24.9	25.5
811	1X	3	2	8	11.0	13.7	20.1	27.1	21.2	27.7	27.7
811	19	3	1	4	11.2	16.9	21.7	24.6	21.6	27.0	27.4
811	19	3	2	8	10.1	15.6	19.9	22.6	21.3	26.0	27.1
811	20	3	1	6	25.1	25.7	30.0	34.3	28.3	32.0	32.1
811	20	3	2	5	20.6	23.7	27.8	31.3	26.8	30.1	30.1
811	21	3	1	6	4.1	6.0	7.8	10.0	7.4	21.9	26.5
811	21	3	2	8	4.0	5.8	7.4	9.9	7.1	20.8	25.4
811	22	3	1	5	16.6	21.3	21.6	20.4	18.7	23.2	22.7
811	22	3	2	4	24.5	29.3	29.7	26.6	26.7	26.4	22.9
811	2X	1	1	4	4.9	5.1	7.3	16.3	13.7	26.3	28.2
811	2X	1	2	4	4.9	5.1	7.3	16.3	13.7	26.3	28.2
811	2X	2	1	4	8.3	10.1	13.3	26.1	17.1	32.7	34.4
811	2X	2	2	6	7.2	8.5	11.5	23.6	16.3	30.5	32.1
811	2X	4	1	8	6.6	7.5	10.3	21.2	15.4	29.5	31.3
811	2X	4	2	8	6.6	7.5	10.3	21.2	15.4	29.5	31.3
811	24	4	1	4	13.9	21.0	23.5	27.5	23.0	29.4	30.1
811	24	4	2	8	11.7	19.3	22.4	25.5	22.6	27.9	29.1
811	25	4	1	8	21.1	22.3	25.9	32.7	25.4	28.1	28.1
811	25	4	2	8	21.1	22.3	25.9	32.7	25.4	28.1	28.1
811	26	4	1	4	4.8	6.6	9.1	14.2	12.3	24.8	24.5
811	26	4	2	4	4.8	6.6	9.1	14.2	12.3	24.8	24.5
811	27	4	1	4	23.2	25.2	26.2	23.7	25.2	23.9	21.3
811	27	4	2	4	23.2	25.2	26.2	23.7	25.2	23.9	21.3

SOIL MOISTURE AVERAGED UNDER LINE SENSORS (SCATTEROMETERS AND PASSIVE RADIOMETERS)

DATE	FLD	LN	PASS	#PTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
814	02	1	1	9	3.6	5.2	9.8	14.5	9.6	22.5	24.5
814	02	1	2	9	3.6	5.2	9.8	14.5	9.6	22.5	24.5
814	02	1	3	9	3.6	5.2	9.8	14.5	9.6	22.5	24.5
814	04	1	2	8	20.5	21.4	21.5	20.5	20.6	20.2	17.6
814	04	1	3	9	20.5	21.4	21.5	20.5	20.6	20.2	17.6
814	06	1	2	20	19.2	19.7	17.7	16.7	18.4	18.3	19.7
814	06	1	3	25	20.1	20.1	18.3	16.7	19.6	18.7	19.8
814	07	1	2	8	7.6	14.0	19.5	20.2	17.7	21.0	22.8
814	07	1	3	5	7.7	14.3	19.8	20.4	18.0	21.5	22.6
814	08	1	2	8	4.9	6.5	8.3	11.9	10.6	18.0	19.3
814	08	1	3	8	4.9	6.5	8.3	11.9	10.6	18.0	19.3
814	1A	1	2	9	5.1	6.8	10.3	17.1	13.8	21.1	21.2
814	1A	1	3	9	5.1	6.8	10.3	17.1	13.8	21.1	21.2
814	10	2	2	9	3.9	5.9	12.4	19.0	11.4	20.7	18.8
814	10	2	3	9	3.9	5.9	12.4	19.0	11.4	20.7	18.8
814	13	2	2	4	8.1	10.9	12.8	13.1	12.4	15.7	15.3
814	13	2	3	4	8.1	10.9	12.8	13.1	12.4	15.7	15.3
814	14	2	2	25	4.0	9.1	14.1	18.3	14.2	23.9	21.9
