AD-A146 449 19313B MLRS MISSILE NUMBER 443 398 375 394 387 435 437 487 388 477 397 44..(U) ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WSMR NM ATM.. D C KELLER AUG 84 1/1

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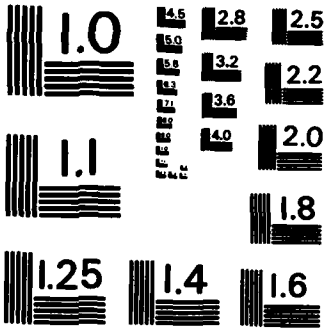

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DR 1356
Aug 84

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AD-A146 449

METEOROLOGICAL DATA REPORT

19313B MLRS
Missile Number 443, 398, 375, 394, 387, 435,
437, 487, 388, 477, 397, 445
Round Number V641/FE-13 Thru V652/FE-24
14 August 1984

by

DONALD C. KELLER
Program Support Coordinator
Phone Number (505) 679-9568
AVN Number 349-9568

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
Meteorological data gathered for the launching of the 19313B MLRS, Missile Number 443, 398, 375, 394, 387, 435, 437, 487, 388, 477, 397, 445, Round Number V641/FE-13 thru V652/FE-24 are presented in tabular form.

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CONTENTS

	PAGE
INTRODUCTION	1
DISCUSSION	1
GENERAL AREA MAP	2
LAUNCH AREA DIAGRAM	3
TABLES:	
1. Surface Observation taken at 1632 MDT at Tula Gate	4
2. Anemometer Measured Wind Data at 30 ft. AGL	5
3. Anemometer Measured Wind Data at 60 ft. AGL	6
4. Anemometer Measured Wind Data at 90 ft. AGL	7
5. T-Time Pilot-Balloon Measured Wind Data	8
6. Aiming and T-Time Met Messages	9
7. Tula Gate Significant Level Data at 1505 MDT	10
8. Tula Gate Upper Air Data at 1505 MDT	11
9. Tula Gate Mandatory Levels at 1505 MDT	13
10. Salt Sotim Significant Level Data at 1507 MDT	14
11. Salt Sotim Upper Air Data at 1507 MDT	15
12. Salt Sotim Mantatory Levels at 1507 MDT	17
13. Tula Gate Significant Levels Data at 1632 MDT	18
14. Tula Gate Upper Air Data at 1632 MDT	19
15. Tula Gate Mandatory Levels at 1632 MDT	21
16. Salt Sotim Significant Level Data at 1632 MDT	22
17. Salt Sotim Upper Air Data at 1632 MDT	24
18. Salt Sotim Mandatory Levels at 1632 MDT	26

INTRODUCTION

19313B MLRS, Missile Numbers 443, 398, 375, 394, 387, 435, 437, 487, 388, 477, 397, and 445, Round Numbers V641/FE-13 Thru V652/FE-24, were launched from Tula Gate, White Sands Missile Range (WSMR). New Mexico, at 1632:00, 1632:04, 1632:08 1632:13, 1632:17, 1632:22, 1642:00, 1642:05, 1642:09, 1642:14, 1642:18 and 1642:23 MDT. The scheduled launch times were 1335 MDT (6 T's) and 1335 MDT (6T's) with a 4.5 second separation.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorlogical Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature (°C), relative humidity, dew point (°C), density (gm/m^3), wind direction and speed, and cloud cover were made at the Tula Gate Met Site at T-0 minutes.

(2) Anemometer data were provided from existing tower-mounted anemometers at Tula Gate. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air

(1) Low level wind data were obtained from pilot-balloon observations at:

SITE AND ALTITUDE	
Tula Gate	2 km
Deadhorse	2 km

(2) Air structure data (rawinsonde) were collected at the following Met Sites.

