

**UTM GRID DECLINATION
and
MIL EQUIVALENTS
for
Center of Quadrangle**

Conterminous United States

**U. S. Geological Survey
Topographic Division
Office of Research and Technical Standards
National Center
Reston, Virginia**

June 1978

C O N T E N T S

<u>Quadrangle Size</u>	<u>Pages</u>	<u>Sections</u>
7.5 X 7.5 Minute	1-25	I - White
7.5 X 15 Minute	27-39	II - Blue
15 X 15 Minute	40-46	III - Yellow
30 X 60 Minute	47-49	IV - Green

I N S T R U C T I O N S

The grid declination and mil equivalents for the center of a quadrangle are tabulated for the four standard quadrangle map series listed above. To determine the grid declination and mil values, locate the latitude and longitude corresponding to the SE corner of the map in the section for the appropriate series. The grid declination is WEST for longitude values tabulated in the left margin and EAST for longitude values tabulated in the right margin. For example, if the SE coordinates of a 7.5 X 7.5 minute quadrangle are 38°07'30"N and 105°22'30"W, the grid declination is 0°16' west or 5 mils.

[illegible]

SECTION I - 7.5 X 7.5 MINUTE QUADRANGLES

LONGITUDE		LATITUDE DEGREES-MINUTES								LONGITUDE	
GRID DEC=WEST										GRID DEC=EAST	
DEGREES	MINUTES	25-00.0	25-07.5	25-15.0	25-22.5	25-30.0	25-37.5	25-45.0	25-52.5	MINUTES	DEGREES
69	00.0	* 0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	* 52.5	68
75	07.5	* 0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	* 45.0	74
81		*								*	80
87	15.0	* 0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	* 37.5	86
93	22.5	* 0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	* 30.0	92
99		*								*	98
105	30.0	* 0-14/04	0-14/04	0-14/04	0-14/04	0-15/04	0-15/04	0-15/04	0-15/04	* 22.5	104
111	37.5	* 0-17/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	* 15.0	110
117		*								*	116
123	45.0	* 0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	* 07.5	122
	52.5	* 0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-25/07	* 00.0	
		*								*	
		*								*	
70	00.0	* 0-27/08	0-27/08	0-27/08	0-27/08	0-28/08	0-28/08	0-28/08	0-28/08	* 52.5	67
76	07.5	* 0-30/09	0-30/09	0-30/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	* 45.0	73
82		*								*	79
88	15.0	* 0-33/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	* 37.5	85
94	22.5	* 0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-38/11	0-38/11	* 30.0	91
100		*								*	97
106	30.0	* 0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	0-41/12	* 22.5	103
112	37.5	* 0-43/13	0-43/13	0-43/13	0-43/13	0-44/13	0-44/13	0-44/13	0-44/13	* 15.0	109
118		*								*	115
124	45.0	* 0-46/14	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	0-47/14	0-48/14	* 07.5	121
	52.5	* 0-49/15	0-49/15	0-50/15	0-50/15	0-50/15	0-50/15	0-51/15	0-51/15	* 00.0	
		*								*	
		*								*	
71	00.0	* 0-52/15	0-53/16	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	* 52.5	66
77	07.5	* 0-56/17	0-56/17	0-56/17	0-56/17	0-57/17	0-57/17	0-57/17	0-57/17	* 45.0	72
83		*								*	78
89	15.0	* 0-59/17	0-59/17	0-59/17	1-00/18	1-00/18	1-00/18	1-00/18	1-01/18	* 37.5	84
95	22.5	* 1-02/18	1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	1-04/19	* 30.0	90
101		*								*	96
107	30.0	* 1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	1-07/20	1-07/20	1-07/20	* 22.5	102
113	37.5	* 1-08/20	1-09/20	1-09/20	1-09/20	1-10/21	1-10/21	1-10/21	1-11/21	* 15.0	108
119		*								*	114
125	45.0	* 1-11/21	1-12/21	1-12/21	1-12/21	1-13/22	1-13/22	1-13/22	1-14/22	* 07.5	120
	52.5	* 1-15/22	1-15/22	1-15/22	1-16/23	1-16/23	1-16/23	1-17/23	1-17/23	* 00.0	
		*								*	
		* 25-00.0	25-07.5	25-15.0	25-22.5	25-30.0	25-37.5	25-45.0	25-52.5	*	
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE											
TABULATED BY THE SE CORNER COORDINATES											

LONGITUDE		LATITUDE								LONGITUDE	
GRID DEC=WEST										GRID DEC=EAST	
DEGREES	MINUTES									MINUTES	DEGREES
69	00.0	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	52.5	68
75	07.5	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45.0	74
81											80
87	15.0	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	37.5	86
93	22.5	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	30.0	92
99											98
105	30.0	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	22.5	104
111	37.5	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-19/06	0-19/06	0-19/06	15.0	110
117											116
123	45.0	0-21/06	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	07.5	122
	52.5	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	00.0	
70	00.0	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	0-29/09	0-29/09	52.5	67
76	07.5	0-31/09	0-31/09	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	45.0	73
82											79
88	15.0	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-36/11	0-36/11	37.5	85
94	22.5	0-38/11	0-38/11	0-38/11	0-38/11	0-39/12	0-39/12	0-39/12	0-39/12	30.0	91
100											97
106	30.0	0-41/12	0-41/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	22.5	103
112	37.5	0-44/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-46/14	0-46/14	15.0	109
118											115
124	45.0	0-48/14	0-48/14	0-48/14	0-48/14	0-49/15	0-49/15	0-49/15	0-49/15	07.5	121
	52.5	0-51/15	0-51/15	0-52/15	0-52/15	0-52/15	0-52/15	0-52/15	0-53/16	00.0	
71	00.0	0-54/16	0-55/16	0-55/16	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17	52.5	66
77	07.5	0-58/17	0-58/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	45.0	72
83											78
89	15.0	1-01/18	1-01/18	1-02/18	1-02/18	1-02/18	1-02/18	1-03/19	1-03/19	37.5	84
95	22.5	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	30.0	90
101											96
107	30.0	1-08/20	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	1-09/20	1-10/21	22.5	102
113	37.5	1-11/21	1-11/21	1-11/21	1-12/21	1-12/21	1-12/21	1-13/22	1-13/22	15.0	108
119											114
125	45.0	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	1-16/23	1-16/23	1-16/23	07.5	120
	52.5	1-17/23	1-18/23	1-18/23	1-18/23	1-19/23	1-19/23	1-20/24	1-20/24	00.0	
										</	

* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		* GRID DEC=WEST		* 27-00.0		* 27-07.5		* 27-15.0		* 27-22.5		* 27-30.0		* 27-37.5		* 27-45.0		* 27-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
69	00.0	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
75	07.5	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
81		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
87	15.0	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
93	22.5	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
99		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
105	30.0	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
111	37.5	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
117		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
123	45.0	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
	52.5	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-15/04		* 0-16/05		* 0-19/06		* 0-22/07		* 0-23/07		* 0-26/08	
70	00.0	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
76	07.5	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
82		* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
88	15.0	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
94	22.5	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
100		* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
106	30.0	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
112	37.5	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
118		* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
124	45.0	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
	52.5	* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
		* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
		* 0-29/09		* 0-32/09		* 0-36/11		* 0-39/12		* 0-43/13		* 0-46/14		* 0-49/15		* 0-53/16		* 0-56/17		* 0-57/17	
71	00.0	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
77	07.5	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
83		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
89	15.0	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
95	22.5	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
101		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
107	30.0	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
113	37.5	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
119		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
125	45.0	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
	52.5	* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24		* 1-23/25		* 1-26/08	
		* 1-00/18		* 1-03/19		* 1-07/20		* 1-10/21		* 1-13/22		* 1-17/23		* 1-20/24		* 1-22/24					

LONGITUDE		* GRID DEC=WEST		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-16/05		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10	
69	00.0	* 0-02/01		* 0-05/01		* 0-09/03		* 0-12/04		* 0-16/05		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10	
75	07.5	* 0-05/01		* 0-09/03		* 0-12/04		* 0-16/05		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10		* 0-37/11	
81		* 0-09/03		* 0-12/04		* 0-16/05		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10		* 0-37/11		* 0-41/12	
87	15.0	* 0-12/04		* 0-16/05		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10		* 0-37/11		* 0-41/12		* 0-44/13	
93	22.5	* 0-16/05		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10		* 0-37/11		* 0-41/12		* 0-44/13		* 0-48/14	
99		* 0-19/06		* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10		* 0-37/11		* 0-41/12		* 0-44/13		* 0-48/14		* 0-51/15	
105	30.0	* 0-23/07		* 0-26/08		* 0-30/09		* 0-34/10		* 0-37/11		* 0-41/12		* 0-44/13		* 0-48/14		* 0-51/15		* 0-55/16	
111	37.5	* 0-30/09		* 0-34/10		* 0-37/11		* 0-41/12		* 0-44/13		* 0-48/14		* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18	
117		* 0-34/10		* 0-37/11		* 0-41/12		* 0-44/13		* 0-48/14		* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20	
123	45.0	* 0-37/11		* 0-41/12		* 0-44/13		* 0-48/14		* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20	
	52.5	* 0-41/12		* 0-44/13		* 0-48/14		* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21	
		* 0-44/13		* 0-48/14		* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23	
70	00.0	* 0-48/14		* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23	
76	07.5	* 0-51/15		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25	
82		* 0-55/16		* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25		* 28-00.0	
88	15.0	* 0-58/17		* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25		* 28-07.5		* 28-15.0	
94	22.5	* 1-02/18		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25		* 28-22.5		* 28-30.0		* 28-37.5	
100		* 1-06/20		* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
106	30.0	* 1-09/20		* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
112	37.5	* 1-12/21		* 1-16/23		* 1-19/23		* 1-23/25		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
118		* 1-16/23		* 1-19/23		* 1-23/25		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
124	45.0	* 1-19/23		* 1-23/25		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5	
	52.5	* 1-23/25		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
71	00.0	* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
77	07.5	* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0	
83		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
89	15.0	* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0	
95	22.5	* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5	
101		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0	
107	30.0	* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
113	37.5	* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0	
119		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
125	45.0	* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0	
	52.5	* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0	
		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5	
		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0	
		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0	
		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0	
		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0	
		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5	
		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0	
		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0	
		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0	
		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0	
		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5	
		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0	
		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0	
		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5	
		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0	
		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5	
		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0	
		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5	
		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0	
		* 28-30.0		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5	
		* 28-37.5		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5		* 28-45.0	
		* 28-45.0		* 28-52.5		* 28-00.0		* 28-07.5		* 28-15.0		* 28-22.5		* 28-30.0		* 28-37.5					

LONGITUDE		* GRID DEC=WEST		* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* MINUTES DEGREES	
69	00.0	* 0-05/01		* 0-05/01		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 52.5 68	
75	07.5	* 0-09/03		* 0-09/03		* 0-09/03		* 0-09/03		* 0-09/03		* 0-09/03		* 0-09/03		* 0-09/03		* 0-09/03		* 45.0 74	
81		* 0-13/04		* 0-13/04		* 0-13/04		* 0-13/04		* 0-13/04		* 0-13/04		* 0-13/04		* 0-13/04		* 0-13/04		* 37.5 86	
87	15.0	* 0-16/05		* 0-16/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 30.0 92	
93	22.5	* 0-20/06		* 0-20/06		* 0-20/06		* 0-20/06		* 0-20/06		* 0-20/06		* 0-20/06		* 0-21/06		* 0-21/06		* 22.5 104	
99		* 0-24/07		* 0-24/07		* 0-24/07		* 0-24/07		* 0-24/07		* 0-24/07		* 0-24/07		* 0-24/07		* 0-24/07		* 15.0 110	
105	30.0	* 0-27/08		* 0-27/08		* 0-28/08		* 0-28/08		* 0-28/08		* 0-28/08		* 0-28/08		* 0-28/08		* 0-28/08		* 07.5 116	
111	37.5	* 0-31/09		* 0-31/09		* 0-31/09		* 0-31/09		* 0-31/09		* 0-31/09		* 0-32/09		* 0-32/09		* 0-32/09		* 00.0 122	
117		* 0-35/10		* 0-35/10		* 0-35/10		* 0-35/10		* 0-35/10		* 0-35/10		* 0-35/10		* 0-35/10		* 0-36/11		* 52.5 67	
123	45.0	* 0-38/11		* 0-38/11		* 0-39/12		* 0-39/12		* 0-39/12		* 0-39/12		* 0-39/12		* 0-39/12		* 0-39/12		* 45.0 73	
	52.5	* 0-42/12		* 0-42/12		* 0-42/12		* 0-42/12		* 0-43/13		* 0-43/13		* 0-43/13		* 0-43/13		* 0-43/13		* 37.5 85	
70	00.0	* 0-46/14		* 0-46/14		* 0-46/14		* 0-46/14		* 0-46/14		* 0-46/14		* 0-47/14		* 0-47/14		* 0-47/14		* 30.0 91	
76	07.5	* 0-49/15		* 0-49/15		* 0-50/15		* 0-50/15		* 0-50/15		* 0-50/15		* 0-50/15		* 0-50/15		* 0-51/15		* 22.5 103	
82		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-54/16		* 0-54/16		* 0-54/16		* 0-54/16		* 0-54/16		* 15.0 109	
88	15.0	* 0-56/17		* 0-56/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-58/17		* 0-58/17		* 0-58/17		* 07.5 121	
94	22.5	* 1-00/18		* 1-00/18		* 1-01/18		* 1-01/18		* 1-01/18		* 1-01/18		* 1-02/18		* 1-02/18		* 1-02/18		* 00.0	
100		* 1-04/19		* 1-04/19		* 1-04/19		* 1-05/19		* 1-05/19		* 1-05/19		* 1-05/19		* 1-05/19		* 1-06/20		* 52.5 66	
106	30.0	* 1-07/20		* 1-08/20		* 1-08/20		* 1-08/20		* 1-08/20		* 1-08/20		* 1-09/20		* 1-09/20		* 1-09/20		* 45.0 72	
112	37.5	* 1-11/21		* 1-11/21		* 1-12/21		* 1-12/21		* 1-12/21		* 1-12/21		* 1-12/21		* 1-13/22		* 1-13/22		* 37.5 84	
118		* 1-15/22		* 1-15/22		* 1-15/22		* 1-16/23		* 1-16/23		* 1-16/23		* 1-16/23		* 1-17/23		* 1-17/23		* 30.0 90	
124	45.0	* 1-18/23		* 1-19/23		* 1-19/23		* 1-19/23		* 1-20/24		* 1-20/24		* 1-20/24		* 1-20/24		* 1-20/24		* 22.5 102	
	52.5	* 1-22/24		* 1-22/24		* 1-23/25		* 1-23/25		* 1-23/25		* 1-23/25		* 1-24/25		* 1-24/25		* 1-24/25		* 15.0 108	
71	00.0	* 1-26/25		* 1-26/25		* 1-26/25		* 1-27/26		* 1-27/26		* 1-27/26		* 1-27/26		* 1-28/26		* 1-28/26		* 07.5 114	
77	07.5	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0 120	
83		* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
89	15.0	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
95	22.5	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
101		* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
107	30.0	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
113	37.5	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
119		* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
125	45.0	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	
	52.5	* 29-00.0		* 29-07.5		* 29-15.0		* 29-22.5		* 29-30.0		* 29-37.5		* 29-45.0		* 29-52.5		* 29-52.5		* 00.0	

* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

GRID DEC=WEST										GRID DEC=EAST	
DEGREES	MINUTES									MINUTES	DEGREES
		*	30-00.0	30-07.5	30-15.0	30-22.5	30-30.0	30-37.5	30-45.0	30-52.5	*
69	00.0	*	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	* 52.5 68
75	07.5	*	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	* 45.0 74
81		*									* 80
87	15.0	*	0-09/03	0-09/03	0-09/03	0-09/03	0-10/03	0-10/03	0-10/03	0-10/03	* 37.5 86
93	22.5	*	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	* 30.0 92
99		*									* 98
105	30.0	*	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	* 22.5 104
111	37.5	*	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	* 15.0 110
117		*									* 116
123	45.0	*	0-24/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	* 07.5 122
	52.5	*	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	0-29/09	0-29/09	* 00.0
		*									*
		*									*
		*									*
70	00.0	*	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	0-33/10	0-33/10	0-33/10	* 52.5 67
76	07.5	*	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-37/11	* 45.0 73
82		*									* 79
88	15.0	*	0-39/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	* 37.5 85
94	22.5	*	0-43/13	0-43/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	* 30.0 91
100		*									* 97
106	30.0	*	0-47/14	0-47/14	0-47/14	0-47/14	0-48/14	0-48/14	0-48/14	0-48/14	* 22.5 103
112	37.5	*	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	0-52/15	0-52/15	* 15.0 109
118		*									* 115
124	45.0	*	0-54/16	0-55/16	0-55/16	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17	* 07.5 121
	52.5	*	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	1-00/18	1-00/18	* 00.0
		*									*
		*									*
		*									*
71	00.0	*	1-02/18	1-02/18	1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	* 52.5 66
77	07.5	*	1-06/20	1-06/20	1-06/20	1-06/20	1-07/20	1-07/20	1-07/20	1-07/20	* 45.0 72
83		*									* 78
89	15.0	*	1-10/21	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	1-11/21	* 37.5 84
95	22.5	*	1-13/22	1-14/22	1-14/22	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	* 30.0 90
101		*									* 96
107	30.0	*	1-17/23	1-17/23	1-18/23	1-18/23	1-18/23	1-18/23	1-19/23	1-19/23	* 22.5 102
113	37.5	*	1-21/24	1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	* 15.0 108
119		*									* 114
125	45.0	*	1-25/25	1-25/25	1-25/25	1-26/25	1-26/25	1-26/25	1-26/25	1-27/26	* 07.5 120
	52.5	*	1-28/26	1-29/26	1-29/26	1-29/26	1-30/27	1-30/27	1-30/27	1-31/27	* 00.0
		*									*
		*									*
		*									*
		*	30-00.0	30-07.5	30-15.0	30-22.5	30-30.0	30-37.5	30-45.0	30-52.5	*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									*
		*									