814	14	2	3	32	4.0	9.1	14.1	17.9	14.1	22.8	21.2
814	15	2	2	4	10.9	15.8	21.7	22.7	20.3	21.8	23.7
814	15	2	3	9	9.5	14.4	19.4	20.2	18.4	20.3	22.0
814	17	2	2	8	3.9	4.6	7.0	12.6	9.2	22.0	23.7
814	17	2	3	9	3.9	4.6	7.0	12.6	9.2	22.0	23.7
814	2A	2	2	9	6.1	12.8	19.0	26.5	19.8	27.9	27.5
814	2A	2	3	9	6.1	12.8	19.0	26.5	19.8	27.9	27.5
814	1X	1	2	4	6.9	10.2	16.9	22.6	18.0	25.7	27.9
81	1X	1	3	4	6.9	10.2	16.9	22.6	18.0	25.7	27.9
81	1X	2	2	4	7.7	10.5	16.8	23.3	17.6	25.2	24.6
814	1X	2	3	4	7.7	10.5	16.8	23.3	17.6	25.2	24.6
814	1X	3	2	9	7.3	10.3	16.9	23.0	17.8	25.5	26.2
814	1X	3	3	4	8.6	12.2	20.0	25.9	21.7	28.0	28.8
814	19	3	2	8	12.9	17.3	21.2	24.4	21.5	27.2	27.9
814	19	3	3	8	12.9	17.3	21.2	24.4	21.5	27.2	27.9
814	20	3	2	9	12.1	18.7	22.4	28.7	22.4	29.1	28.2
814	20	3	3	9	12.1	18.7	22.4	28.7	22.4	29.1	28.2
814	21	3	2	5	5.1	5.5	7.2	11.8	7.2	22.2	27.5
814	21	3	3	6	5.1	5.5	7.2	11.8	7.2	22.2	27.5
814	22	3	2	9	19.4	22.4	22.4	22.6	22.0	23.6	20.7
814	22	3	3	8	19.4	22.4	22.4	22.6	22.0	23.6	20.7
814	2X	1	2	4	4.9	5.1	7.5	17.2	14.0	26.2	29.1
814	2X	1	3	4	4.9	5.1	7.5	17.2	14.0	26.2	28.1
814	2X	2	2	4	6.0	8.2	11.8	25.0	15.7	32.3	34.2
814	2X	2	3	4	6.0	8.2	11.8	25.0	15.7	32.3	34.2
814	2X	4	2	9	5.5	6.6	9.7	21.1	14.9	29.3	31.2
814	2X	4	3	9	5.5	6.6	9.7	21.1	14.9	29.3	31.2
814	24	4	2	8	18.8	24.6	28.0	30.5	28.5	32.7	32.3
814	24	4	3	9	18.8	24.6	28.0	30.5	29.5	32.7	32.3
814	25	4	2	8	27.4	25.6	30.8	35.5	29.7	29.8	29.3
814	25	4	3	8	27.4	26.6	30.8	35.5	29.7	28.8	29.3
814	26	4	2	9	4.5	6.3	8.4	12.5	9.2	22.0	23.4
814	26	4	3	5	4.5	6.4	8.4	12.3	9.4	21.0	22.3
814	27	4	2	4	9.9	16.2	16.1	16.3	15.3	18.2	17.3
814	27	4	3	6	12.1	20.3	20.2	19.7	18.1	23.3	21.0

SOIL MOISTURE AVERAGED UNDER LINE SENSORS (SCATTEROMETERS AND PASSIVE RADIOMETERS)

DATE	FLD	LN	PASS	#PTS	AVERAGE FOR DEPTH 0-2	2-5	5-9	9-15	0-15	15-30	30-45
817	02	1	2	4	3.3	5.0	8.5	15.6	9.1	22.3	23.6
817	04	1	1	4	7.3	10.9	13.2	13.3	12.9	15.3	15.8
817	04	1	2	4	7.3	10.9	13.2	13.3	12.9	15.3	15.8
817	06	1	1	25	5.7	12.6	15.7	16.7	15.0	17.8	17.0
817	06	1	2	18	6.0	12.6	15.9	16.8	15.5	18.9	16.6
817	07	1	1	8	4.5	10.9	16.1	18.3	15.6	19.1	21.6