SITE AND TIME	
TULA GATE	1505 MDT
SALT SOTIM	1507 MDT
TULA GATE	1632 MDT
SALT SOTIM	1632 MDT

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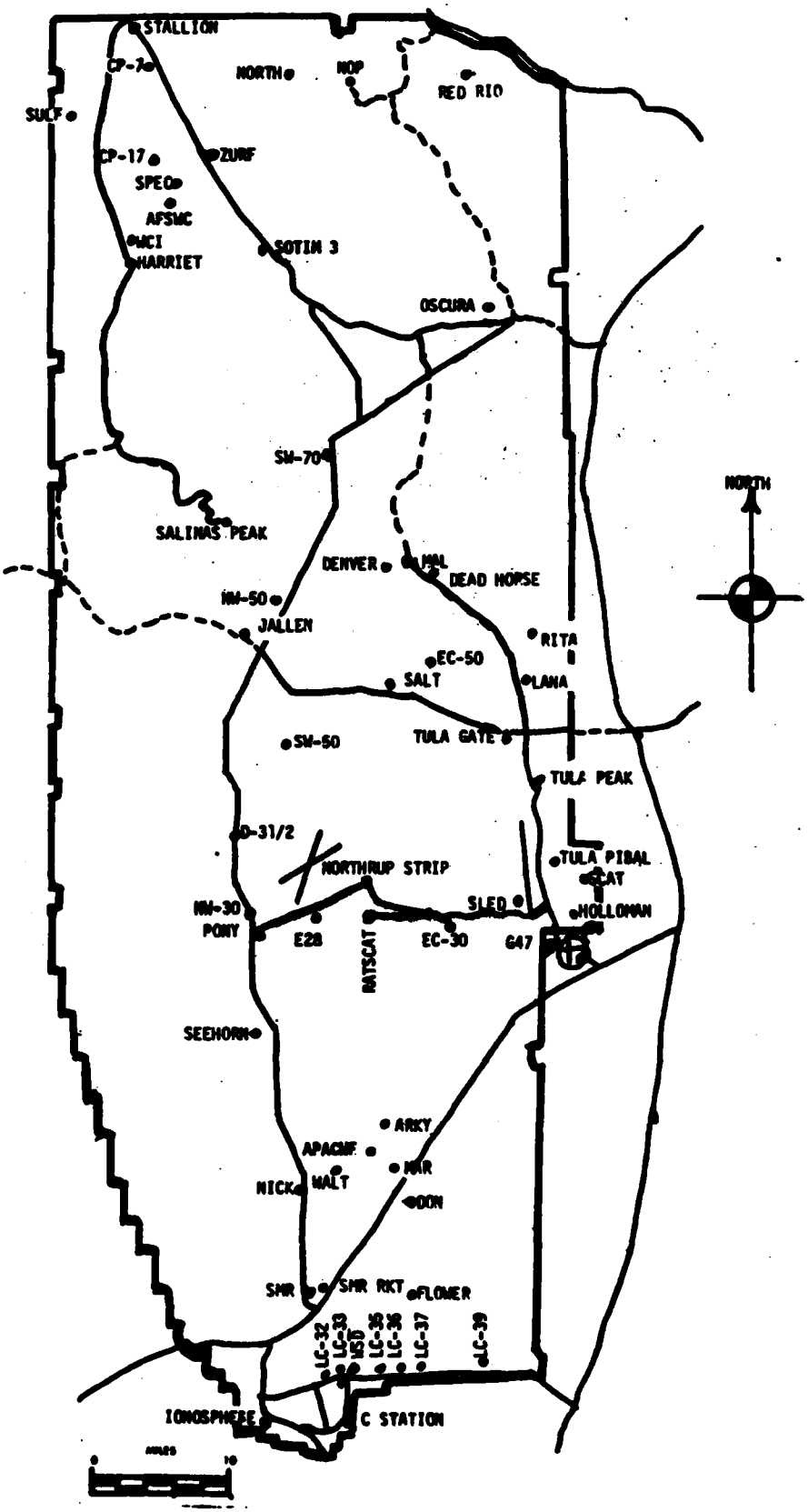
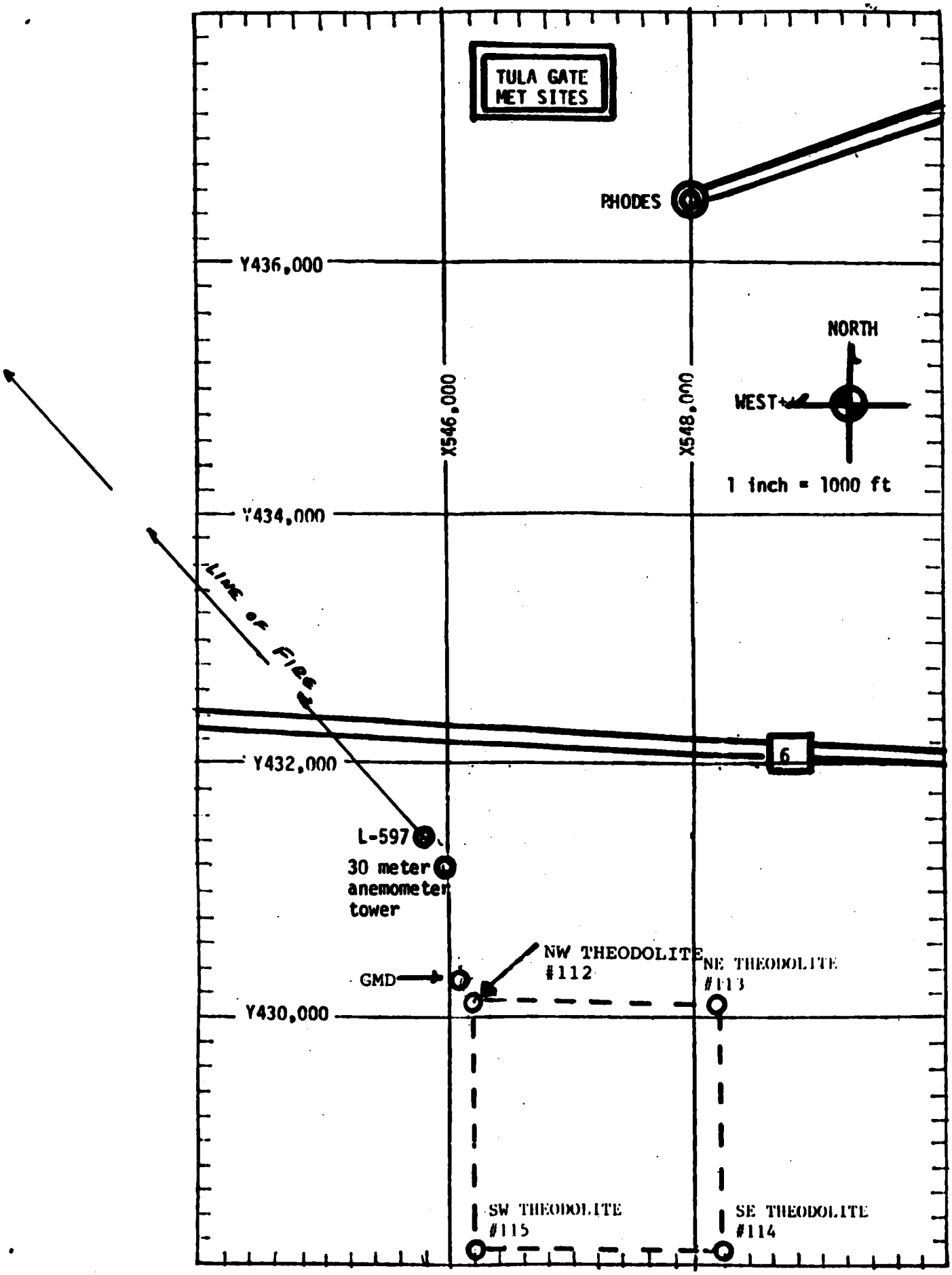
WSMR METEOROLOGICAL SITES