LONGITUDE		* GRID DEC=WEST		* 31-00.0		* 31-07.5		* 31-15.0		* 31-22.5		* 31-30.0		* 31-37.5		* 31-45.0		* 31-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 69 00.0		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* MINUTES DEGREES	
75	07.5	* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 52.5 68	
81		* 0-10/03		* 0-10/03		* 0-10/03		* 0-10/03		* 0-10/03		* 0-10/03		* 0-10/03		* 0-10/03		* 0-10/03		* 45.0 74	
87	15.0	* 0-14/04		* 0-14/04		* 0-14/04		* 0-14/04		* 0-14/04		* 0-14/04		* 0-14/04		* 0-14/04		* 0-14/04		* 37.5 86	
93	22.5	* 0-17/05		* 0-17/05		* 0-18/05		* 0-18/05		* 0-18/05		* 0-18/05		* 0-18/05		* 0-18/05		* 0-18/05		* 30.0 92	
99		* 0-21/06		* 0-21/06		* 0-21/06		* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 22.5 104	
105	30.0	* 0-25/07		* 0-25/07		* 0-25/07		* 0-25/07		* 0-26/08		* 0-26/08		* 0-26/08		* 0-26/08		* 0-26/08		* 15.0 110	
111	37.5	* 0-29/09		* 0-29/09		* 0-29/09		* 0-29/09		* 0-29/09		* 0-30/09		* 0-30/09		* 0-30/09		* 0-30/09		* 07.5 122	
117	45.0	* 0-33/10		* 0-33/10		* 0-33/10		* 0-33/10		* 0-33/10		* 0-33/10		* 0-33/10		* 0-34/10		* 0-34/10		* 00.0	
123	52.5	* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-38/11		* 0-38/11		* 52.5 67	
		* 0-41/12		* 0-41/12		* 0-41/12		* 0-41/12		* 0-41/12		* 0-41/12		* 0-41/12		* 0-42/12		* 0-42/12		* 45.0 73	
70	00.0	* 0-45/13		* 0-45/13		* 0-45/13		* 0-45/13		* 0-45/13		* 0-45/13		* 0-45/13		* 0-46/14		* 0-46/14		* 37.5 85	
76	07.5	* 0-48/14		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-50/15		* 30.0 91	
82		* 0-52/15		* 0-52/15		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-54/16		* 22.5 103	
88	15.0	* 0-56/17		* 0-56/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-58/17		* 15.0 109	
94	22.5	* 1-00/18		* 1-00/18		* 1-00/18		* 1-01/18		* 1-01/18		* 1-01/18		* 1-01/18		* 1-01/18		* 1-01/18		* 07.5 121	
100		* 1-04/19		* 1-04/19		* 1-04/19		* 1-05/19		* 1-05/19		* 1-05/19		* 1-05/19		* 1-05/19		* 1-05/19		* 00.0	
106	30.0	* 1-08/20		* 1-08/20		* 1-08/20		* 1-08/20		* 1-09/20		* 1-09/20		* 1-09/20		* 1-09/20		* 1-09/20		* 52.5 66	
112	37.5	* 1-12/21		* 1-12/21		* 1-12/21		* 1-12/21		* 1-13/22		* 1-13/22		* 1-13/22		* 1-13/22		* 1-13/22		* 45.0 72	
118	45.0	* 1-15/22		* 1-16/23		* 1-16/23		* 1-16/23		* 1-17/23		* 1-17/23		* 1-17/23		* 1-17/23		* 1-17/23		* 37.5 84	
124	52.5	* 1-19/23		* 1-20/24		* 1-20/24		* 1-20/24		* 1-20/24		* 1-21/24		* 1-21/24		* 1-21/24		* 1-21/24		* 30.0 90	
		* 1-23/25		* 1-24/25		* 1-24/25		* 1-24/25		* 1-24/25		* 1-25/25		* 1-25/25		* 1-25/25		* 1-25/25		* 22.5 102	
71	00.0	* 1-27/26		* 1-27/26		* 1-28/26		* 1-28/26		* 1-28/26		* 1-29/26		* 1-29/26		* 1-29/26		* 1-29/26		* 15.0 108	
77	07.5	* 1-31/27		* 1-31/27		* 1-32/27		* 1-32/27		* 1-32/27		* 1-32/27		* 1-33/28		* 1-33/28		* 1-33/28		* 07.5 120	
83		* 31-00.0		* 31-07.5		* 31-15.0		* 31-22.5		* 31-30.0		* 31-37.5		* 31-45.0		* 31-52.5		* 31-52.5		* 00.0	

* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		* GRID DEC=WEST		* 33-00.0		* 33-07.5		* 33-15.0		* 33-22.5		* 33-30.0		* 33-37.5		* 33-45.0		* 33-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 0-02/01		* 0-06/02		* 0-10/03		* 0-14/04		* 0-18/05		* 0-23/07		* 0-27/08		* 0-31/09		* 0-35/10		* 0-39/12	
69	00.0	0-02/01	0-02/01	0-06/02	0-06/02	0-10/03	0-10/03	0-14/04	0-14/04	0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12
75	07.5	0-06/02	0-06/02	0-10/03	0-10/03	0-14/04	0-14/04	0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13
81				0-14/04	0-14/04	0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14
87	15.0	0-10/03	0-10/03	0-14/04	0-14/04	0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14
93	22.5	0-14/04	0-14/04	0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15
99				0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15
105	30.0	0-18/05	0-18/05	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16
111	37.5	0-23/07	0-23/07	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17
117				0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17
123	45.0	0-27/08	0-27/08	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18
	52.5	0-31/09	0-31/09	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19
70	00.0	0-35/10	0-35/10	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20
76	07.5	0-39/12	0-39/12	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21
82				0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21
88	15.0	0-43/13	0-43/13	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22
94	22.5	0-47/14	0-47/14	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23
100				0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23
106	30.0	0-51/15	0-51/15	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23	1-23/24	1-23/24
112	37.5	0-55/16	0-55/16	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23	1-23/24	1-23/24	1-27/25	1-27/25
118				0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23	1-23/24	1-23/24	1-27/25	1-27/25
124	45.0	0-59/17	0-59/17	1-00/18	1-00/18	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23	1-23/24	1-23/24	1-27/25	1-27/25	1-31/26	1-31/26
	52.5	1-03/19	1-03/19	1-07/20	1-07/20	1-11/21	1-11/21	1-15/22	1-15/22	1-19/23	1-19/23	1-23/24	1-23/24	1-27/25	1-27/25	1-31/26	1-31/26	1-35/27	1-35/27	1-39/28	1-39/28
71	00.0	1-08/20	1-08/20	1-12/21	1-12/21	1-16/23	1-16/23	1-20/24	1-20/24	1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30
77	07.5	1-12/21	1-12/21	1-16/23	1-16/23	1-20/24	1-20/24	1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31
83				1-16/23	1-16/23	1-20/24	1-20/24	1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31
89	15.0	1-16/23	1-16/23	1-20/24	1-20/24	1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32
95	22.5	1-20/24	1-20/24	1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33
101				1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33
107	30.0	1-24/25	1-24/25	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33	1-60/34	1-60/34
113	37.5	1-28/26	1-28/26	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33	1-60/34	1-60/34	1-64/35	1-64/35
119				1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33	1-60/34	1-60/34	1-64/35	1-64/35
125	45.0	1-32/27	1-32/27	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33	1-60/34	1-60/34	1-64/35	1-64/35	1-68/36	1-68/36
	52.5	1-36/28	1-36/28	1-40/29	1-40/29	1-44/30	1-44/30	1-48/31	1-48/31	1-52/32	1-52/32	1-56/33	1-56/33	1-60/34	1-60/34	1-64/35	1-64/35	1-68/36	1-68/36	1-72/37	1-72/37
		33-00.0	33-07.5	33-15.0	33-22.5	33-30.0	33-37.5	33-45.0	33-52.5												
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE																					
TABULATED BY THE SE CORNER COORDINATES																					

LONGITUDE		* GRID DEC=WEST		* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* MINUTES DEGREES	
69	00.0	* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 0-06/02		* 52.5	68
75	07.5	* 0-11/03		* 0-11/03		* 0-11/03		* 0-11/03		* 0-11/03		* 0-11/03		* 0-11/03		* 0-11/03		* 0-11/03		* 45.0	74
81		* 0-15/04		* 0-15/04		* 0-15/04		* 0-15/04		* 0-15/04		* 0-15/04		* 0-15/04		* 0-15/04		* 0-15/04		* 37.5	86
87	15.0	* 0-19/06		* 0-19/06		* 0-19/06		* 0-19/06		* 0-19/06		* 0-19/06		* 0-19/06		* 0-19/06		* 0-19/06		* 30.0	92
93	22.5	* 0-23/07		* 0-23/07		* 0-23/07		* 0-23/07		* 0-23/07		* 0-23/07		* 0-23/07		* 0-24/07		* 0-24/07		* 22.5	104
99		* 0-27/08		* 0-27/08		* 0-27/08		* 0-27/08		* 0-28/08		* 0-28/08		* 0-28/08		* 0-28/08		* 0-28/08		* 15.0	110
105	30.0	* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 07.5	116
111	37.5	* 0-36/11		* 0-36/11		* 0-36/11		* 0-36/11		* 0-36/11		* 0-36/11		* 0-36/11		* 0-36/11		* 0-37/11		* 00.0	122
117		* 0-40/12		* 0-40/12		* 0-40/12		* 0-40/12		* 0-40/12		* 0-40/12		* 0-41/12		* 0-41/12		* 0-41/12		* 52.5	67
123	45.0	* 0-44/13		* 0-44/13		* 0-44/13		* 0-44/13		* 0-45/13		* 0-45/13		* 0-45/13		* 0-45/13		* 0-45/13		* 45.0	73
	52.5	* 0-48/14		* 0-48/14		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 0-49/15		* 37.5	79
70	00.0	* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-53/16		* 0-54/16		* 0-54/16		* 30.0	85
76	07.5	* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-58/17		* 0-58/17		* 0-58/17		* 22.5	91
82		* 1-01/18		* 1-01/18		* 1-01/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 15.0	97
88	15.0	* 1-05/19		* 1-05/19		* 1-06/20		* 1-06/20		* 1-06/20		* 1-06/20		* 1-06/20		* 1-06/20		* 1-07/20		* 07.5	103
94	22.5	* 1-09/20		* 1-10/21		* 1-10/21		* 1-10/21		* 1-10/21		* 1-10/21		* 1-10/21		* 1-11/21		* 1-11/21		* 00.0	109
100		* 1-14/22		* 1-14/22		* 1-14/22		* 1-14/22		* 1-14/22		* 1-14/22		* 1-15/22		* 1-15/22		* 1-15/22		* 52.5	115
106	30.0	* 1-18/23		* 1-18/23		* 1-18/23		* 1-18/23		* 1-18/23		* 1-19/23		* 1-19/23		* 1-19/23		* 1-19/23		* 07.5	121
112	37.5	* 1-22/24		* 1-22/24		* 1-22/24		* 1-23/25		* 1-23/25		* 1-23/25		* 1-23/25		* 1-24/25		* 1-24/25		* 00.0	127
118	45.0	* 1-26/25		* 1-26/25		* 1-27/26		* 1-27/26		* 1-27/26		* 1-27/26		* 1-28/26		* 1-28/26		* 1-28/26		* 52.5	133
124	52.5	* 1-30/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-32/27		* 1-32/27		* 1-32/27		* 45.0	139
		* 1-35/28		* 1-35/28		* 1-35/28		* 1-35/28		* 1-35/28		* 1-36/28		* 1-36/28		* 1-36/28		* 1-37/29		* 37.5	145
71	00.0	* 1-39/29		* 1-39/29		* 1-39/29		* 1-40/30		* 1-40/30		* 1-40/30		* 1-40/30		* 1-41/30		* 1-41/30		* 30.0	151
77	07.5	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 22.5	157
83		* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 15.0	163
89	15.0	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 07.5	169
95	22.5	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 00.0	175
101		* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 52.5	181
107	30.0	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 45.0	187
113	37.5	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 37.5	193
119	45.0	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 30.0	199
125	52.5	* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 22.5	205
		* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 15.0	211
		* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 07.5	217
		* 34-00.0		* 34-07.5		* 34-15.0		* 34-22.5		* 34-30.0		* 34-37.5		* 34-45.0		* 34-52.5		* 34-52.5		* 00.0	223

LONGITUDE		GRID DEC=WEST		LATITUDE		DEGREES-MINUTES		LONGITUDE		GRID DEC=EAST		
DEGREES MINUTES								MINUTES DEGREES				
69	00.0	*	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	*	52.5 68	
75	07.5	*	0-06/02	0-06/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	*	45.0 74	
81		*								*	80	
87	15.0	*	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	*	37.5 86	
93	22.5	*	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	*	30.0 92	
99		*								*	98	
105	30.0	*	0-19/06	0-19/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	*	22.5 104	
111	37.5	*	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	*	15.0 110	
117		*								*	116	
123	45.0	*	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	*	07.5 122	
	52.5	*	0-32/09	0-32/09	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	*	00.0	
		*								*		
		*								*		
70	00.0	*	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	*	52.5 67	
76	07.5	*	0-41/12	0-41/12	0-41/12	0-41/12	0-41/12	0-42/12	0-42/12	*	45.0 73	
82		*								*	79	
88	15.0	*	0-45/13	0-45/13	0-46/14	0-46/14	0-46/14	0-46/14	0-46/14	*	37.5 85	
94	22.5	*	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-51/15	*	30.0 91	
100		*								*	97	
106	30.0	*	0-54/16	0-54/16	0-54/16	0-54/16	0-55/16	0-55/16	0-55/16	*	22.5 103	
112	37.5	*	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	*	15.0 109	
118		*								*	115	
124	45.0	*	1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	*	07.5 121	
	52.5	*	1-07/20	1-07/20	1-07/20	1-07/20	1-08/20	1-08/20	1-08/20	*	00.0	
		*								*		
		*								*		
71	00.0	*	1-11/21	1-11/21	1-12/21	1-12/21	1-12/21	1-12/21	1-13/22	*	52.5 66	
77	07.5	*	1-15/22	1-16/23	1-16/23	1-16/23	1-16/23	1-17/23	1-17/23	*	45.0 72	
83		*								*	78	
89	15.0	*	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	1-21/24	1-21/24	*	37.5 84	
95	22.5	*	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	1-25/25	1-26/25	*	30.0 90	
101		*								*	96	
107	30.0	*	1-28/26	1-29/26	1-29/26	1-29/26	1-29/26	1-30/27	1-30/27	*	22.5 102	
113	37.5	*	1-33/28	1-33/28	1-33/28	1-34/28	1-34/28	1-34/28	1-35/28	*	15.0 108	
119		*								*	114	
125	45.0	*	1-37/29	1-37/29	1-38/29	1-38/29	1-38/29	1-38/29	1-39/29	*	07.5 120	
	52.5	*	1-41/30	1-42/30	1-42/30	1-42/30	1-43/31	1-43/31	1-43/31	*	00.0	
		*								*		
		*	35-00.0	35-07.5	35-15.0	35-22.5	35-30.0	35-37.5	35-45.0	35-52.5	*	
		*									*	
		*									*	
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE TABULATED BY THE SE CORNER COORDINATES												

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		*	LATITUDE DEGREES-MINUTES								LONGITUDE	
GRID DEC=WEST											GRID DEC=EAST	
DEGREES	MINUTES		36-00.0	36-07.5	36-15.0	36-22.5	36-30.0	36-37.5	36-45.0	36-52.5	MINUTES	DEGREES
69	00.0	*	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	52.5	68
75	07.5	*	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	45.0	74
81		*										80
87	15.0	*	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	37.5	86
93	22.5	*	0-15/04	0-15/04	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	30.0	92
99		*										98
105	30.0	*	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	22.5	104
111	37.5	*	0-24/07	0-24/07	0-24/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	15.0	110
117		*										116
123	45.0	*	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	07.5	122
	52.5	*	0-33/10	0-33/10	0-33/10	0-33/10	0-34/10	0-34/10	0-34/10	0-34/10	00.0	
		*										
		*										
70	00.0	*	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	52.5	67
76	07.5	*	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-43/13	0-43/13	0-43/13	45.0	73
82		*										79
88	15.0	*	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	37.5	85
94	22.5	*	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	0-52/15	0-52/15	30.0	91
100		*										97
106	30.0	*	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	22.5	103
112	37.5	*	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	1-01/18	1-01/18	15.0	109
118		*										115
124	45.0	*	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	1-05/19	07.5	121
	52.5	*	1-08/20	1-09/20	1-09/20	1-09/20	1-09/20	1-09/20	1-10/21	1-10/21	00.0	
		*										
		*										
71	00.0	*	1-13/22	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	1-14/22	1-14/22	52.5	66
77	07.5	*	1-17/23	1-17/23	1-18/23	1-18/23	1-18/23	1-18/23	1-19/23	1-19/23	45.0	72
83		*										78
89	15.0	*	1-22/24	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	1-23/25	1-23/25	37.5	84
95	22.5	*	1-26/25	1-26/25	1-27/26	1-27/26	1-27/26	1-27/26	1-28/26	1-28/26	30.0	90
101		*										96
107	30.0	*	1-31/27	1-31/27	1-31/27	1-31/27	1-32/27	1-32/27	1-32/27	1-32/27	22.5	102
113	37.5	*	1-35/28	1-35/28	1-36/28	1-36/28	1-36/28	1-36/28	1-37/29	1-37/29	15.0	108
119		*										114
125	45.0	*	1-39/29	1-40/30	1-40/30	1-40/30	1-41/30	1-41/30	1-41/30	1-41/30	07.5	120
	52.5	*	1-44/31	1-44/31	1-44/31	1-45/31	1-45/31	1-45/31	1-46/31	1-46/31	00.0	
		*										
		*	36-00.0	36-07.5	36-15.0	36-22.5	36-30.0	36-37.5	36-45.0	36-52.5		
		*										
		*										

* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		GRID DEC=WEST		LATITUDE DEGREES-MINUTES						LONGITUDE	
										GRID DEC=EAST	
DEGREES MINUTES										MINUTES DEGREES	
69	00.0	*	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	52.5 68
75	07.5	*	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	45.0 74
81		*									80
87	15.0	*	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-12/04	37.5 86
93	22.5	*	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	30.0 92
99		*									98
105	30.0	*	0-20/06	0-20/06	0-20/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	22.5 104
111	37.5	*	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	15.0 110
117		*									116
123	45.0	*	0-29/09	0-29/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	07.5 122
	52.5	*	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-35/10	00.0
		*									
		*									
70	00.0	*	0-38/11	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	52.5 67
76	07.5	*	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-44/13	0-44/13	0-44/13	45.0 73
82		*									79
88	15.0	*	0-47/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	37.5 85
94	22.5	*	0-52/15	0-52/15	0-52/15	0-52/15	0-53/16	0-53/16	0-53/16	0-53/16	30.0 91
100		*									97
106	30.0	*	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-58/17	22.5 103
112	37.5	*	1-01/18	1-01/18	1-01/18	1-02/18	1-02/18	1-02/18	1-02/18	1-02/18	15.0 109
118		*									115
124	45.0	*	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	1-07/20	1-07/20	07.5 121
	52.5	*	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	00.0
		*									
		*									
71	00.0	*	1-15/22	1-15/22	1-15/22	1-15/22	1-15/22	1-16/23	1-16/23	1-16/23	52.5 66
77	07.5	*	1-19/23	1-19/23	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	45.0 72
83		*									78
89	15.0	*	1-24/25	1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	1-25/25	37.5 84
95	22.5	*	1-28/26	1-28/26	1-29/26	1-29/26	1-29/26	1-29/26	1-30/27	1-30/27	30.0 90
101		*									96
107	30.0	*	1-33/28	1-33/28	1-33/28	1-33/28	1-34/28	1-34/28	1-34/28	1-35/28	22.5 102
113	37.5	*	1-37/29	1-37/29	1-38/29	1-38/29	1-38/29	1-39/29	1-39/29	1-39/29	15.0 108
119		*									114
125	45.0	*	1-42/30	1-42/30	1-42/30	1-43/31	1-43/31	1-43/31	1-43/31	1-44/31	07.5 120
	52.5	*	1-46/31	1-47/32	1-47/32	1-47/32	1-47/32	1-48/32	1-48/32	1-48/32	00.0
		*									
		*									
		*	37-00.0	37-07.5	37-15.0	37-22.5	37-30.0	37-37.5	37-45.0	37-52.5	

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

GRID DEC=WEST		LATITUDE DEGREES-MINUTES								GRID DEC=EAST	
DEGREES MINUTES										MINUTES DEGREES	
69	00.0	* 0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	* 52.5	68
75	07.5	* 0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	* 45.0	74
81		*								*	80
87	15.0	* 0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	* 37.5	86
93	22.5	* 0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	* 30.0	92
99		*								*	98
105	30.0	* 0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	* 22.5	104
111	37.5	* 0-25/07	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	* 15.0	110
117		*								*	116
123	45.0	* 0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-31/09	0-31/09	* 07.5	122
	52.5	* 0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	* 00.0	
		*								*	
		*								*	
70	00.0	* 0-39/12	0-39/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	* 52.5	67
76	07.5	* 0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-45/13	0-45/13	0-45/13	* 45.0	73
82		*								*	79
88	15.0	* 0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	* 37.5	85
94	22.5	* 0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	* 30.0	91
100		*								*	97
106	30.0	* 0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	* 22.5	103
112	37.5	* 1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	* 15.0	109
118		*								*	115
124	45.0	* 1-07/20	1-07/20	1-07/20	1-08/20	1-08/20	1-08/20	1-08/20	1-08/20	* 07.5	121
	52.5	* 1-12/21	1-12/21	1-12/21	1-12/21	1-12/21	1-13/22	1-13/22	1-13/22	* 00.0	
		*								*	
		*								*	
71	00.0	* 1-16/23	1-17/23	1-17/23	1-17/23	1-17/23	1-17/23	1-18/23	1-18/23	* 52.5	66
77	07.5	* 1-21/24	1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-22/24	1-22/24	* 45.0	72
83		*								*	78
89	15.0	* 1-26/25	1-26/25	1-26/25	1-26/25	1-26/25	1-27/26	1-27/26	1-27/26	* 37.5	84
95	22.5	* 1-30/27	1-30/27	1-31/27	1-31/27	1-31/27	1-31/27	1-32/27	1-32/27	* 30.0	90
101		*								*	96
107	30.0	* 1-35/28	1-35/28	1-35/28	1-36/28	1-36/28	1-36/28	1-36/28	1-37/29	* 22.5	102
113	37.5	* 1-39/29	1-40/30	1-40/30	1-40/30	1-41/30	1-41/30	1-41/30	1-41/30	* 15.0	108
119		*								*	114
125	45.0	* 1-44/31	1-44/31	1-45/31	1-45/31	1-45/31	1-45/31	1-46/31	1-46/31	* 07.5	120
	52.5	* 1-49/32	1-49/32	1-49/32	1-50/33	1-50/33	1-50/33	1-50/33	1-51/33	* 00.0	
		*								*	
		* 38-00.0	38-07.5	38-15.0	38-22.5	38-30.0	38-37.5	38-45.0	38-52.5	*	
		*								*	

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		* GRID DEC=WEST		LATITUDE DEGREES-MINUTES						* GRID DEC=EAST	
DEGREES MINUTES		* MINUTES DEGREES									
69	00.0	*	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	52.5 68
75	07.5	*	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	45.0 74
81		*									80
87	15.0	*	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	37.5 86
93	22.5	*	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	30.0 92
99		*									98
105	30.0	*	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-22/07	0-22/07	0-22/07	22.5 104
111	37.5	*	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	15.0 110
117		*									116
123	45.0	*	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	07.5 122
	52.5	*	0-35/10	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	00.0
		*									
		*									
70	00.0	*	0-40/12	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	0-41/12	0-41/12	52.5 67
76	07.5	*	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-46/14	0-46/14	0-46/14	45.0 73
82		*									79
88	15.0	*	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-51/15	37.5 85
94	22.5	*	0-54/16	0-54/16	0-55/16	0-55/16	0-55/16	0-55/16	0-55/16	0-55/16	30.0 91
100		*									97
106	30.0	*	0-59/17	0-59/17	0-59/17	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	22.5 103
112	37.5	*	1-04/19	1-04/19	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-05/19	15.0 109
118		*									115
124	45.0	*	1-09/20	1-09/20	1-09/20	1-09/20	1-09/20	1-09/20	1-10/21	1-10/21	07.5 121
	52.5	*	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	1-14/22	1-14/22	1-15/22	00.0
		*									
		*									
71	00.0	*	1-18/23	1-18/23	1-18/23	1-19/23	1-19/23	1-19/23	1-19/23	1-19/23	52.5 66
77	07.5	*	1-23/25	1-23/25	1-23/25	1-23/25	1-24/25	1-24/25	1-24/25	1-24/25	45.0 72
83		*									78
89	15.0	*	1-27/26	1-28/26	1-28/26	1-28/26	1-28/26	1-29/26	1-29/26	1-29/26	37.5 84
95	22.5	*	1-32/27	1-32/27	1-33/28	1-33/28	1-33/28	1-33/28	1-34/28	1-34/28	30.0 90
101		*									96
107	30.0	*	1-37/29	1-37/29	1-37/29	1-38/29	1-38/29	1-38/29	1-38/29	1-39/29	22.5 102
113	37.5	*	1-42/30	1-42/30	1-42/30	1-42/30	1-43/31	1-43/31	1-43/31	1-44/31	15.0 108
119		*									114
125	45.0	*	1-46/31	1-47/32	1-47/32	1-47/32	1-47/32	1-48/32	1-48/32	1-48/32	07.5 120
	52.5	*	1-51/33	1-51/33	1-52/33	1-52/33	1-52/33	1-53/33	1-53/33	1-53/33	00.0
		*									
		*	39-00.0	39-07.5	39-15.0	39-22.5	39-30.0	39-37.5	39-45.0	39-52.5	

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		LATITUDE								LONGITUDE		
GRID DEC=WEST		DEGREES-MINUTES								GRID DEC=EAST		
DEGREES	MINUTES									MINUTES	DEGREES	
69	00.0	*	40-00.0	40-07.5	40-15.0	40-22.5	40-30.0	40-37.5	40-45.0	40-52.5	*	
75	07.5	*	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	0-02/01	*	52.5 68
81		*	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	0-07/02	*	45.0 74
87	15.0	*	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	*	37.5 86
93	22.5	*	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	*	30.0 92
99		*									*	98
105	30.0	*	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	*	22.5 104
111	37.5	*	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	*	15.0 110
117		*									*	116
123	45.0	*	0-31/09	0-31/09	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	*	07.5 122
	52.5	*	0-36/11	0-36/11	0-36/11	0-36/11	0-37/11	0-37/11	0-37/11	0-37/11	*	00.0
		*									*	
		*									*	
70	00.0	*	0-41/12	0-41/12	0-41/12	0-41/12	0-41/12	0-42/12	0-42/12	0-42/12	*	52.5 67
76	07.5	*	0-46/14	0-46/14	0-46/14	0-46/14	0-46/14	0-46/14	0-47/14	0-47/14	*	45.0 73
82		*									*	79
88	15.0	*	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	*	37.5 85
94	22.5	*	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	0-57/17	*	30.0 91
100		*									*	97
106	30.0	*	1-00/18	1-00/18	1-01/18	1-01/18	1-01/18	1-01/18	1-01/18	1-01/18	*	22.5 103
112	37.5	*	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	*	15.0 109
118		*									*	115
124	45.0	*	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	*	07.5 121
	52.5	*	1-15/22	1-15/22	1-15/22	1-15/22	1-16/23	1-16/23	1-16/23	1-16/23	*	00.0
		*									*	
		*									*	
71	00.0	*	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	1-21/24	1-21/24	*	52.5 66
77	07.5	*	1-24/25	1-25/25	1-25/25	1-25/25	1-25/25	1-26/25	1-26/25	1-26/25	*	45.0 72
83		*									*	78
89	15.0	*	1-29/26	1-30/27	1-30/27	1-30/27	1-30/27	1-30/27	1-31/27	1-31/27	*	37.5 84
95	22.5	*	1-34/28	1-34/28	1-35/28	1-35/28	1-35/28	1-35/28	1-36/28	1-36/28	*	30.0 90
101		*									*	96
107	30.0	*	1-39/29	1-39/29	1-39/29	1-40/30	1-40/30	1-40/30	1-40/30	1-41/30	*	22.5 102
113	37.5	*	1-44/31	1-44/31	1-44/31	1-45/31	1-45/31	1-45/31	1-45/31	1-46/31	*	15.0 108
119		*									*	114
125	45.0	*	1-49/32	1-49/32	1-49/32	1-49/32	1-50/33	1-50/33	1-50/33	1-51/33	*	07.5 120
	52.5	*	1-53/33	1-54/34	1-54/34	1-54/34	1-55/34	1-55/34	1-55/34	1-55/34	*	00.0
		*									*	
		*	40-00.0	40-07.5	40-15.0	40-22.5	40-30.0	40-37.5	40-45.0	40-52.5	*	

LONGITUDE		* GRID DEC=WEST		* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* GRID DEC=EAST	
DEGREES MINUTES		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-02/01		* 0-03/01		* 0-03/01		* MINUTES DEGREES	
69	00.0	* 0-07/02		* 0-07/02		* 0-07/02		* 0-07/02		* 0-07/02		* 0-07/02		* 0-07/02		* 0-08/02		* 0-08/02		* 52.5 68	
75	07.5	* 0-12/04		* 0-12/04		* 0-12/04		* 0-12/04		* 0-12/04		* 0-12/04		* 0-12/04		* 0-13/04		* 0-13/04		* 45.0 74	
81		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-17/05		* 0-18/05		* 0-18/05		* 37.5 86	
87	15.0	* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 0-22/07		* 0-23/07		* 0-23/07		* 30.0 92	
93	22.5	* 0-27/08		* 0-27/08		* 0-27/08		* 0-27/08		* 0-27/08		* 0-27/08		* 0-27/08		* 0-28/08		* 0-28/08		* 22.5 104	
99		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-32/09		* 0-33/10		* 0-33/10		* 15.0 110	
105	30.0	* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-37/11		* 0-38/11		* 0-38/11		* 07.5 116	
111	37.5	* 0-42/12		* 0-42/12		* 0-42/12		* 0-42/12		* 0-42/12		* 0-42/12		* 0-42/12		* 0-43/13		* 0-43/13		* 00.0 122	
117		* 0-47/14		* 0-47/14		* 0-47/14		* 0-47/14		* 0-47/14		* 0-47/14		* 0-47/14		* 0-48/14		* 0-48/14		* 52.5 67	
123	45.0	* 0-52/15		* 0-52/15		* 0-52/15		* 0-52/15		* 0-52/15		* 0-52/15		* 0-52/15		* 0-53/16		* 0-53/16		* 45.0 73	
	52.5	* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-57/17		* 0-58/17		* 0-58/17		* 37.5 85	
70	00.0	* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-02/18		* 1-03/19		* 1-03/19		* 30.0 91	
76	07.5	* 1-07/20		* 1-07/20		* 1-07/20		* 1-07/20		* 1-07/20		* 1-07/20		* 1-07/20		* 1-08/20		* 1-08/20		* 22.5 103	
82		* 1-11/21		* 1-11/21		* 1-11/21		* 1-11/21		* 1-11/21		* 1-11/21		* 1-11/21		* 1-13/22		* 1-13/22		* 15.0 109	
88	15.0	* 1-16/23		* 1-16/23		* 1-16/23		* 1-16/23		* 1-16/23		* 1-16/23		* 1-16/23		* 1-18/23		* 1-18/23		* 07.5 121	
94	22.5	* 1-21/24		* 1-21/24		* 1-21/24		* 1-21/24		* 1-21/24		* 1-21/24		* 1-21/24		* 1-23/25		* 1-23/25		* 00.0	
100		* 1-26/25		* 1-26/25		* 1-26/25		* 1-26/25		* 1-26/25		* 1-26/25		* 1-26/25		* 1-28/26		* 1-28/26		* 52.5 66	
106	30.0	* 1-31/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-31/27		* 1-33/28		* 1-33/28		* 45.0 72	
112	37.5	* 1-36/28		* 1-36/28		* 1-36/28		* 1-36/28		* 1-36/28		* 1-36/28		* 1-36/28		* 1-38/29		* 1-38/29		* 37.5 84	
118		* 1-41/30		* 1-41/30		* 1-41/30		* 1-41/30		* 1-41/30		* 1-41/30		* 1-41/30		* 1-43/31		* 1-43/31		* 30.0 90	
124	45.0	* 1-46/31		* 1-46/31		* 1-46/31		* 1-46/31		* 1-46/31		* 1-46/31		* 1-46/31		* 1-48/32		* 1-48/32		* 22.5 102	
	52.5	* 1-51/33		* 1-51/33		* 1-51/33		* 1-51/33		* 1-51/33		* 1-51/33		* 1-51/33		* 1-53/33		* 1-53/33		* 15.0 108	
71	00.0	* 1-56/34		* 1-56/34		* 1-56/34		* 1-56/34		* 1-56/34		* 1-56/34		* 1-56/34		* 1-58/35		* 1-58/35		* 07.5 114	
77	07.5	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 00.0 120	
83		* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 52.5 66	
89	15.0	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 45.0 72	
95	22.5	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 37.5 84	
101		* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 30.0 90	
107	30.0	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 22.5 102	
113	37.5	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 15.0 108	
119		* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 07.5 114	
125	45.0	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 00.0 120	
	52.5	* 41-00.0		* 41-07.5		* 41-15.0		* 41-22.5		* 41-30.0		* 41-37.5		* 41-45.0		* 41-52.5		* 41-52.5		* 52.5 66	