817	07	1	2	4	4.5	11.3	16.5	19.5	16.0	20.4	23.5
817	09	1	1	8	3.2	5.6	7.5	11.0	9.6	16.7	18.1
817	09	1	2	8	3.2	5.6	7.5	11.0	9.6	16.7	18.1
817	1A	1	1	8	4.5	5.7	8.6	15.8	12.9	20.3	20.7
817	1A	1	2	8	4.5	5.7	8.6	15.8	12.9	20.3	20.7
817	10	2	1	4	3.6	5.9	12.8	19.9	10.7	21.2	20.3
817	10	2	2	8	3.4	5.1	11.4	18.6	10.7	21.6	19.6
817	13	2	1	8	23.0	24.6	23.3	22.2	22.4	16.9	16.9
817	13	2	2	8	23.0	24.6	23.3	22.2	22.4	16.9	16.9
817	14	2	1	25	3.5	6.2	12.5	18.1	12.1	23.6	21.6
817	14	2	2	18	3.5	5.8	12.2	17.9	12.0	23.8	21.3
817	15	2	1	8	4.9	11.5	16.3	18.6	15.6	19.1	22.2
817	15	2	2	8	4.9	11.5	16.3	18.6	15.6	19.1	22.2
817	17	2	1	4	2.9	3.9	6.1	10.3	8.2	20.9	22.0
817	17	2	2	8	3.5	4.2	6.5	11.8	9.0	21.0	23.3
817	2A	2	1	8	5.4	10.1	18.0	24.9	17.4	27.0	26.6
817	2A	2	2	8	5.4	10.1	18.0	24.9	17.4	27.0	26.6
817	1X	1	1	4	5.6	8.0	12.9	19.2	16.1	22.2	26.2
817	1X	1	2	4	5.6	8.0	12.9	19.2	16.1	22.2	26.2
817	1X	2	1	4	6.4	8.3	14.5	21.2	17.4	24.5	24.2
817	1X	2	2	4	6.4	8.3	14.5	21.2	17.4	24.5	24.2
817	1X	3	1	4	5.1	6.6	10.5	16.9	14.0	20.8	22.8
817	1X	3	2	4	6.9	9.7	16.9	23.5	19.4	25.9	27.6
817	19	3	1	8	9.5	14.7	18.5	21.3	18.6	25.5	26.0
817	19	3	2	8	9.5	14.7	18.5	21.3	18.6	25.5	26.0
817	20	3	1	8	26.4	26.0	28.8	30.7	25.0	26.2	26.0
817	20	3	2	6	27.9	28.9	31.7	33.4	27.4	29.2	27.1
817	21	3	1	6	4.2	4.8	6.3	7.9	6.7	21.6	28.2
817	21	3	2	6	4.2	4.8	6.3	7.9	6.7	21.6	28.2
817	22	3	1	6	11.8	18.9	19.8	19.8	18.4	21.5	18.5
817	22	3	2	6	11.8	18.9	19.8	19.8	18.4	21.5	18.5
817	2X	1	1	4	4.9	5.1	8.6	18.2	14.2	25.9	28.0
817	2X	1	2	4	4.9	5.1	8.6	18.2	14.2	25.9	28.0
817	2X	2	1	4	5.5	8.0	11.5	24.4	14.9	32.0	34.2
817	2X	2	2	4	5.5	8.0	11.5	24.4	14.9	32.0	34.2
817	2X	4	1	8	5.2	6.5	10.0	21.3	14.5	29.0	31.1
817	2X	4	2	8	5.2	6.5	10.0	21.3	14.5	29.0	31.1
817	24	4	1	4	14.8	22.2	26.3	30.1	26.8	30.4	30.6
817	24	4	2	8	13.1	19.7	24.0	27.8	24.7	29.7	30.5
817	25	4	1	4	9.7	14.7	18.9	24.3	19.9	26.3	27.0
817	25	4	2	8	10.6	17.5	21.5	27.2	21.0	26.6	26.3
817	26	4	1	4	4.6	6.1	8.6	12.4	9.0	22.8	25.2
817	26	4	2	8	4.5	6.0	8.2	11.9	8.6	21.3	23.4
817	27	4	1	4	4.3	8.4	11.5	12.1	10.6	14.7	15.9
817	27	4	2	8	5.5	10.8	13.8	14.8	12.5	18.4	18.4