TULA GATE
MET SITES
RHODES
Y436,000
NORTH
WEST
X546,000
X548,000
1 inch = 1000 ft
Y434,000
Line of Fire
6
Y432,000
L-597
30 meter
anemometer
tower
NW THEODOLITE
#112
NE THEODOLITE
#113
GMD
Y430,000
SW THEODOLITE
#115
SE THEODOLITE
#114

PROJECT SURFACE OBSERVATION

TABLE 1 STATION Tula Gate

DATE 14 (DAY) Aug (MONTH) 84 (YEAR) X= 546,073.04 Y= 430,265.61 H= 1253 m

TIME MDT	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1632	876.1		29.6		14.3	40		160	02		30

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
	2/10	CB	45	3/10	AC	120	2/10	Ci	E250	

PSYCHROMETRIC COMPUTATION

TIME: MDT	1632		
DRY BULB TEMP.	29.6		
WET BULB TEMP.	19.2		
WET BULB DEPR.	10.4		
DEW POINT	14.3		
RELATIVE HUMID.	40%		

TABLE 2 ANEMOMETER DATA - 30 Ft Level of 30 Meter Tower

X= 545,944.89 Y= 431,158.70 H= 4102.47 (BASE)

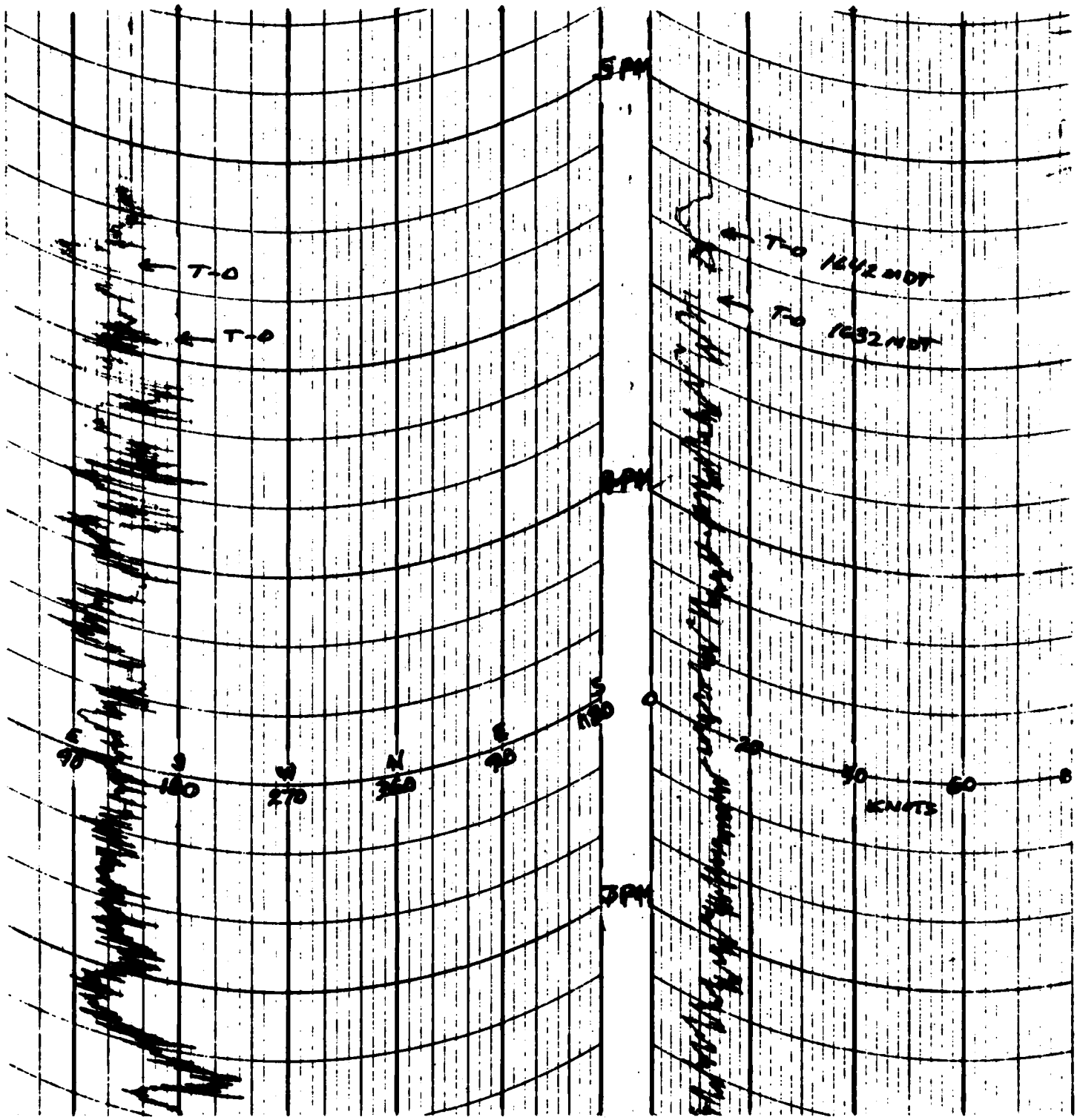


TABLE 3

ANEMOMETER DATA - 60 Ft Level of 30 Meter Tower

X= 545,944.89 Y= 431,158.70 H= 4102.47 (BASE)