LONGITUDE		*	LATITUDE DEGREES-MINUTES								*	LONGITUDE	
GRID DEC=WEST												GRID DEC=EAST	
DEGREES MINUTES		*	42-00.0	42-07.5	42-15.0	42-22.5	42-30.0	42-37.5	42-45.0	42-52.5	*	MINUTES DEGREES	
69	00.0	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	*	52.5 68	
75	07.5	*	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	*	45.0 74	
81		*									*	80	
87	15.0	*	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	*	37.5 86	
93	22.5	*	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	*	30.0 92	
99		*									*	98	
105	30.0	*	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	*	22.5 104	
111	37.5	*	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	*	15.0 110	
117		*									*	116	
123	45.0	*	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	*	07.5 122	
	52.5	*	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	*	00.0	
		*									*		
		*									*		
70	00.0	*	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	*	52.5 67	
76	07.5	*	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-49/15	*	45.0 73	
82		*									*	79	
88	15.0	*	0-53/16	0-53/16	0-53/16	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	*	37.5 85	
94	22.5	*	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-59/17	0-59/17	*	30.0 91	
100		*									*	97	
106	30.0	*	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	1-04/19	1-04/19	*	22.5 103	
112	37.5	*	1-08/20	1-08/20	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	1-09/20	*	15.0 109	
118		*									*	115	
124	45.0	*	1-13/22	1-13/22	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	1-14/22	*	07.5 121	
	52.5	*	1-18/23	1-18/23	1-18/23	1-18/23	1-19/23	1-19/23	1-19/23	1-19/23	*	00.0	
		*									*		
		*									*		
71	00.0	*	1-23/25	1-23/25	1-23/25	1-24/25	1-24/25	1-24/25	1-24/25	1-24/25	*	52.5 66	
77	07.5	*	1-28/26	1-28/26	1-28/26	1-29/26	1-29/26	1-29/26	1-29/26	1-29/26	*	45.0 72	
83		*									*	78	
89	15.0	*	1-33/28	1-33/28	1-33/28	1-34/28	1-34/28	1-34/28	1-34/28	1-35/28	*	37.5 84	
95	22.5	*	1-38/29	1-38/29	1-38/29	1-39/29	1-39/29	1-39/29	1-39/29	1-40/30	*	30.0 90	
101		*									*	96	
107	30.0	*	1-43/31	1-43/31	1-44/31	1-44/31	1-44/31	1-44/31	1-44/31	1-45/31	*	22.5 102	
113	37.5	*	1-48/32	1-48/32	1-49/32	1-49/32	1-49/32	1-49/32	1-50/33	1-50/33	*	15.0 108	
119		*									*	114	
125	45.0	*	1-53/33	1-53/33	1-54/34	1-54/34	1-54/34	1-54/34	1-55/34	1-55/34	*	07.5 120	
	52.5	*	1-58/35	1-58/35	1-59/35	1-59/35	1-59/35	2-00/36	2-00/36	2-00/36	*	00.0	
		*									*		
		*	42-00.0	42-07.5	42-15.0	42-22.5	42-30.0	42-37.5	42-45.0	42-52.5	*		
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE TABULATED BY THE SE CORNER COORDINATES													

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		*	LATITUDE DEGREES-MINUTES								*	LONGITUDE	
GRID DEC=WEST												GRID DEC=EAST	
DEGREES MINUTES		*	43-00.0	43-07.5	43-15.0	43-22.5	43-30.0	43-37.5	43-45.0	43-52.5	*	MINUTES DEGREES	
69	00.0	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	*	52.5 68	
75	07.5	*	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	*	45.0 74	
81		*									*	80	
87	15.0	*	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	*	37.5 86	
93	22.5	*	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	*	30.0 92	
99		*									*	98	
105	30.0	*	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	*	22.5 104	
111	37.5	*	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	*	15.0 110	
117		*									*	116	
123	45.0	*	0-33/10	0-33/10	0-33/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	*	07.5 122	
	52.5	*	0-38/11	0-38/11	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	*	00.0	
		*									*		
		*									*		
70	00.0	*	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	*	52.5 67	
76	07.5	*	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	*	45.0 73	
82		*									*	79	
88	15.0	*	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	0-55/16	0-55/16	*	37.5 85	
94	22.5	*	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	1-00/18	1-00/18	1-00/18	*	30.0 91	
100		*									*	97	
106	30.0	*	1-04/19	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	*	22.5 103	
112	37.5	*	1-09/20	1-09/20	1-09/20	1-10/21	1-10/21	1-10/21	1-10/21	1-10/21	*	15.0 109	
118		*									*	115	
124	45.0	*	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	1-15/22	1-15/22	1-15/22	*	07.5 121	
	52.5	*	1-19/23	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	*	00.0	
		*									*		
		*									*		
71	00.0	*	1-25/25	1-25/25	1-25/25	1-25/25	1-25/25	1-25/25	1-26/25	1-26/25	*	52.5 66	
77	07.5	*	1-30/27	1-30/27	1-30/27	1-30/27	1-30/27	1-31/27	1-31/27	1-31/27	*	45.0 72	
83		*									*	78	
89	15.0	*	1-35/28	1-35/28	1-35/28	1-35/28	1-36/28	1-36/28	1-36/28	1-36/28	*	37.5 84	
95	22.5	*	1-40/30	1-40/30	1-40/30	1-41/30	1-41/30	1-41/30	1-41/30	1-41/30	*	30.0 90	
101		*									*	96	
107	30.0	*	1-45/31	1-45/31	1-45/31	1-46/31	1-46/31	1-46/31	1-46/31	1-47/32	*	22.5 102	
113	37.5	*	1-50/33	1-50/33	1-51/33	1-51/33	1-51/33	1-51/33	1-52/33	1-52/33	*	15.0 108	
119		*									*	114	
125	45.0	*	1-55/34	1-56/34	1-56/34	1-56/34	1-56/34	1-57/35	1-57/35	1-57/35	*	07.5 120	
	52.5	*	2-00/36	2-01/36	2-01/36	2-01/36	2-01/36	2-02/36	2-02/36	2-02/36	*	00.0	
		*									*		
		*	43-00.0	43-07.5	43-15.0	43-22.5	43-30.0	43-37.5	43-45.0	43-52.5	*		

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		GRID DEC=WEST		LATITUDE		DEGREES-MINUTES		LONGITUDE		GRID DEC=EAST	
DEGREES		MINUTES		DEGREES		MINUTES		DEGREES		MINUTES	
69	00.0	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01
75	07.5	*	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02
81		*									
87	15.0	*	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04
93	22.5	*	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-19/06	0-19/06	0-19/06
99		*									
105	30.0	*	0-23/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07
111	37.5	*	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09
117		*									
123	45.0	*	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10
	52.5	*	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-40/12	0-40/12	0-40/12	0-40/12
		*									
		*									
70	00.0	*	0-44/13	0-44/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13
76	07.5	*	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15
82		*									
88	15.0	*	0-55/16	0-55/16	0-55/16	0-55/16	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17
94	22.5	*	1-00/18	1-00/18	1-00/18	1-00/18	1-01/18	1-01/18	1-01/18	1-01/18	1-01/18
100		*									
106	30.0	*	1-05/19	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20
112	37.5	*	1-10/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	1-12/21	1-12/21
118		*									
124	45.0	*	1-16/23	1-16/23	1-16/23	1-16/23	1-16/23	1-16/23	1-17/23	1-17/23	1-17/23
	52.5	*	1-21/24	1-21/24	1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-22/24	1-22/24
		*									
		*									
		*									
71	00.0	*	1-26/25	1-26/25	1-26/25	1-27/26	1-27/26	1-27/26	1-27/26	1-27/26	1-27/26
77	07.5	*	1-31/27	1-31/27	1-32/27	1-32/27	1-32/27	1-32/27	1-33/28	1-33/28	1-33/28
83		*									
89	15.0	*	1-36/28	1-37/29	1-37/29	1-37/29	1-37/29	1-38/29	1-38/29	1-38/29	1-38/29
95	22.5	*	1-42/30	1-42/30	1-42/30	1-42/30	1-43/31	1-43/31	1-43/31	1-43/31	1-43/31
101		*									
107	30.0	*	1-47/32	1-47/32	1-47/32	1-48/32	1-48/32	1-48/32	1-48/32	1-49/32	1-49/32
113	37.5	*	1-52/33	1-52/33	1-53/33	1-53/33	1-53/33	1-53/33	1-54/34	1-54/34	1-54/34
119		*									
125	45.0	*	1-57/35	1-58/35	1-58/35	1-58/35	1-58/35	1-59/35	1-59/35	1-59/35	1-59/35
	52.5	*	2-03/36	2-03/36	2-03/36	2-03/36	2-04/37	2-04/37	2-04/37	2-05/37	2-05/37
		*									
		*									
		*	44-00.0	44-07.5	44-15.0	44-22.5	44-30.0	44-37.5	44-45.0	44-52.5	44-52.5

LATITUDE DEGREES-MINUTES
 * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
 TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		GRID DEC=WEST		LATITUDE		DEGREES-MINUTES		LONGITUDE		GRID DEC=EAST	

LONGITUDE		LATITUDE								LONGITUDE		
GRID DEC=WEST		DEGREES-MINUTES								GRID DEC=EAST		
DEGREES	MINUTES									MINUTES	DEGREES	
69	00.0	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	*	52.5	68
75	07.5	*	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	*	45.0	74
81		*								*		80
87	15.0	*	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	*	37.5	86
93	22.5	*	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	*	30.0	92
99		*								*		98
105	30.0	*	0-24/07	0-24/07	0-24/07	0-24/07	0-25/07	0-25/07	0-25/07	*	22.5	104
111	37.5	*	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	*	15.0	110
117		*								*		116
123	45.0	*	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-36/11	*	07.5	122
	52.5	*	0-41/12	0-41/12	0-41/12	0-41/12	0-41/12	0-41/12	0-41/12	*	00.0	
		*								*		
		*								*		
70	00.0	*	0-46/14	0-46/14	0-46/14	0-46/14	0-46/14	0-46/14	0-47/14	*	52.5	67
76	07.5	*	0-51/15	0-51/15	0-52/15	0-52/15	0-52/15	0-52/15	0-52/15	*	45.0	73
82		*								*		79
88	15.0	*	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-58/17	*	37.5	85
94	22.5	*	1-02/18	1-02/18	1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	*	30.0	91
100		*								*		97
106	30.0	*	1-08/20	1-08/20	1-08/20	1-08/20	1-08/20	1-08/20	1-08/20	*	22.5	103
112	37.5	*	1-13/22	1-13/22	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	*	15.0	109
118		*								*		115
124	45.0	*	1-18/23	1-18/23	1-19/23	1-19/23	1-19/23	1-19/23	1-19/23	*	07.5	121
	52.5	*	1-24/25	1-24/25	1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	*	00.0	
		*								*		
		*								*		
71	00.0	*	1-29/26	1-29/26	1-29/26	1-30/27	1-30/27	1-30/27	1-30/27	*	52.5	66
77	07.5	*	1-35/28	1-35/28	1-35/28	1-35/28	1-35/28	1-36/28	1-36/28	*	45.0	72
83		*								*		78
89	15.0	*	1-40/30	1-40/30	1-40/30	1-41/30	1-41/30	1-41/30	1-41/30	*	37.5	84
95	22.5	*	1-45/31	1-46/31	1-46/31	1-46/31	1-46/31	1-46/31	1-47/32	*	30.0	90
101		*								*		96
107	30.0	*	1-51/33	1-51/33	1-51/33	1-51/33	1-52/33	1-52/33	1-52/33	*	22.5	102
113	37.5	*	1-56/34	1-56/34	1-57/35	1-57/35	1-57/35	1-57/35	1-58/35	*	15.0	108
119		*								*		114
125	45.0	*	2-02/36	2-02/36	2-02/36	2-02/36	2-03/36	2-03/36	2-03/36	*	07.5	120
	52.5	*	2-07/38	2-07/38	2-07/38	2-08/38	2-08/38	2-08/38	2-09/38	*	00.0	
		*								*		
		*	46-00.0	46-07.5	46-15.0	46-22.5	46-30.0	46-37.5	46-45.0	*		
		*								*		
		*								*		
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE												
TABULATED BY THE SE CORNER COORDINATES												

LONGITUDE		LATITUDE								LONGITUDE	
GRID DEC=WEST		DEGREES-MINUTES								GRID DEC=EAST	
DEGREES	MINUTES									MINUTES	DEGREES
		47-00.0	47-07.5	47-15.0	47-22.5	47-30.0	47-37.5	47-45.0	47-52.5		
69	00.0	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	52.5	68
75	07.5	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	45.0	74
81											80
87	15.0	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	37.5	86
93	22.5	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	30.0	92
99											98
105	30.0	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	22.5	104
111	37.5	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-31/09	0-31/09	0-31/09	15.0	110
117											116
123	45.0	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	07.5	122
	52.5	0-41/12	0-41/12	0-41/12	0-41/12	0-42/12	0-42/12	0-42/12	0-42/12	00.0	
70	00.0	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	52.5	67
76	07.5	0-52/15	0-52/15	0-52/15	0-52/15	0-53/16	0-53/16	0-53/16	0-53/16	45.0	73
82											79
88	15.0	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	37.5	85
94	22.5	1-03/19	1-03/19	1-03/19	1-04/19	1-04/19	1-04/19	1-04/19	1-04/19	30.0	91
100											97
106	30.0	1-09/20	1-09/20	1-09/20	1-09/20	1-09/20	1-09/20	1-09/20	1-10/21	22.5	103
112	37.5	1-14/22	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	1-15/22	1-15/22	15.0	109
118											115
124	45.0	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	1-21/24	07.5	121
	52.5	1-25/25	1-25/25	1-25/25	1-26/25	1-26/25	1-26/25	1-26/25	1-26/25	00.0	
71	00.0	1-31/27	1-31/27	1-31/27	1-31/27	1-31/27	1-32/27	1-32/27	1-32/27	52.5	66
77	07.5	1-36/28	1-36/28	1-36/28	1-37/29	1-37/29	1-37/29	1-37/29	1-37/29	45.0	72
83											78
89	15.0	1-42/30	1-42/30	1-42/30	1-42/30	1-42/30	1-43/31	1-43/31	1-43/31	37.5	84
95	22.5	1-47/32	1-47/32	1-48/32	1-48/32	1-48/32	1-48/32	1-48/32	1-49/32	30.0	90
101											96
107	30.0	1-53/33	1-53/33	1-53/33	1-53/33	1-53/33	1-54/34	1-54/34	1-54/34	22.5	102
113	37.5	1-58/35	1-58/35	1-59/35	1-59/35	1-59/35	1-59/35	1-59/35	2-00/36	15.0	108
119											114
125	45.0	2-04/37	2-04/37	2-04/37	2-04/37	2-05/37	2-05/37	2-05/37	2-05/37	07.5	120
	52.5	2-09/38	2-09/38	2-10/39	2-10/39	2-10/39	2-10/39	2-11/39	2-11/39	00.0	
		47-00.0	47-07.5	47-15.0	47-22.5	47-30.0	47-37.5	47-45.0	47-52.5		
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE											
* TABULATED BY THE SE CORNER COORDINATES											

LONGITUDE		*	LATITUDE DEGREES-MINUTES								LONGITUDE	
GRID DEC=WEST											GRID DEC=EAST	
DEGREES MINUTES		*									MINUTES DEGREES	
69	00.0	*	48-00.0	48-07.5	48-15.0	48-22.5	48-30.0	48-37.5	48-45.0	48-52.5	*	52.5 68
75	07.5	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	*	45.0 74
81		*	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	0-08/02	*	80
87	15.0	*	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	*	37.5 86
93	22.5	*	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	*	30.0 92
99		*									*	98
105	30.0	*	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	*	22.5 104
111	37.5	*	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	*	15.0 110
117		*									*	116
123	45.0	*	0-36/11	0-36/11	0-36/11	0-36/11	0-37/11	0-37/11	0-37/11	0-37/11	*	07.5 122
	52.5	*	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	*	00.0
		*									*	
		*									*	
		*									*	
70	00.0	*	0-47/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	*	52.5 67
76	07.5	*	0-53/16	0-53/16	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	*	45.0 73
82		*									*	79
88	15.0	*	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	*	37.5 85
94	22.5	*	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	1-05/19	*	30.0 91
100		*									*	97
106	30.0	*	1-10/21	1-10/21	1-10/21	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	*	22.5 103
112	37.5	*	1-15/22	1-15/22	1-16/23	1-16/23	1-16/23	1-16/23	1-16/23	1-16/23	*	15.0 109
118		*									*	115
124	45.0	*	1-21/24	1-21/24	1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-22/24	*	07.5 121
	52.5	*	1-26/25	1-27/26	1-27/26	1-27/26	1-27/26	1-27/26	1-27/26	1-28/26	*	00.0
		*									*	
		*									*	
		*									*	
71	00.0	*	1-32/27	1-32/27	1-32/27	1-33/28	1-33/28	1-33/28	1-33/28	1-33/28	*	52.5 66
77	07.5	*	1-38/29	1-38/29	1-38/29	1-38/29	1-38/29	1-39/29	1-39/29	1-39/29	*	45.0 72
83		*									*	78
89	15.0	*	1-43/31	1-43/31	1-44/31	1-44/31	1-44/31	1-44/31	1-44/31	1-45/31	*	37.5 84
95	22.5	*	1-49/32	1-49/32	1-49/32	1-49/32	1-50/33	1-50/33	1-50/33	1-50/33	*	30.0 90
101		*									*	96
107	30.0	*	1-54/34	1-55/34	1-55/34	1-55/34	1-55/34	1-55/34	1-56/34	1-56/34	*	22.5 102
113	37.5	*	2-00/36	2-00/36	2-00/36	2-01/36	2-01/36	2-01/36	2-01/36	2-02/36	*	15.0 108
119		*									*	114
125	45.0	*	2-06/37	2-06/37	2-06/37	2-06/37	2-07/38	2-07/38	2-07/38	2-07/38	*	07.5 120
	52.5	*	2-11/39	2-11/39	2-12/39	2-12/39	2-12/39	2-12/39	2-13/39	2-13/39	*	00.0
		*									*	
		*	48-00.0	48-07.5	48-15.0	48-22.5	48-30.0	48-37.5	48-45.0	48-52.5	*	
		*									*	
		*									*	
		*									*	

* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE
TABULATED BY THE SE CORNER COORDINATES

LONGITUDE		*	LATITUDE DEGREES-MINUTES								*	LONGITUDE	
GRID DEC=WEST												GRID DEC=EAST	
DEGREES MINUTES			49-00.0	49-07.5	49-15.0	49-22.5	49-30.0	49-37.5	49-45.0	49-52.5		MINUTES DEGREES	
69	00.0	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	*	52.5	68
75	07.5	*	0-08/02	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	*	45.0	74
81		*									*		80
87	15.0	*	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	*	37.5	86
93	22.5	*	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	*	30.0	92
99		*									*		98
105	30.0	*	0-25/07	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	*	22.5	104
111	37.5	*	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-32/09	0-32/09	*	15.0	110
117		*									*		116
123	45.0	*	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	*	07.5	122
	52.5	*	0-42/12	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	*	00.0	
		*									*		
		*									*		
70	00.0	*	0-48/14	0-48/14	0-48/14	0-48/14	0-49/15	0-49/15	0-49/15	0-49/15	*	52.5	67
76	07.5	*	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	0-55/16	*	45.0	73
82		*									*		79
88	15.0	*	0-59/17	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	*	37.5	85
94	22.5	*	1-05/19	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	*	30.0	91
100		*									*		97
106	30.0	*	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	1-12/21	1-12/21	*	22.5	103
112	37.5	*	1-16/23	1-17/23	1-17/23	1-17/23	1-17/23	1-17/23	1-17/23	1-17/23	*	15.0	109
118		*									*		115
124	45.0	*	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	1-23/25	1-23/25	1-23/25	*	07.5	121
	52.5	*	1-28/26	1-28/26	1-28/26	1-28/26	1-28/26	1-29/26	1-29/26	1-29/26	*	00.0	
		*									*		
		*									*		
71	00.0	*	1-33/28	1-34/28	1-34/28	1-34/28	1-34/28	1-34/28	1-35/28	1-35/28	*	52.5	66
77	07.5	*	1-39/29	1-39/29	1-40/30	1-40/30	1-40/30	1-40/30	1-40/30	1-40/30	*	45.0	72
83		*									*		78
89	15.0	*	1-45/31	1-45/31	1-45/31	1-45/31	1-46/31	1-46/31	1-46/31	1-46/31	*	37.5	84
95	22.5	*	1-50/33	1-51/33	1-51/33	1-51/33	1-51/33	1-52/33	1-52/33	1-52/33	*	30.0	90
101		*									*		96
107	30.0	*	1-56/34	1-56/34	1-57/35	1-57/35	1-57/35	1-57/35	1-57/35	1-58/35	*	22.5	102
113	37.5	*	2-02/36	2-02/36	2-02/36	2-03/36	2-03/36	2-03/36	2-03/36	2-03/36	*	15.0	108
119		*									*		114
125	45.0	*	2-07/38	2-08/38	2-08/38	2-08/38	2-08/38	2-09/38	2-09/38	2-09/38	*	07.5	120
	52.5	*	2-13/39	2-13/39	2-14/40	2-14/40	2-14/40	2-14/40	2-15/40	2-15/40	*	00.0	
		*									*		
		*	49-00.0	49-07.5	49-15.0	49-22.5	49-30.0	49-37.5	49-45.0	49-52.5	*		
* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-7.5MINUTE QUADRANGLE													
* TABULATED BY THE SE CORNER COORDINATES													

SECTION II - 7.5 X 15 MINUTE QUADRANGLES

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE				
GRID DEC=WEST			24-00.0	24-07.5	24-15.0	24-22.5	24-30.0	24-37.5	24-45.0	24-52.5	GRID DEC=EAST				
DEGREES	MIN										MIN	DEGREES			
69	99	00	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	45	68	98		
75	105	15	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	30	74	104		
81	111											80	110		
87	117	30	0-15/04	0-15/04	0-15/04	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	15	86	116		
93	123	45	0-21/06	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	00	92	122		
70	100	00	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	45	67	97		
76	106	15	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-35/10	0-35/10	30	73	103		
82	112											79	109		
88	118	30	0-40/12	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	0-41/12	0-41/12	15	85	115		
94	124	45	0-46/14	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	00	91	121		
71	101	00	0-52/15	0-52/15	0-52/15	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	45	66	96		
77	107	15	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	1-00/18	1-00/18	1-00/18	30	72	102		
83	113											78	108		
89	119	30	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	15	84	114		
95	125	45	1-10/21	1-11/21	1-11/21	1-11/21	1-12/21	1-12/21	1-12/21	1-13/22	00	90	120		
			24-00.0	24-07.5	24-15.0	24-22.5	24-30.0	24-37.5	24-45.0	24-52.5					
			LATITUDE DEGREES-MINUTES												

DEGREES			25-00.0	25-07.5	25-15.0	25-22.5	25-30.0	25-37.5	25-45.0	25-52.5	MIN DEGREES				
69	99	00	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	45	68	98		
75	105	15	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	30	74	104		
81	111											80	110		
87	117	30	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	15	86	116		
93	123	45	0-22/07	0-22/07	0-22/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	00	92	122		
70	100	00	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-30/09	45	67	97		
76	106	15	0-35/10	0-35/10	0-35/10	0-35/10	0-36/11	0-36/11	0-36/11	0-36/11	30	73	103		
82	112											79	109		
88	118	30	0-41/12	0-41/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-43/13	15	85	115		
94	124	45	0-48/14	0-48/14	0-48/14	0-48/14	0-49/15	0-49/15	0-49/15	0-49/15	00	91	121		
71	101	00	0-54/16	0-54/16	0-55/16	0-55/16	0-55/16	0-55/16	0-56/17	0-56/17	45	66	96		
77	107	15	1-00/18	1-01/18	1-01/18	1-01/18	1-01/18	1-02/18	1-02/18	1-02/18	30	72	102		
83	113											78	108		
89	119	30	1-07/20	1-07/20	1-07/20	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	15	84	114		
95	125	45	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	00	90	120		
			25-00.0	25-07.5	25-15.0	25-22.5	25-30.0	25-37.5	25-45.0	25-52.5					
			LATITUDE DEGREES-MINUTES												
DEGREES			*****												
MIN			*****												
GRID DEC=WEST			* GRID DECLINATION IN DEGREES-MINUTES/MILS								FOR CENTER OF 7.5-15MINUTE QUADRANGLE				
LONGITUDE			* TABULATED BY THE SE CORNER COORDINATES								* GRID DEC=EAST				
											* LONGITUDE				

GRID DEC=WEST			LATITUDE DEGREES-MINUTES								GRID DEC=EAST		
DEGREES		MIN	*	26-00.0	26-07.5	26-15.0	26-22.5	26-30.0	26-37.5	26-45.0	26-52.5	* MIN	DEGREES
69	99	00	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	*	45
75	105	15	*	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	*	30
81	111		*									*	
87	117	30	*	0-16/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	*	15
93	123	45	*	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	0-24/07	0-24/07	0-24/07	*	00
			*									*	
			*									*	
70	100	00	*	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-31/09	*	45
76	106	15	*	0-36/11	0-36/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	*	30
82	112		*									*	
88	118	30	*	0-43/13	0-43/13	0-43/13	0-43/13	0-44/13	0-44/13	0-44/13	0-44/13	*	15
94	124	45	*	0-49/15	0-50/15	0-50/15	0-50/15	0-50/15	0-51/15	0-51/15	0-51/15	*	00
			*									*	
			*									*	
71	101	00	*	0-56/17	0-56/17	0-57/17	0-57/17	0-57/17	0-57/17	0-58/17	0-58/17	*	45
77	107	15	*	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	1-04/19	1-04/19	1-05/19	*	30
83	113		*									*	
89	119	30	*	1-09/20	1-10/21	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	*	15
95	125	45	*	1-16/23	1-16/23	1-16/23	1-17/23	1-17/23	1-17/23	1-18/23	1-18/23	*	00

			LATITUDE DEGREES-MINUTES										
DEGREES		MIN	*	26-00.0	26-07.5	26-15.0	26-22.5	26-30.0	26-37.5	26-45.0	26-52.5	* MIN	DEGREES
69	99	00	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-04/01	*	45
75	105	15	*	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-11/03	*	30
81	111		*									*	
87	117	30	*	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-18/05	*	15
93	123	45	*	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-25/07	*	00
			*									*	
			*									*	
70	100	00	*	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-31/09	0-32/09	*	45
76	106	15	*	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-39/12	*	30
82	112		*									*	
88	118	30	*	0-44/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-46/14	*	15
94	124	45	*	0-51/15	0-51/15	0-52/15	0-52/15	0-52/15	0-52/15	0-52/15	0-53/16	*	00
			*									*	
			*									*	
71	101	00	*	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	1-00/18	*	45
77	107	15	*	1-05/19	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	1-06/20	1-07/20	*	30
83	113		*									*	
89	119	30	*	1-12/21	1-12/21	1-12/21	1-13/22	1-13/22	1-13/22	1-13/22	1-14/22	*	15
95	125	45	*	1-18/23	1-19/23	1-19/23	1-19/23	1-20/24	1-20/24	1-20/24	1-21/24	*	00

DEGREES MIN *
 GRID DEC=WEST * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-15MINUTE QUADRANGLE * MIN DEGREES
 LONGITUDE * TABULATED BY THE SE CORNER COORDINATES * LONGITUDE
 LATITUDE 26-27 7.5X15-MINUTE PG28

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE			
GRID DEC=WEST			28-00.0	28-07.5	28-15.0	28-22.5	28-30.0	28-37.5	28-45.0	28-52.5	GRID DEC=EAST			
DEGREES		MIN									MIN	DEGREES		
*														
*														
69	99	00	*	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	*	45	68	98
75	105	15	*	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	*	30	74	104
81	111		*								*		80	110
87	117	30	*	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	*	15	86	116
93	123	45	*	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	*	00	92	122
*														
*														
70	100	00	*	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	0-33/10	*	45	67	97
76	106	15	*	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-40/12	0-40/12	*	30	73	103
82	112		*								*		79	109
88	118	30	*	0-46/14	0-46/14	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	*	15	85	115
94	124	45	*	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	0-54/16	*	00	91	121
*														
*														
71	101	00	*	1-00/18	1-00/18	1-00/18	1-01/18	1-01/18	1-01/18	1-01/18	*	45	66	96
77	107	15	*	1-07/20	1-07/20	1-08/20	1-08/20	1-08/20	1-08/20	1-09/20	*	30	72	102
83	113		*								*		78	108
89	119	30	*	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	1-16/23	1-16/23	*	15	84	114
95	125	45	*	1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	*	00	90	120
*														
*														
			*	28-00.0	28-07.5	28-15.0	28-22.5	28-30.0	28-37.5	28-45.0	28-52.5			
			*	LATITUDE DEGREES-MINUTES										

DEGREES			*	29-00.0	29-07.5	29-15.0	29-22.5	29-30.0	29-37.5	29-45.0	29-52.5	*	MIN	DEGREES
*														
*														
69	99	00	*	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	*	45	68	98
75	105	15	*	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	*	30	74	104
81	111		*								*		80	110
87	117	30	*	0-18/05	0-18/05	0-18/05	0-18/05	0-19/06	0-19/06	0-19/06	*	15	86	116
93	123	45	*	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	*	00	92	122
*														
*														
70	100	00	*	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-34/10	*	45	67	97
76	106	15	*	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	0-41/12	0-41/12	*	30	73	103
82	112		*								*		79	109
88	118	30	*	0-47/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	*	15	85	115
94	124	45	*	0-55/16	0-55/16	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17	*	00	91	121
*														
*														
71	101	00	*	1-02/18	1-02/18	1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	*	45	66	96
77	107	15	*	1-09/20	1-10/21	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	*	30	72	102
83	113		*								*		78	108
89	119	30	*	1-17/23	1-17/23	1-17/23	1-17/23	1-18/23	1-18/23	1-18/23	*	15	84	114
95	125	45	*	1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	1-26/25	*	00	90	120
*														
*														
			*	29-00.0	29-07.5	29-15.0	29-22.5	29-30.0	29-37.5	29-45.0	29-52.5			
			*	LATITUDE DEGREES-MINUTES										

DEGREES			*									MIN DEGREES		

GRID DEC=WEST			*	* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-15MINUTE QUADRANGLE								* GRID DEC=EAST		
LONGITUDE			*	* TABULATED BY THE SE CORNER COORDINATES								* LONGITUDE		

GRID DEC=WEST			LATITUDE DEGREES-MINUTES								GRID DEC=EAST		
DEGREES	MIN	*	30-00.0	30-07.5	30-15.0	30-22.5	30-30.0	30-37.5	30-45.0	30-52.5	* MIN	DEGREES	

69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	* 45	68	98
75	105	15	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-12/04	0-12/04	* 30	74	104
81	111										*	80	110
87	117	30	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	* 15	86	116
93	123	45	0-26/08	0-26/08	0-26/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	* 00	92	122

70	100	00	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-35/10	0-35/10	* 45	67	97
76	106	15	0-41/12	0-41/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	0-42/12	* 30	73	103
82	112										*	79	109
88	118	30	0-49/15	0-49/15	0-49/15	0-49/15	0-50/15	0-50/15	0-50/15	0-50/15	* 15	85	115
94	124	45	0-56/17	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-58/17	0-58/17	* 00	91	121

71	101	00	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	1-06/20	* 45	66	96
77	107	15	1-11/21	1-12/21	1-12/21	1-12/21	1-12/21	1-13/22	1-13/22	1-13/22	* 30	72	102
83	113										*	78	108
89	119	30	1-19/23	1-19/23	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	1-21/24	* 15	84	114
95	125	45	1-26/25	1-27/26	1-27/26	1-27/26	1-28/26	1-28/26	1-28/26	1-29/26	* 00	90	120

			30-00.0	30-07.5	30-15.0	30-22.5	30-30.0	30-37.5	30-45.0	30-52.5			
			LATITUDE DEGREES-MINUTES										

DEGREES	MIN	*	31-00.0	31-07.5	31-15.0	31-22.5	31-30.0	31-37.5	31-45.0	31-52.5	* MIN	DEGREES	

69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	* 45	68	98
75	105	15	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	* 30	74	104
81	111										*	80	110
87	117	30	0-19/06	0-19/06	0-19/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	* 15	86	116
93	123	45	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-28/08	0-28/08	0-28/08	* 00	92	122

70	100	00	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-36/11	0-36/11	* 45	67	97
76	106	15	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-43/13	0-44/13	* 30	73	103
82	112										*	79	109
88	118	30	0-50/15	0-50/15	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	* 15	85	115
94	124	45	0-58/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	1-00/18	* 00	91	121

71	101	00	1-06/20	1-06/20	1-06/20	1-07/20	1-07/20	1-07/20	1-07/20	1-07/20	* 45	66	96
77	107	15	1-14/22	1-14/22	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	1-15/22	* 30	72	102
83	113										*	78	108
89	119	30	1-21/24	1-22/24	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	1-23/25	* 15	84	114
95	125	45	1-29/26	1-29/26	1-30/27	1-30/27	1-30/27	1-31/27	1-31/27	1-31/27	* 00	90	120

			31-00.0	31-07.5	31-15.0	31-22.5	31-30.0	31-37.5	31-45.0	31-52.5			
			LATITUDE DEGREES-MINUTES										

DEGREES	MIN	*									* MIN	DEGREES	

GRID DEC=WEST			* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-15MINUTE QUADRANGLE								* GRID DEC=EAST		
LONGITUDE			* TABULATED BY THE SE CORNER COORDINATES								* LONGITUDE		
												LATITUDE 30-31 7.5X15-MINUTE PG30	

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	32-00.0	32-07.5	32-15.0	32-22.5	32-30.0	32-37.5	32-45.0	32-52.5	GRID DEC=EAST	MIN	DEGREES
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	45	68	98
75	105	15	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	30	74	104
81	111											80	110
87	117	30	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	15	86	116
93	123	45	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	00	92	122
70	100	00	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-37/11	0-37/11	45	67	97
76	106	15	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-45/13	0-45/13	0-45/13	30	73	103
82	112											79	109
88	118	30	0-52/15	0-52/15	0-52/15	0-52/15	0-52/15	0-53/16	0-53/16	0-53/16	15	85	115
94	124	45	1-00/18	1-00/18	1-00/18	1-00/18	1-01/18	1-01/18	1-01/18	1-01/18	00	91	121
71	101	00	1-08/20	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	1-09/20	1-09/20	45	66	96
77	107	15	1-16/23	1-16/23	1-16/23	1-16/23	1-17/23	1-17/23	1-17/23	1-17/23	30	72	102
83	113											78	108
89	119	30	1-24/25	1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	1-26/25	15	84	114
95	125	45	1-32/27	1-32/27	1-32/27	1-33/28	1-33/28	1-33/28	1-33/28	1-34/28	00	90	120

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	32-00.0	32-07.5	32-15.0	32-22.5	32-30.0	32-37.5	32-45.0	32-52.5	GRID DEC=EAST	MIN	DEGREES
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	45	68	98
75	105	15	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-13/04	0-13/04	30	74	104
81	111											80	110
87	117	30	0-20/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	0-21/06	15	86	116
93	123	45	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	0-29/09	00	92	122
70	100	00	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-38/11	0-38/11	45	67	97
76	106	15	0-45/13	0-45/13	0-45/13	0-45/13	0-46/14	0-46/14	0-46/14	0-46/14	30	73	103
82	112											79	109
88	118	30	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	15	85	115
94	124	45	1-01/18	1-02/18	1-02/18	1-02/18	1-02/18	1-02/18	1-03/19	1-03/19	00	91	121
71	101	00	1-10/21	1-10/21	1-10/21	1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	45	66	96
77	107	15	1-18/23	1-18/23	1-18/23	1-19/23	1-19/23	1-19/23	1-19/23	1-20/24	30	72	102
83	113											78	108
89	119	30	1-26/25	1-26/25	1-27/26	1-27/26	1-27/26	1-27/26	1-28/26	1-28/26	15	84	114
95	125	45	1-34/28	1-34/28	1-35/28	1-35/28	1-35/28	1-36/28	1-36/28	1-36/28	00	90	120

DEGREES MIN * * * * *
 GRID DEC=WEST * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-15MINUTE QUADRANGLE
 LONGITUDE * TABULATED BY THE SE CORNER COORDINATES

LATITUDE 32-33 7.5X15-MINUTE PG31

LATITUDE 34-35 7.5X15-MINUTE PG32

[illegible]

[illegible]

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	40-00.0	40-07.5	40-15.0	40-22.5	40-30.0	40-37.5	40-45.0	40-52.5	GRID DEC=EAST	MIN	DEGREES
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-14/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	30	74	104
81	111											80	110
87	117	30	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-25/07	0-25/07	15	86	116
93	123	45	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	0-34/10	00	92	122
70	100	00	0-43/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	45	67	97
76	106	15	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	0-54/16	0-54/16	30	73	103
82	112											79	109
88	118	30	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	1-04/19	1-04/19	1-04/19	15	85	115
94	124	45	1-12/21	1-13/22	1-13/22	1-13/22	1-13/22	1-13/22	1-14/22	1-14/22	00	91	121
71	101	00	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	1-23/25	1-23/25	1-24/25	45	66	96
77	107	15	1-32/27	1-32/27	1-32/27	1-32/27	1-33/28	1-33/28	1-33/28	1-33/28	30	72	102
83	113											78	108
89	119	30	1-41/30	1-42/30	1-42/30	1-42/30	1-42/30	1-43/31	1-43/31	1-43/31	15	84	114
95	125	45	1-51/33	1-51/33	1-52/33	1-52/33	1-52/33	1-52/33	1-53/33	1-53/33	00	90	120
			40-00.0	40-07.5	40-15.0	40-22.5	40-30.0	40-37.5	40-45.0	40-52.5			

DEGREES		MIN	41-00.0	41-07.5	41-15.0	41-22.5	41-30.0	41-37.5	41-45.0	41-52.5	MIN	DEGREES	
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	30	74	104
81	111											80	110
87	117	30	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	15	86	116
93	123	45	0-34/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	0-35/10	00	92	122
70	100	00	0-44/13	0-44/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	0-45/13	45	67	97
76	106	15	0-54/16	0-54/16	0-54/16	0-55/16	0-55/16	0-55/16	0-55/16	0-55/16	30	73	103
82	112											79	109
88	118	30	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-05/19	1-05/19	1-05/19	15	85	115
94	124	45	1-14/22	1-14/22	1-14/22	1-14/22	1-15/22	1-15/22	1-15/22	1-15/22	00	91	121
71	101	00	1-24/25	1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	1-25/25	45	66	96
77	107	15	1-34/28	1-34/28	1-34/28	1-34/28	1-35/28	1-35/28	1-35/28	1-35/28	30	72	102
83	113											78	108
89	119	30	1-43/31	1-44/31	1-44/31	1-44/31	1-45/31	1-45/31	1-45/31	1-45/31	15	84	114
95	125	45	1-53/33	1-54/34	1-54/34	1-54/34	1-54/34	1-55/34	1-55/34	1-55/34	00	90	120
			41-00.0	41-07.5	41-15.0	41-22.5	41-30.0	41-37.5	41-45.0	41-52.5			

DEGREES		MIN	LATITUDE DEGREES-MINUTES								MIN	DEGREES	
GRID DEC=WEST			* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-15MINUTE QUADRANGLE								* GRID DEC=EAST		
LONGITUDE			* TABULATED BY THE SE CORNER COORDINATES								* LONGITUDE		

LATITUDE 40-41 7.5X15-MINUTE PG35

LONGITUDE											LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	42-00.0	42-07.5	42-15.0	42-22.5	42-30.0	42-37.5	42-45.0	42-52.5	GRID DEC=EAST	MIN	DEGREES
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	30	74	104
81	111											80	110
87	117	30	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	0-26/08	15	86	116
93	123	45	0-35/10	0-35/10	0-35/10	0-35/10	0-36/11	0-36/11	0-36/11	0-36/11	00	92	122
70	100	00	0-45/13	0-45/13	0-45/13	0-46/14	0-46/14	0-46/14	0-46/14	0-46/14	45	67	97
76	106	15	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	0-56/17	30	73	103
82	112											79	109
88	118	30	1-05/19	1-05/19	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	1-06/20	15	85	115
94	124	45	1-15/22	1-16/23	1-16/23	1-16/23	1-16/23	1-16/23	1-16/23	1-17/23	00	91	121
71	101	00	1-25/25	1-26/25	1-26/25	1-26/25	1-26/25	1-26/25	1-27/26	1-27/26	45	66	96
77	107	15	1-35/28	1-36/28	1-36/28	1-36/28	1-36/28	1-37/29	1-37/29	1-37/29	30	72	102
83	113											78	108
89	119	30	1-46/31	1-46/31	1-46/31	1-46/31	1-47/32	1-47/32	1-47/32	1-47/32	15	84	114
95	125	45	1-56/34	1-56/34	1-56/34	1-56/34	1-57/35	1-57/35	1-57/35	1-58/35	00	90	120

LATITUDE DEGREES-MINUTES													

DEGREES	MIN		43-00.0	43-07.5	43-15.0	43-22.5	43-30.0	43-37.5	43-45.0	43-52.5	MIN	DEGREES	
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-15/04	0-15/04	0-15/04	0-15/04	0-16/05	0-16/05	0-16/05	0-16/05	30	74	104
81	111											80	110
87	117	30	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	15	86	116
93	123	45	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	00	92	122
70	100	00	0-46/14	0-46/14	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	0-47/14	45	67	97
76	106	15	0-56/17	0-56/17	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	0-57/17	30	73	103
82	112											79	109
88	118	30	1-07/20	1-07/20	1-07/20	1-07/20	1-07/20	1-07/20	1-08/20	1-08/20	15	85	115
94	124	45	1-17/23	1-17/23	1-17/23	1-17/23	1-18/23	1-18/23	1-18/23	1-18/23	00	91	121
71	101	00	1-27/26	1-27/26	1-27/26	1-28/26	1-28/26	1-28/26	1-28/26	1-28/26	45	66	96
77	107	15	1-37/29	1-38/29	1-38/29	1-38/29	1-38/29	1-38/29	1-39/29	1-39/29	30	72	102
83	113											78	108
89	119	30	1-48/32	1-48/32	1-48/32	1-48/32	1-49/32	1-49/32	1-49/32	1-49/32	15	84	114
95	125	45	1-58/35	1-58/35	1-58/35	1-59/35	1-59/35	1-59/35	1-59/35	2-00/36	00	90	120

LATITUDE DEGREES-MINUTES													

DEGREES	MIN		43-00.0	43-07.5	43-15.0	43-22.5	43-30.0	43-37.5	43-45.0	43-52.5	MIN	DEGREES	
GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5X15MINUTE QUADRANGLE													
TABULATED BY THE SE CORNER COORDINATES													
LONGITUDE													
LATITUDE 42-43 7.5X15-MINUTE PG36													

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	44-00.0	44-07.5	44-15.0	44-22.5	44-30.0	44-37.5	44-45.0	44-52.5	GRID DEC=EAST	MIN	DEGREES
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	30	74	104
81	111											80	110
87	117	30	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	15	86	116
93	123	45	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	00	92	122
70	100	00	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	0-47/14	0-48/14	0-48/14	45	67	97
76	106	15	0-57/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	0-58/17	30	73	103
82	112											79	109
88	118	30	1-08/20	1-08/20	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	1-09/20	15	85	115
94	124	45	1-18/23	1-18/23	1-19/23	1-19/23	1-19/23	1-19/23	1-19/23	1-19/23	00	91	121
71	101	00	1-29/26	1-29/26	1-29/26	1-29/26	1-29/26	1-30/27	1-30/27	1-30/27	45	66	96
77	107	15	1-39/29	1-39/29	1-40/30	1-40/30	1-40/30	1-40/30	1-40/30	1-41/30	30	72	102
83	113											78	108
89	119	30	1-50/33	1-50/33	1-50/33	1-50/33	1-51/33	1-51/33	1-51/33	1-51/33	15	84	114
95	125	45	2-00/36	2-00/36	2-01/36	2-01/36	2-01/36	2-01/36	2-02/36	2-02/36	00	90	120
			44-00.0	44-07.5	44-15.0	44-22.5	44-30.0	44-37.5	44-45.0	44-52.5			

			45-00.0	45-07.5	45-15.0	45-22.5	45-30.0	45-37.5	45-45.0	45-52.5			
DEGREES		MIN									MIN	DEGREES	
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	30	74	104
81	111											80	110
87	117	30	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	15	86	116
93	123	45	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-38/11	0-38/11	0-38/11	00	92	122
70	100	00	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	0-49/15	45	67	97
76	106	15	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	30	73	103
82	112											79	109
88	118	30	1-09/20	1-09/20	1-09/20	1-09/20	1-10/21	1-10/21	1-10/21	1-10/21	15	85	115
94	124	45	1-20/24	1-20/24	1-20/24	1-20/24	1-20/24	1-21/24	1-21/24	1-21/24	00	91	121
71	101	00	1-30/27	1-30/27	1-31/27	1-31/27	1-31/27	1-31/27	1-31/27	1-32/27	45	66	96
77	107	15	1-41/30	1-41/30	1-41/30	1-42/30	1-42/30	1-42/30	1-42/30	1-42/30	30	72	102
83	113											78	108
89	119	30	1-52/33	1-52/33	1-52/33	1-52/33	1-52/33	1-53/33	1-53/33	1-53/33	15	84	114
95	125	45	2-02/36	2-02/36	2-03/36	2-03/36	2-03/36	2-03/36	2-04/37	2-04/37	00	90	120
			45-00.0	45-07.5	45-15.0	45-22.5	45-30.0	45-37.5	45-45.0	45-52.5			

			LATITUDE DEGREES-MINUTES										
DEGREES		MIN									MIN	DEGREES	

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	* 46-00.0	46-07.5	46-15.0	46-22.5	46-30.0	46-37.5	46-45.0	46-52.5	* MIN	GRID DEC=EAST	DEGREES
69	99	00	* 0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	* 45	68	98
75	105	15	* 0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	* 30	74	104
81	111		* *								* *	80	110
87	117	30	* 0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	* 15	86	116
93	123	45	* 0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	* 00	92	122
			* *								* *		
70	100	00	* 0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	* 45	67	97
76	106	15	* 0-59/17	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	1-00/18	* 30	73	103
82	112		* *								* *	79	109
88	118	30	* 1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	1-11/21	* 15	85	115
94	124	45	* 1-21/24	1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-22/24	1-22/24	* 00	91	121
			* *								* *		
71	101	00	* 1-32/27	1-32/27	1-32/27	1-32/27	1-33/28	1-33/28	1-33/28	1-33/28	* 45	66	96
77	107	15	* 1-43/31	1-43/31	1-43/31	1-43/31	1-43/31	1-44/31	1-44/31	1-44/31	* 30	72	102
83	113		* *								* *	78	108
89	119	30	* 1-53/33	1-54/34	1-54/34	1-54/34	1-54/34	1-55/34	1-55/34	1-55/34	* 15	84	114
95	125	45	* 2-04/37	2-04/37	2-05/37	2-05/37	2-05/37	2-06/37	2-06/37	2-06/37	* 00	90	120
			* *								* *		
			* 46-00.0	46-07.5	46-15.0	46-22.5	46-30.0	46-37.5	46-45.0	46-52.5	* *		
			LATITUDE DEGREES-MINUTES										

DEGREES		MIN	* 47-00.0	47-07.5	47-15.0	47-22.5	47-30.0	47-37.5	47-45.0	47-52.5	* MIN	DEGREES	
69	99	00	* 0-05/01	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	* 45	68	98
75	105	15	* 0-16/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	* 30	74	104
81	111		* *								* *	80	110
87	117	30	* 0-27/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	* 15	86	116
93	123	45	* 0-38/11	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	* 00	92	122
			* *								* *		
70	100	00	* 0-49/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	0-50/15	* 45	67	97
76	106	15	* 1-00/18	1-01/18	1-01/18	1-01/18	1-01/18	1-01/18	1-01/18	1-01/18	* 30	73	103
82	112		* *								* *	79	109
88	118	30	* 1-11/21	1-12/21	1-12/21	1-12/21	1-12/21	1-12/21	1-12/21	1-12/21	* 15	85	115
94	124	45	* 1-22/24	1-23/25	1-23/25	1-23/25	1-23/25	1-23/25	1-23/25	1-24/25	* 00	91	121
			* *								* *		
71	101	00	* 1-33/28	1-34/28	1-34/28	1-34/28	1-34/28	1-34/28	1-34/28	1-35/28	* 45	66	96
77	107	15	* 1-44/31	1-45/31	1-45/31	1-45/31	1-45/31	1-45/31	1-46/31	1-46/31	* 30	72	102
83	113		* *								* *	78	108
89	119	30	* 1-55/34	1-56/34	1-56/34	1-56/34	1-56/34	1-56/34	1-57/35	1-57/35	* 15	84	114
95	125	45	* 2-06/37	2-07/38	2-07/38	2-07/38	2-07/38	2-08/38	2-08/38	2-08/38	* 00	90	120
			* *								* *		
			* 47-00.0	47-07.5	47-15.0	47-22.5	47-30.0	47-37.5	47-45.0	47-52.5	* *		
			LATITUDE DEGREES-MINUTES										

DEGREES			GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 7.5-15MINUTE QUADRANGLE								MIN DEGREES		
LONGITUDE			TABULATED BY THE SE CORNER COORDINATES								GRID DEC=EAST		

			LATITUDE 46-47 7.5X15-MINUTE								PG38		

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST			48-00.0	48-07.5	48-15.0	48-22.5	48-30.0	48-37.5	48-45.0	48-52.5	GRID DEC=EAST		
DEGREES		MIN									MIN	DEGREES	

69	99	00	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	45	68	98
75	105	15	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	30	74	104
81	111											80	110
87	117	30	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	15	86	116
93	123	45	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-39/12	0-40/12	0-40/12	00	92	122

70	100	00	0-50/15	0-50/15	0-50/15	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	45	67	97
76	106	15	1-01/18	1-01/18	1-02/18	1-02/18	1-02/18	1-02/18	1-02/18	1-02/18	30	73	103
82	112											79	109
88	118	30	1-13/22	1-13/22	1-13/22	1-13/22	1-13/22	1-13/22	1-13/22	1-14/22	15	85	115
94	124	45	1-24/25	1-24/25	1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	00	91	121

71	101	00	1-35/28	1-35/28	1-35/28	1-35/28	1-36/28	1-36/28	1-36/28	1-36/28	45	66	96
77	107	15	1-46/31	1-46/31	1-46/31	1-47/32	1-47/32	1-47/32	1-47/32	1-47/32	30	72	102
83	113											78	108
89	119	30	1-57/35	1-57/35	1-58/35	1-58/35	1-58/35	1-58/35	1-59/35	1-59/35	15	84	114
95	125	45	2-08/38	2-09/38	2-09/38	2-09/38	2-09/38	2-10/39	2-10/39	2-10/39	00	90	120

			48-00.0	48-07.5	48-15.0	48-22.5	48-30.0	48-37.5	48-45.0	48-52.5			
			LATITUDE DEGREES-MINUTES										

DEGREES			49-00.0	49-07.5	49-15.0	49-22.5	49-30.0	49-37.5	49-45.0	49-52.5	MIN	DEGREES	

69	99	00	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	45	68	98
75	105	15	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	30	74	104
81	111											80	110
87	117	30	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	0-29/09	0-29/09	15	86	116
93	123	45	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	00	92	122

70	100	00	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	0-52/15	45	67	97
76	106	15	1-02/18	1-02/18	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	1-03/19	30	73	103
82	112											79	109
88	118	30	1-14/22	1-14/22	1-14/22	1-14/22	1-14/22	1-14/22	1-14/22	1-15/22	15	85	115
94	124	45	1-25/25	1-25/25	1-25/25	1-25/25	1-26/25	1-26/25	1-26/25	1-26/25	00	91	121

71	101	00	1-36/28	1-37/29	1-37/29	1-37/29	1-37/29	1-37/29	1-37/29	1-38/29	45	66	96
77	107	15	1-48/32	1-48/32	1-48/32	1-48/32	1-48/32	1-49/32	1-49/32	1-49/32	30	72	102
83	113											78	108
89	119	30	1-59/35	1-59/35	1-59/35	2-00/36	2-00/36	2-00/36	2-00/36	2-01/36	15	84	114
95	125	45	2-10/39	2-11/39	2-11/39	2-11/39	2-11/39	2-12/39	2-12/39	2-12/39	00	90	120

			49-00.0	49-07.5	49-15.0	49-22.5	49-30.0	49-37.5	49-45.0	49-52.5			
			LATITUDE DEGREES-MINUTES										

DEGREES													
MIN													
GRID DEC=WEST			GRID DECLINATION IN DEGREES-MINUTES/MILS							FOR CENTER OF 7.5-15MINUTE QUADRANGLE			
LONGITUDE			TABULATED BY THE SE CORNER COORDINATES							LONGITUDE			