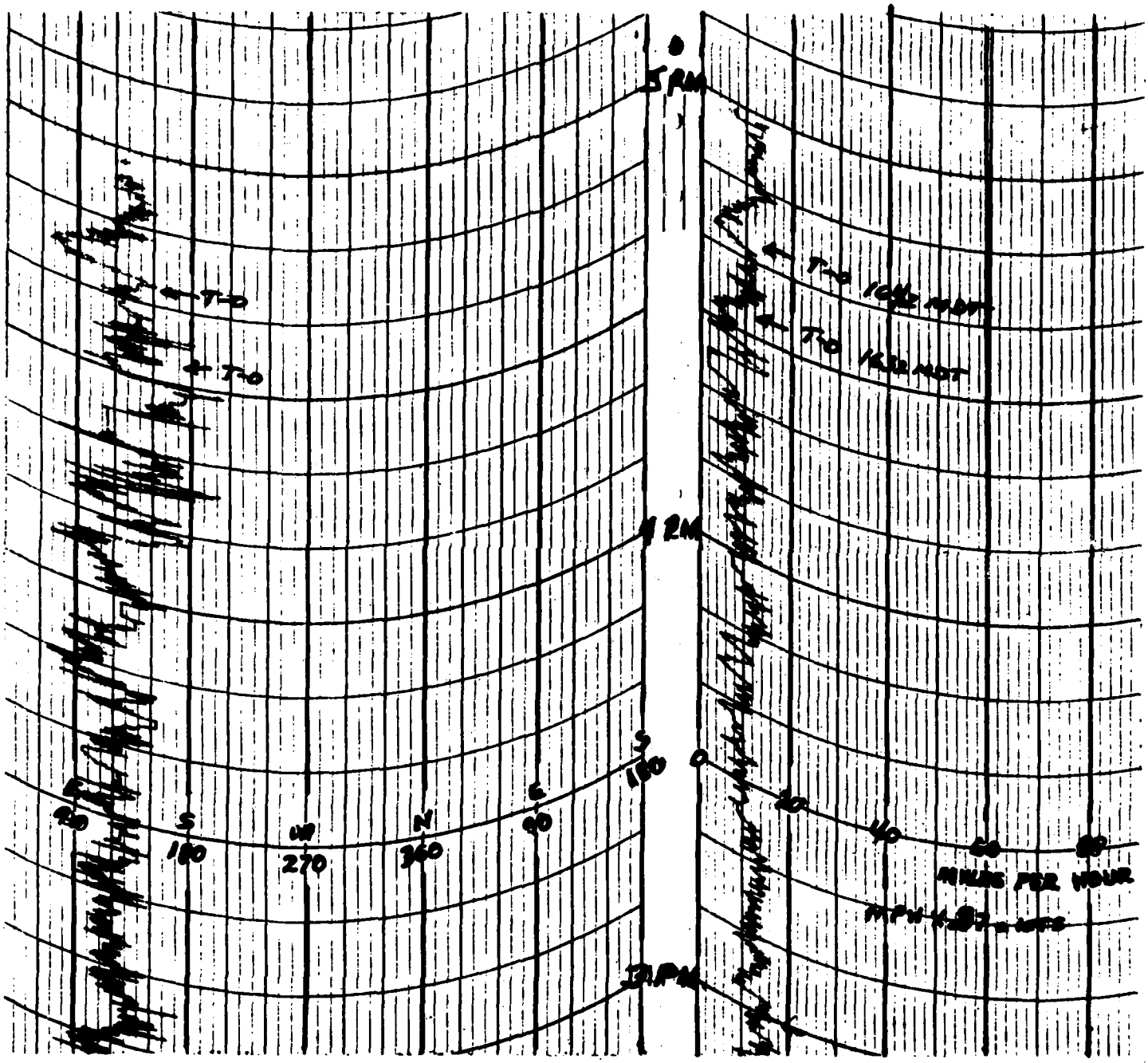