LATITUDE 48-49 7.5X15-MINUTE PG39													

SECTION III - 15 X 15 MINUTE QUADRANGLES

GRID DEC=WEST	DEGREES	MIN	*	22-00	22-15	22-30	22-45	23-00	23-15	23-30	23-45	* MIN	DEGREES
69 99	00	*	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	* 45	68 98
75 105	15	*	*	0-08/02	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	0-09/03	* 30	74 104
81 111		*	*									*	80 110
87 117	30	*	*	0-14/04	0-14/04	0-14/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	* 15	86 116
93 123	45	*	*	0-20/06	0-20/06	0-20/06	0-20/06	0-21/06	0-21/06	0-21/06	0-21/06	* 00	92 122
		*	*									*	
70 100	00	*	*	0-25/07	0-26/08	0-26/08	0-26/08	0-27/08	0-27/08	0-27/08	0-27/08	* 45	67 97
76 106	15	*	*	0-31/09	0-31/09	0-32/09	0-32/09	0-32/09	0-33/10	0-33/10	0-33/10	* 30	73 103
82 112		*	*									*	79 109
88 118	30	*	*	0-37/11	0-37/11	0-38/11	0-38/11	0-38/11	0-39/12	0-39/12	0-39/12	* 15	85 115
94 124	45	*	*	0-42/12	0-43/13	0-43/13	0-44/13	0-44/13	0-45/13	0-45/13	0-46/14	* 00	91 121
		*	*									*	
71 101	00	*	*	0-48/14	0-49/15	0-49/15	0-50/15	0-50/15	0-51/15	0-51/15	0-52/15	* 45	66 96
77 107	15	*	*	0-54/16	0-54/16	0-55/16	0-55/16	0-56/17	0-57/17	0-57/17	0-58/17	* 30	72 102
83 113		*	*									*	78 108
89 119	30	*	*	0-59/17	1-00/18	1-01/18	1-01/18	1-02/18	1-02/18	1-03/19	1-04/19	* 15	84 114
95 125	45	*	*	1-05/19	1-06/20	1-06/20	1-07/20	1-08/20	1-08/20	1-09/20	1-10/21	* 00	90 120
		*	*									*	
		*	*	22-00	22-15	22-30	22-45	23-00	23-15	23-30	23-45	*	

LATITUDE DEGREES-MINUTES

DEGREES	MIN	*	*	24-00	24-15	24-30	24-45	25-00	25-15	25-30	25-45	* MIN	DEGREES
69 99	00	*	*	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	* 45	68 98
75 105	15	*	*	0-09/03	0-09/03	0-09/03	0-09/03	0-10/03	0-10/03	0-10/03	0-10/03	* 30	74 104
81 111		*	*									*	80 110
87 117	30	*	*	0-15/04	0-15/04	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	* 15	86 116
93 123	45	*	*	0-21/06	0-22/07	0-22/07	0-22/07	0-22/07	0-22/07	0-23/07	0-23/07	* 00	92 122
		*	*									*	
70 100	00	*	*	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	0-29/09	0-29/09	* 45	67 97
76 106	15	*	*	0-34/10	0-34/10	0-34/10	0-35/10	0-35/10	0-35/10	0-36/11	0-36/11	* 30	73 103
82 112		*	*									*	79 109
88 118	30	*	*	0-40/12	0-40/12	0-41/12	0-41/12	0-41/12	0-42/12	0-42/12	0-43/13	* 15	85 115
94 124	45	*	*	0-46/14	0-46/14	0-47/14	0-47/14	0-48/14	0-48/14	0-49/15	0-49/15	* 00	91 121
		*	*									*	
71 101	00	*	*	0-52/15	0-53/16	0-53/16	0-54/16	0-54/16	0-55/16	0-55/16	0-56/17	* 45	66 96
77 107	15	*	*	0-58/17	0-59/17	0-59/17	1-00/18	1-01/18	1-01/18	1-02/18	1-02/18	* 30	72 102
83 113		*	*									*	78 108
89 119	30	*	*	1-04/19	1-05/19	1-06/20	1-06/20	1-07/20	1-08/20	1-08/20	1-09/20	* 15	84 114
95 125	45	*	*	1-11/21	1-11/21	1-12/21	1-13/22	1-13/22	1-14/22	1-15/22	1-15/22	* 00	90 120
		*	*									*	
		*	*	24-00	24-15	24-30	24-45	25-00	25-15	25-30	25-45	*	

LATITUDE DEGREES-MINUTES

DEGREES MIN * GRID DEC=WEST * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 15-15 MINUTE QUADRANGLE * GRID DEC=EAST * LONGITUDE

LATITUDE 22-25 15x15-MINUTE PG40

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST		MIN	26-00	26-15	26-30	26-45	27-00	27-15	27-30	27-45	GRID DEC=EAST		DEGREES
DEGREES											MIN		
69	99	00	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-03/01	0-04/01	45	68	98
75	105	15	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-10/03	0-11/03	30	74	104
81	111											80	110
87	117	30	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-18/05	15	86	116
93	123	45	0-23/07	0-23/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	0-25/07	00	92	122
70	100	00	0-30/09	0-30/09	0-30/09	0-31/09	0-31/09	0-31/09	0-31/09	0-32/09	45	67	97
76	106	15	0-36/11	0-37/11	0-37/11	0-37/11	0-38/11	0-38/11	0-38/11	0-39/12	30	73	103
82	112											79	109
88	118	30	0-43/13	0-43/13	0-44/13	0-44/13	0-44/13	0-45/13	0-45/13	0-46/14	15	85	115
94	124	45	0-50/15	0-50/15	0-50/15	0-51/15	0-51/15	0-52/15	0-52/15	0-53/16	00	91	121
71	101	00	0-56/17	0-57/17	0-57/17	0-58/17	0-58/17	0-59/17	0-59/17	1-00/18	45	66	96
77	107	15	1-03/19	1-03/19	1-04/19	1-04/19	1-05/19	1-06/20	1-06/20	1-07/20	30	72	102
83	113											78	108
89	119	30	1-09/20	1-10/21	1-11/21	1-11/21	1-12/21	1-12/21	1-13/22	1-14/22	15	84	114
95	125	45	1-16/23	1-17/23	1-17/23	1-18/23	1-19/23	1-19/23	1-20/24	1-21/24	00	90	120

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST		MIN	26-00	26-15	26-30	26-45	27-00	27-15	27-30	27-45	GRID DEC=EAST		DEGREES
DEGREES											MIN		
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	45	68	98
75	105	15	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	30	74	104
81	111											80	110
87	117	30	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-19/06	0-19/06	15	86	116
93	123	45	0-25/07	0-25/07	0-25/07	0-25/07	0-26/08	0-26/08	0-26/08	0-26/08	00	92	122
70	100	00	0-32/09	0-32/09	0-32/09	0-33/10	0-33/10	0-33/10	0-33/10	0-34/10	45	67	97
76	106	15	0-39/12	0-39/12	0-40/12	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	30	73	103
82	112											79	109
88	118	30	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	0-48/14	0-48/14	0-49/15	15	85	115
94	124	45	0-53/16	0-53/16	0-54/16	0-54/16	0-55/16	0-55/16	0-56/17	0-56/17	00	91	121
71	101	00	1-00/18	1-01/18	1-01/18	1-02/18	1-02/18	1-03/19	1-03/19	1-04/19	45	66	96
77	107	15	1-07/20	1-08/20	1-08/20	1-09/20	1-09/20	1-10/21	1-10/21	1-11/21	30	72	102
83	113											78	108
89	119	30	1-14/22	1-15/22	1-15/22	1-16/23	1-17/23	1-17/23	1-18/23	1-18/23	15	84	114
95	125	45	1-21/24	1-22/24	1-23/25	1-23/25	1-24/25	1-25/25	1-25/25	1-26/25	00	90	120

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST		MIN	28-00	28-15	28-30	28-45	29-00	29-15	29-30	29-45	GRID DEC=EAST		DEGREES
DEGREES											MIN		
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	45	68	98
75	105	15	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	0-11/03	30	74	104
81	111											80	110
87	117	30	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-19/06	0-19/06	15	86	116
93	123	45	0-25/07	0-25/07	0-25/07	0-25/07	0-26/08	0-26/08	0-26/08	0-26/08	00	92	122
70	100	00	0-32/09	0-32/09	0-32/09	0-33/10	0-33/10	0-33/10	0-33/10	0-34/10	45	67	97
76	106	15	0-39/12	0-39/12	0-40/12	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	30	73	103
82	112											79	109
88	118	30	0-46/14	0-46/14	0-47/14	0-47/14	0-47/14	0-48/14	0-48/14	0-49/15	15	85	115
94	124	45	0-53/16	0-53/16	0-54/16	0-54/16	0-55/16	0-55/16	0-56/17	0-56/17	00	91	121
71	101	00	1-00/18	1-01/18	1-01/18	1-02/18	1-02/18	1-03/19	1-03/19	1-04/19	45	66	96
77	107	15	1-07/20	1-08/20	1-08/20	1-09/20	1-09/20	1-10/21	1-10/21	1-11/21	30	72	102
83	113											78	108
89	119	30	1-14/22	1-15/22	1-15/22	1-16/23	1-17/23	1-17/23	1-18/23	1-18/23	15	84	114
95	125	45	1-21/24	1-22/24	1-23/25	1-23/25	1-24/25	1-25/25	1-25/25	1-26/25	00	90	120

* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 15-15 MINUTE QUADRANGLE
 * TABULATED BY THE SE CORNER COORDINATES
 LATITUDE 26-29 15X15-MINUTE PG41

LONGITUDE			LATITUDE DEGREES-MINUTES										LONGITUDE		
DEGREES	MIN	*	30-00	30-15	30-30	30-45	31-00	31-15	31-30	31-45	*	MIN	DEGREES		
*															
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	*	45	68	98	
75	105	15	0-11/03	0-11/03	0-11/03	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	*	30	74	104	
81	111										*		80	110	
87	117	30	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-20/06	0-20/06	0-20/06	*	15	86	116	
93	123	45	0-26/08	0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-28/08	0-28/08	*	00	92	122	
*															
70	100	00	0-34/10	0-34/10	0-34/10	0-35/10	0-35/10	0-35/10	0-35/10	0-36/11	*	45	67	97	
76	106	15	0-41/12	0-42/12	0-42/12	0-42/12	0-43/13	0-43/13	0-43/13	0-44/13	*	30	73	103	
82	112										*		79	109	
88	118	30	0-49/15	0-49/15	0-50/15	0-50/15	0-50/15	0-51/15	0-51/15	0-51/15	*	15	85	115	
94	124	45	0-56/17	0-57/17	0-57/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	*	00	91	121	
*															
71	101	00	1-04/19	1-04/19	1-05/19	1-05/19	1-06/20	1-06/20	1-07/20	1-07/20	*	45	66	96	
77	107	15	1-12/21	1-12/21	1-13/22	1-13/22	1-14/22	1-14/22	1-15/22	1-15/22	*	30	72	102	
83	113										*		78	108	
89	119	30	1-19/23	1-20/24	1-20/24	1-21/24	1-21/24	1-22/24	1-23/25	1-23/25	*	15	84	114	
95	125	45	1-27/26	1-27/26	1-28/26	1-29/26	1-29/26	1-30/27	1-30/27	1-31/27	*	00	90	120	
*															
			30-00	30-15	30-30	30-45	31-00	31-15	31-30	31-45					

LATITUDE DEGREES-MINUTES

DEGREES			LATITUDE DEGREES-MINUTES										DEGREES		
DEGREES	MIN	*	32-00	32-15	32-30	32-45	33-00	33-15	33-30	33-45	*	MIN	DEGREES		
*															
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	*	45	68	98	
75	105	15	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-12/04	0-13/04	*	30	74	104	
81	111										*		80	110	
87	117	30	0-20/06	0-20/06	0-20/06	0-20/06	0-20/06	0-21/06	0-21/06	0-21/06	*	15	86	116	
93	123	45	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	0-29/09	0-29/09	*	00	92	122	
*															
70	100	00	0-36/11	0-36/11	0-36/11	0-37/11	0-37/11	0-37/11	0-37/11	0-38/11	*	45	67	97	
76	106	15	0-44/13	0-44/13	0-44/13	0-45/13	0-45/13	0-45/13	0-46/14	0-46/14	*	30	73	103	
82	112										*		79	109	
88	118	30	0-52/15	0-52/15	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	*	15	85	115	
94	124	45	1-00/18	1-00/18	1-01/18	1-01/18	1-01/18	1-02/18	1-02/18	1-03/19	*	00	91	121	
*															
71	101	00	1-08/20	1-08/20	1-09/20	1-09/20	1-10/21	1-10/21	1-11/21	1-11/21	*	45	66	96	
77	107	15	1-16/23	1-16/23	1-17/23	1-17/23	1-18/23	1-18/23	1-19/23	1-19/23	*	30	72	102	
83	113										*		78	108	
89	119	30	1-24/25	1-24/25	1-25/25	1-26/25	1-26/25	1-27/26	1-27/26	1-28/26	*	15	84	114	
95	125	45	1-32/27	1-32/27	1-33/28	1-34/28	1-34/28	1-35/28	1-36/28	1-36/28	*	00	90	120	
*															
			32-00	32-15	32-30	32-45	33-00	33-15	33-30	33-45					

LATITUDE DEGREES-MINUTES

DEGREES MIN * GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 15-15 MINUTE QUADRANGLE
 GRID DEC=WEST LONGITUDE * TABULATED BY THE SE CORNER COORDINATES
 * MIN DEGREES
 * GRID DEC=EAST
 * LONGITUDE
 LATITUDE 30-33 15x15-MINUTE PG42

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	34-00	34-15	34-30	34-45	35-00	35-15	35-30	35-45	GRID DEC=EAST	DEGREES	MIN
69	99	00	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	0-04/01	45	68	98
75	105	15	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	0-13/04	30	74	104
81	111											80	110
87	117	30	0-21/06	0-21/06	0-21/06	0-21/06	0-22/07	0-22/07	0-22/07	0-22/07	15	86	116
93	123	45	0-29/09	0-30/09	0-30/09	0-30/09	0-30/09	0-30/09	0-31/09	0-31/09	00	92	122
70	100	00	0-38/11	0-38/11	0-38/11	0-39/12	0-39/12	0-39/12	0-39/12	0-40/12	45	67	97
76	106	15	0-46/14	0-47/14	0-47/14	0-47/14	0-47/14	0-48/14	0-48/14	0-48/14	30	73	103
82	112											79	109
88	118	30	0-55/16	0-55/16	0-55/16	0-56/17	0-56/17	0-56/17	0-57/17	0-57/17	15	85	115
94	124	45	1-03/19	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	1-06/20	1-06/20	00	91	121
71	101	00	1-12/21	1-12/21	1-12/21	1-13/22	1-13/22	1-14/22	1-14/22	1-15/22	45	66	96
77	107	15	1-20/24	1-20/24	1-21/24	1-21/24	1-22/24	1-23/25	1-23/25	1-24/25	30	72	102
83	113											78	108
89	119	30	1-28/26	1-29/26	1-30/27	1-30/27	1-31/27	1-31/27	1-32/27	1-32/27	15	84	114
95	125	45	1-37/29	1-37/29	1-38/29	1-39/29	1-39/29	1-40/30	1-40/30	1-41/30	00	90	120
			34-00	34-15	34-30	34-45	35-00	35-15	35-30	35-45			
***** LATITUDE DEGREES-MINUTES *****													
DEGREES		MIN	36-00	36-15	36-30	36-45	37-00	37-15	37-30	37-45	MIN	DEGREES	
69	99	00	0-04/01	0-04/01	0-04/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-13/04	0-13/04	0-13/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	30	74	104
81	111											80	110
87	117	30	0-22/07	0-22/07	0-22/07	0-23/07	0-23/07	0-23/07	0-23/07	0-23/07	15	86	116
93	123	45	0-31/09	0-31/09	0-31/09	0-32/09	0-32/09	0-32/09	0-32/09	0-32/09	00	92	122
70	100	00	0-40/12	0-40/12	0-40/12	0-41/12	0-41/12	0-41/12	0-41/12	0-41/12	45	67	97
76	106	15	0-49/15	0-49/15	0-49/15	0-50/15	0-50/15	0-50/15	0-50/15	0-51/15	30	73	103
82	112											79	109
88	118	30	0-57/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	1-00/18	1-00/18	15	85	115
94	124	45	1-06/20	1-07/20	1-07/20	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	00	91	121
71	101	00	1-15/22	1-16/23	1-16/23	1-17/23	1-17/23	1-17/23	1-18/23	1-18/23	45	66	96
77	107	15	1-24/25	1-25/25	1-25/25	1-26/25	1-26/25	1-27/26	1-27/26	1-27/26	30	72	102
83	113											78	108
89	119	30	1-33/28	1-33/28	1-34/28	1-35/28	1-35/28	1-36/28	1-36/28	1-37/29	15	84	114
95	125	45	1-42/30	1-42/30	1-43/31	1-44/31	1-44/31	1-45/31	1-45/31	1-46/31	00	90	120
			36-00	36-15	36-30	36-45	37-00	37-15	37-30	37-45			
***** LATITUDE DEGREES-MINUTES *****													
DEGREES		MIN	* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 15-15 MINUTE QUADRANGLE * * TABULATED BY THE SE CORNER COORDINATES *										
GRID DEC=WEST	LONGITUDE		* GRID DEC=EAST * * LONGITUDE *										