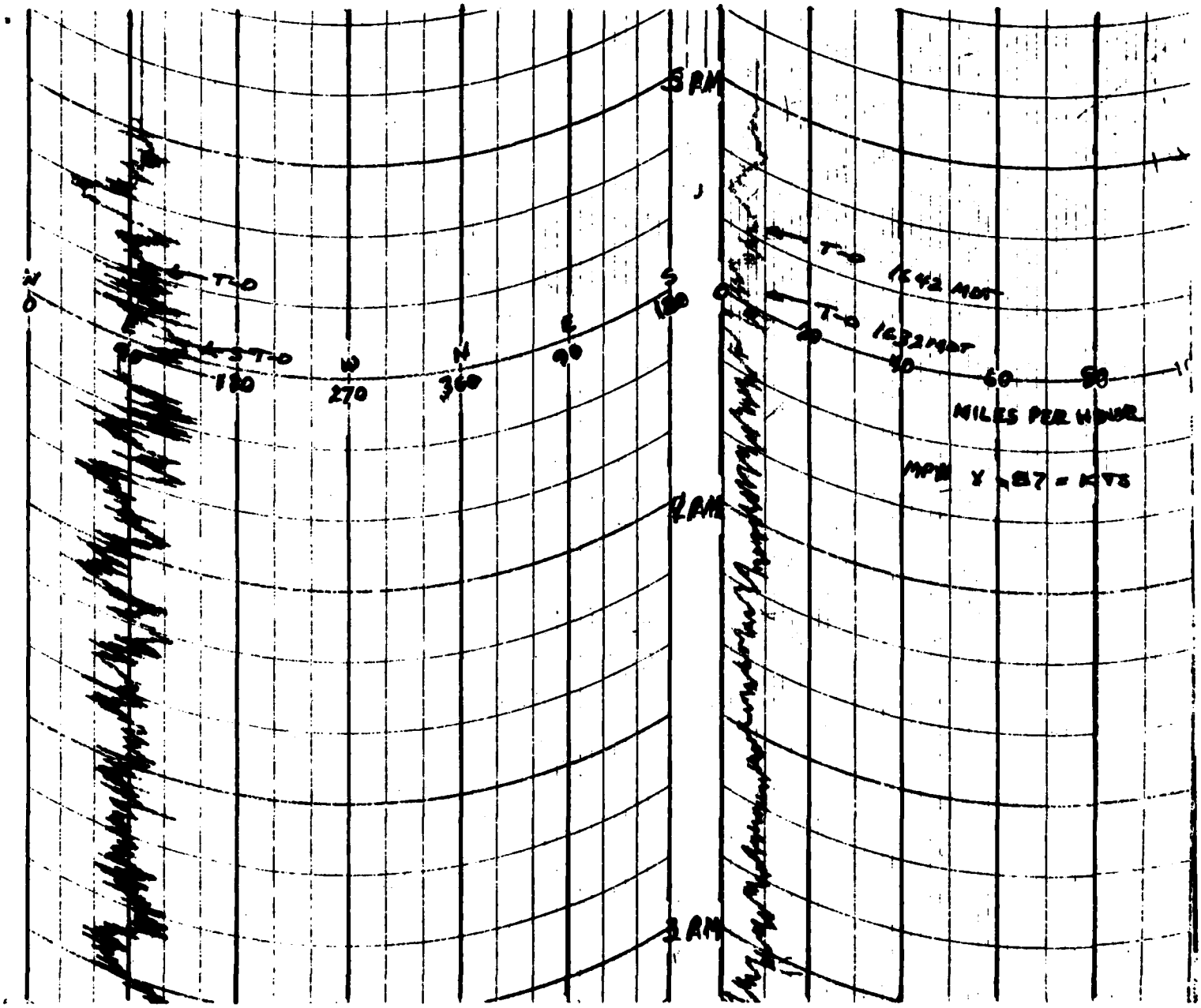


TABLE 4 ANEMOMETER DATA - 90 Ft Level of 30 Meter Tower

X= 545,944.89 Y= 431,158.70 H= 4102.47 (BASE)



T-TIME PILOT-BALLOON MEASURED WIND DATA

DATE 14 August 1984

SITE: TULA GATE
TIME: 1632 MDT
WSTM COORDINATES:
X= 548,204.58
Y= 428,125.01
H= 4,110.76

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	160	02
150	117	06
210	120	07
270	123	07
330	126	08
390	128	08
500	133	07
650	152	04
800	174	05
950	189	07
1150	198	09
1350	203	11
1550	208	10
1750	220	09
2000	215	05

SITE: DEADHORSE
TIME 1632 MDT
WSTM COORDINATES:
X= 519,982.11
Y= 488,249.83
H= 4,128.52

LAYER MIDPOINT METERS AGL	DIRECTION DEGREES	SPEED KNOTS
SURFACE	160	10
150	150	08
210	150	08
270	150	08
330	150	08
390	150	08
500	160	09
650	170	12
800	165	13
950	175	13
1150	191	12
1350	195	15
1550	210	13
1750	215	10
2000	205	08

All data obtained from Double Theodolite Tracked Pilot-Balloon observations.

TABLE 6

AIMING AND T-TIME COMPUTER MET MESSAGE DATA

14 August 1984

TULA GATE 1505 MDT
METCM1331062
142110125877

00267011	30300877
01212008	30130867
02264012	29850843
03296010	29490805
04351008	29020759
05381009	28650716
06363007	28320674
07310007	27930634
08345004	27620597
09267002	27300561
10256006	26980527
11171005	26650494
12164016	26220449
13146024	25530393
14067020	24830344
15065026	24090299

SALT SOTIM 1507 MDT
METCM1331064
142110123879

00284012	30610879
01238012	30280869
02290012	30000845
03291009	29650807
04328008	29180762
05358010	28750718
06396005	28380676
07358004	28000637
08432005	27700599
09327005	27400563
10293008	27090529
11244014	26770497
12169010	26390451
13127015	25630396
14074028	24920346
15073028	24150301