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST		MIN									GRID DEC=EAST		DEGREES
DEGREES			38-00	38-15	38-30	38-45	39-00	39-15	39-30	39-45	MIN		
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	0-14/04	30	74	104
81	111											80	110
87	117	30	0-23/07	0-23/07	0-23/07	0-24/07	0-24/07	0-24/07	0-24/07	0-24/07	15	86	116
93	123	45	0-32/09	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-33/10	0-34/10	00	92	122
70	100	00	0-42/12	0-42/12	0-42/12	0-42/12	0-43/13	0-43/13	0-43/13	0-43/13	45	67	97
76	106	15	0-51/15	0-51/15	0-51/15	0-52/15	0-52/15	0-52/15	0-53/16	0-53/16	30	73	103
82	112											79	109
88	118	30	1-00/18	1-01/18	1-01/18	1-01/18	1-02/18	1-02/18	1-02/18	1-03/19	15	85	115
94	124	45	1-09/20	1-10/21	1-10/21	1-11/21	1-11/21	1-11/21	1-12/21	1-12/21	00	91	121
71	101	00	1-19/23	1-19/23	1-20/24	1-20/24	1-20/24	1-21/24	1-21/24	1-22/24	45	66	96
77	107	15	1-28/26	1-28/26	1-29/26	1-29/26	1-30/27	1-30/27	1-31/27	1-31/27	30	72	102
83	113											78	108
89	119	30	1-37/29	1-38/29	1-38/29	1-39/29	1-39/29	1-40/30	1-40/30	1-41/30	15	84	114
95	125	45	1-47/32	1-47/32	1-48/32	1-48/32	1-49/32	1-49/32	1-50/33	1-51/33	00	90	120

			38-00	38-15	38-30	38-45	39-00	39-15	39-30	39-45			
			LATITUDE DEGREES-MINUTES										
			40-00	40-15	40-30	40-45	41-00	41-15	41-30	41-45			
DEGREES		MIN									MIN	DEGREES	
69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	30	74	104
81	111											80	110
87	117	30	0-24/07	0-24/07	0-24/07	0-25/07	0-25/07	0-25/07	0-25/07	0-25/07	15	86	116
93	123	45	0-34/10	0-34/10	0-34/10	0-34/10	0-35/10	0-35/10	0-35/10	0-35/10	00	92	122
70	100	00	0-44/13	0-44/13	0-44/13	0-44/13	0-44/13	0-45/13	0-45/13	0-45/13	45	67	97
76	106	15	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	0-55/16	0-55/16	0-55/16	30	73	103
82	112											79	109
88	118	30	1-03/19	1-03/19	1-03/19	1-04/19	1-04/19	1-04/19	1-05/19	1-05/19	15	85	115
94	124	45	1-13/22	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	1-15/22	1-15/22	00	91	121
71	101	00	1-22/24	1-23/25	1-23/25	1-23/25	1-24/25	1-24/25	1-25/25	1-25/25	45	66	96
77	107	15	1-32/27	1-32/27	1-33/28	1-33/28	1-34/28	1-34/28	1-35/28	1-35/28	30	72	102
83	113											78	108
89	119	30	1-42/30	1-42/30	1-43/31	1-43/31	1-44/31	1-44/31	1-45/31	1-45/31	15	84	114
95	125	45	1-51/33	1-52/33	1-52/33	1-53/33	1-53/33	1-54/34	1-55/34	1-55/34	00	90	120

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE		
GRID DEC=WEST	DEGREES	MIN	42-00	42-15	42-30	42-45	43-00	43-15	43-30	43-45	GRID DEC=EAST	DEGREES	MIN

69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-15/04	0-16/05	0-16/05	30	74	104
81	111											80	110
87	117	30	0-25/07	0-25/07	0-25/07	0-26/08	0-26/08	0-26/08	0-26/08	0-26/08	15	86	116
93	123	45	0-35/10	0-35/10	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	0-36/11	00	92	122

70	100	00	0-45/13	0-45/13	0-46/14	0-46/14	0-46/14	0-46/14	0-47/14	0-47/14	45	67	97
76	106	15	0-55/16	0-56/17	0-56/17	0-56/17	0-56/17	0-57/17	0-57/17	0-57/17	30	73	103
82	112											79	109
88	118	30	1-05/19	1-06/20	1-06/20	1-06/20	1-07/20	1-07/20	1-07/20	1-08/20	15	85	115
94	124	45	1-15/22	1-16/23	1-16/23	1-17/23	1-17/23	1-17/23	1-18/23	1-18/23	00	91	121

71	101	00	1-26/25	1-26/25	1-26/25	1-27/26	1-27/26	1-28/26	1-28/26	1-28/26	45	66	96
77	107	15	1-36/28	1-36/28	1-37/29	1-37/29	1-37/29	1-38/29	1-38/29	1-39/29	30	72	102
83	113											78	108
89	119	30	1-46/31	1-46/31	1-47/32	1-47/32	1-48/32	1-48/32	1-49/32	1-49/32	15	84	114
95	125	45	1-56/34	1-56/34	1-57/35	1-57/35	1-58/35	1-58/35	1-59/35	2-00/36	00	90	120

			42-00	42-15	42-30	42-45	43-00	43-15	43-30	43-45			
			LATITUDE DEGREES-MINUTES										

DEGREES		MIN	44-00	44-15	44-30	44-45	45-00	45-15	45-30	45-45	MIN	DEGREES	

69	99	00	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	45	68	98
75	105	15	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	30	74	104
81	111											80	110
87	117	30	0-26/08	0-26/08	0-26/08	0-26/08	0-27/08	0-27/08	0-27/08	0-27/08	15	86	116
93	123	45	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-37/11	0-38/11	0-38/11	00	92	122

70	100	00	0-47/14	0-47/14	0-47/14	0-48/14	0-48/14	0-48/14	0-48/14	0-48/14	45	67	97
76	106	15	0-57/17	0-58/17	0-58/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	30	73	103
82	112											79	109
88	118	30	1-08/20	1-08/20	1-08/20	1-09/20	1-09/20	1-09/20	1-10/21	1-10/21	15	85	115
94	124	45	1-18/23	1-19/23	1-19/23	1-19/23	1-20/24	1-20/24	1-20/24	1-21/24	00	91	121

71	101	00	1-29/26	1-29/26	1-30/27	1-30/27	1-30/27	1-31/27	1-31/27	1-32/27	45	66	96
77	107	15	1-39/29	1-40/30	1-40/30	1-41/30	1-41/30	1-41/30	1-42/30	1-42/30	30	72	102
83	113											78	108
89	119	30	1-50/33	1-50/33	1-51/33	1-51/33	1-52/33	1-52/33	1-53/33	1-53/33	15	84	114
95	125	45	2-00/36	2-01/36	2-01/36	2-02/36	2-02/36	2-03/36	2-03/36	2-04/37	00	90	120

			44-00	44-15	44-30	44-45	45-00	45-15	45-30	45-45			
			LATITUDE DEGREES-MINUTES										

DEGREES		MIN									MIN	DEGREES	

GRID DEC=WEST			* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 15-15 MINUTE QUADRANGLE								* GRID DEC=EAST		
LONGITUDE			* TABULATED BY THE SE CORNER COORDINATES								* LONGITUDE		

LONGITUDE			LATITUDE DEGREES-MINUTES								LONGITUDE			
GRID DEC=WEST			46-00	46-15	46-30	46-45	47-00	47-15	47-30	47-45	GRID DEC=EAST			
DEGREES		MIN									MIN	DEGREES		
69	99	00	* 0-05/01	0-05/01	0-05/01	0-05/01	0-05/01	0-06/02	0-06/02	0-06/02	* 45	68	98	
75	105	15	* 0-16/05	0-16/05	0-16/05	0-16/05	0-16/05	0-17/05	0-17/05	0-17/05	* 30	74	104	
81	111		*								*	80	110	
87	117	30	* 0-27/08	0-27/08	0-27/08	0-27/08	0-27/08	0-28/08	0-28/08	0-28/08	* 15	86	116	
93	123	45	* 0-38/11	0-38/11	0-38/11	0-38/11	0-38/11	0-39/12	0-39/12	0-39/12	* 00	92	122	
			*								*			
70	100	00	* 0-49/15	0-49/15	0-49/15	0-49/15	0-49/15	0-50/15	0-50/15	0-50/15	* 45	67	97	
76	106	15	* 0-59/17	1-00/18	1-00/18	1-00/18	1-00/18	1-01/18	1-01/18	1-01/18	* 30	73	103	
82	112		*								*	79	109	
88	118	30	* 1-10/21	1-11/21	1-11/21	1-11/21	1-11/21	1-12/21	1-12/21	1-12/21	* 15	85	115	
94	124	45	* 1-21/24	1-21/24	1-22/24	1-22/24	1-22/24	1-23/25	1-23/25	1-23/25	* 00	91	121	
			*								*			
71	101	00	* 1-32/27	1-32/27	1-33/28	1-33/28	1-33/28	1-34/28	1-34/28	1-35/28	* 45	66	96	
77	107	15	* 1-43/31	1-43/31	1-44/31	1-44/31	1-44/31	1-45/31	1-45/31	1-46/31	* 30	72	102	
83	113		*								*	78	108	
89	119	30	* 1-54/34	1-54/34	1-54/34	1-55/34	1-55/34	1-56/34	1-56/34	1-57/35	* 15	84	114	
95	125	45	* 2-04/37	2-05/37	2-05/37	2-06/37	2-06/37	2-07/38	2-07/38	2-08/38	* 00	90	120	
			*								*			
			* 46-00	46-15	46-30	46-45	47-00	47-15	47-30	47-45	*			
			LATITUDE DEGREES-MINUTES								*			

DEGREES		MIN	* 48-00	48-15	48-30	48-45	49-00	49-15	49-30	49-45	* MIN	DEGREES		
69	99	00	* 0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	0-06/02	* 45	68	98	
75	105	15	* 0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	* 30	74	104	
81	111		*								*	80	110	
87	117	30	* 0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-28/08	0-29/09	0-29/09	* 15	86	116	
93	123	45	* 0-39/12	0-39/12	0-39/12	0-40/12	0-40/12	0-40/12	0-40/12	0-40/12	* 00	92	122	
			*								*			
70	100	00	* 0-50/15	0-50/15	0-51/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	* 45	67	97	
76	106	15	* 1-01/18	1-02/18	1-02/18	1-02/18	1-02/18	1-03/19	1-03/19	1-03/19	* 30	73	103	
82	112		*								*	79	109	
88	118	30	* 1-13/22	1-13/22	1-13/22	1-13/22	1-14/22	1-14/22	1-14/22	1-15/22	* 15	85	115	
94	124	45	* 1-24/25	1-24/25	1-24/25	1-25/25	1-25/25	1-25/25	1-26/25	1-26/25	* 00	91	121	
			*								*			
71	101	00	* 1-35/28	1-35/28	1-36/28	1-36/28	1-36/28	1-37/29	1-37/29	1-37/29	* 45	66	96	
77	107	15	* 1-46/31	1-47/32	1-47/32	1-47/32	1-48/32	1-48/32	1-49/32	1-49/32	* 30	72	102	
83	113		*								*	78	108	
89	119	30	* 1-57/35	1-58/35	1-58/35	1-59/35	1-59/35	2-00/36	2-00/36	2-00/36	* 15	84	114	
95	125	45	* 2-08/38	2-09/38	2-09/38	2-10/39	2-10/39	2-11/39	2-11/39	2-12/39	* 00	90	120	
			*								*			
			* 48-00	48-15	48-30	48-45	49-00	49-15	49-30	49-45	*			
			LATITUDE DEGREES-MINUTES								*			
DEGREES		MIN	*****											
GRID DEC=WEST			* GRID DECLINATION IN DEGREES-MINUTES/MILS FOR CENTER OF 15-15 MINUTE QUADRANGLE								* MIN DEGREES			
LONGITUDE			* TABULATED BY THE SE CORNER COORDINATES								* GRID DEC=EAST			
											* LONGITUDE			

LATITUDE 46-49 15X15-MINUTE PG46

SECTION IV - 30 X 60 MINUTE QUADRANGLES

[illegible]

LATITUDE 25-32 30X60-MINUTE PG47

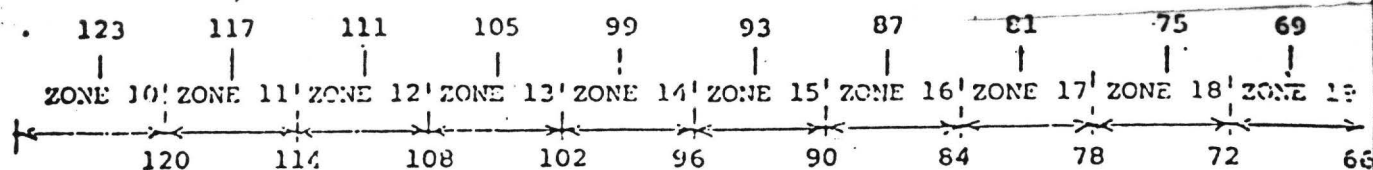
LONGITUDE		GRID DEC=WEST		33-00		33-30		34-00		34-30		35-00		35-30		36-00		36-30		GRID DEC=EAST	
DEGREES		MIN																MIN		DEGREES	
69	99																			68	98
75	105																			74	104
81	111	00		0-16/05	0-17/05	0-17/05	0-17/05	0-17/05	0-17/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	0-18/05	00	80	110
87	117																			86	116
93	123																			92	122
70	100																			67	97
76	106																			73	103
82	112	00		0-49/15	0-50/15	0-51/15	0-51/15	0-51/15	0-51/15	0-52/15	0-53/16	0-53/16	0-53/16	0-53/16	0-53/16	0-54/16	0-54/16	0-54/16	00	79	109
88	118																			85	115
94	124																			91	121
71	101																			66	96
77	107																			72	102
83	113	00		1-22/24	1-23/25	1-24/25	1-26/25	1-27/26	1-28/26	1-28/26	1-29/26	1-29/26	1-29/26	1-30/27	1-30/27	1-30/27	1-30/27	1-30/27	00	78	108
89	119																			84	114
95	125																			90	120
					33-00	33-30	34-00	34-30	35-00	35-30	36-00	36-30									
*****LATITUDE DEGREES-MINUTES*****																					
DEGREES		MIN		37-00		37-30		38-00		38-30		39-00		39-30		40-00		40-30		MIN DEGREES	
69	99																			68	98
75	105																			74	104
81	111	00		0-18/05	0-18/05	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-19/06	0-20/06	0-20/06	0-20/06	00	80	110
87	117																			86	116
93	123																			92	122
70	100																			67	97
76	106																			73	103
82	112	00		0-54/16	0-55/16	0-56/17	0-56/17	0-57/17	0-58/17	0-58/17	0-58/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	0-59/17	00	79	109
88	118																			85	115
94	124																			91	121
71	101																			66	96
77	107																			72	102
83	113	00		1-31/27	1-32/27	1-33/28	1-34/28	1-35/28	1-36/28	1-37/29	1-38/29	1-38/29	1-38/29	1-38/29	1-38/29	1-38/29	1-38/29	1-38/29	00	78	108
89	119																			84	114
95	125																			90	120
					37-00	37-30	38-00	38-30	39-00	39-30	40-00	40-30									
*****LATITUDE DEGREES-MINUTES*****																					
DEGREES		MIN																MIN		DEGREES	

GRID DEC=WEST LONGITUDE																					

*****</																					

LATITUDE 33-40 30X60-MINUTE PG48

CENTRAL MERIDIANS



0°			1°			2°		Magnetic North:	
1'	0.3	41' 12	0'	18	41' 30	0'	36	4°	9
2'	0.6	42' 12	1'	18	42' 30	1'	36	12½°	222
3'	0.9	43' 13	2'	18	43' 31	2'	36	1°	18
4'	1.2	44' 13	3'	19	44' 31	3'	36	13°	231
5'	1.5	45' 13	4'	19	45' 31	4'	37	14°	27
6'	1.8	46' 14	5'	19	46' 31	5'	37	13½°	240
7'	2.1	47' 14	6'	20	47' 32	6'	37	2°	36
8'	2.4	48' 14	7'	20	48' 32	7'	38	14°	249
9'	2.7	49' 15	8'	20	49' 32	8'	38	2½°	44
10'	3	50' 15	9'	20	50' 33	9'	38	14½°	258
11'	3	51' 15	10'	21	51' 33	10'	39	3°	53
12'	4	52' 15	11'	21	52' 33	11'	39	15°	267
13'	4	53' 16	12'	21	53' 33	12'	39	3½°	62
14'	4	54' 16	13'	22	54' 34	13'	39	15½°	276
15'	4	55' 16	14'	22	55' 34			4°	71
16'	5	56' 17	15'	22	56' 34			16°	264
17'	5	57' 17	16'	23	57' 35			4½°	80
18'	5	58' 17	17'	23	58' 35			16½°	293
19'	6	59' 17	18'	23	59' 35			5°	89
20'	6	60' 18	19'	23				17°	302
21'	6		20'	24				5½°	98
22'	7		21'	24				6°	107
23'	7		22'	24				6½°	116
24'	7		23'	25				7°	124
25'	7		24'	25				7½°	133
26'	8		25'	25				8°	142
27'	8		26'	25				8½°	151
28'	8		27'	26				9°	160
29'	9		28'	26				9½°	169
30'	9		29'	26				10°	178
31'	9		30'	27				10½°	187
32'	9		31'	27				11°	196
33'	10		32'	27				11½°	204
34'	10		33'	28				12°	213
35'	10		34'	28					
36'	11		35'	28					
37'	11		36'	28					
38'	11		37'	29					
39'	12		38'	29					
40'	12		39'	29					
			40'	30					