TULA GATE 1632 MDT
METCM1331064
142250123878

00284002	30510876
01210006	30250866
02233006	29980842
03300005	09560804
04357013	09070759
05394008	08720715
06361005	08370674
07347005	08000634
08343003	07630597
09281003	07360561
10104005	07070527
11090005	06720495
12060004	06220449
13132024	05610394
14127028	04810344
15089029	24100299

SALT SOTIM 1632 MDT
METCM1331064
142250123878

00338010	30580878
01282009	30350868
02281012	30020844
03305007	29620806
04391007	29130761
05342003	28760717
06363007	28380676
07363006	28060636
08308001	27720598
09432002	27390562
10203003	27150528
11174012	26800496
12089019	26420451
13144021	25630395
14129024	24790345
15122029	24080300

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84 1505 MDT
ASCENSION NO. 7

SIGNIFICANT LEVEL DATA
2270430007
TULA SITE

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

TABLE 7

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
876.9	4112.8	27.5	16.1	50.0
859.9	4680.6	24.8	14.3	52.0
850.0	5014.4	24.0	14.1	54.0
796.3	6877.3	19.0	12.5	66.0
751.2	8514.1	14.1	12.7	91.0
744.1	8778.2	13.5	12.1	91.0
726.8	9430.2	12.7	7.2	69.0
700.0	10465.6	10.8	5.8	71.0
680.9	11223.5	9.6	3.4	65.0
638.8	12954.8	5.5	-.1	67.0
630.2	13319.1	4.6	.2	73.0
599.8	14640.8	2.6	-3.3	65.0
572.2	15888.9	.0	-7.0	59.0
559.4	16484.5	-1.0	-4.0	80.0
551.6	16853.2	-1.4	-8.4	59.0
518.6	18461.2	-4.8	-9.2	71.0
500.0	19403.6	-6.8	-11.9	67.0
468.4	21074.2	-9.2	-12.6	76.0
423.1	23639.8	-14.3	-18.9	68.0
400.0	25033.2	-17.5	-22.5	65.0
371.0	26876.5	-21.0	-25.5	67.0
364.6	27299.3	-21.6	-27.2	60.0
338.1	29114.2	-26.0	-31.8	58.0
330.6	29648.0	-26.8	-38.7	31.0
327.0	29907.7	-27.6	-41.9	24.0
300.0	31929.8	-32.1	-47.9	19.0
295.4	32288.4	-32.9	-48.5	19.0
285.6	33067.6	-34.5	-42.6	42.0
274.4	33933.0	-37.4	-44.1	49.0
268.6	34467.8	-38.5	-45.3	48.0
250.0	36083.3	-41.1		

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84 1505 MDT
ASCENSION NO. 7

UPPER AIR DATA
2270430007
TULA SITE

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

TABLE 8

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4112.8	876.9	27.5	16.1	50.0	1008.0	678.2	150.0	11.1	1.000302
4500.0	865.3	25.7	14.9	51.4	1001.3	675.9	152.2	11.0	1.000295
5000.0	850.4	24.0	14.1	53.9	989.7	674.0	155.1	10.8	1.000290
5500.0	835.7	22.7	13.8	57.1	977.0	672.5	158.0	10.7	1.000286
6000.0	821.2	21.4	13.4	60.3	964.5	670.9	161.0	10.7	1.000282
6500.0	806.9	20.0	12.9	63.6	952.1	669.4	164.9	10.4	1.000278
7000.0	792.8	18.6	12.6	67.9	940.0	667.8	174.4	9.3	1.000274
7500.0	778.8	17.1	12.8	75.5	928.0	666.1	185.9	8.6	1.000273
8000.0	765.1	15.6	12.8	83.1	916.2	664.5	192.7	8.0	1.000271
8500.0	751.6	14.1	12.7	90.8	904.6	662.8	199.7	7.8	1.000269
9000.0	738.2	13.2	10.5	83.5	892.1	661.4	205.8	8.6	1.000258
9500.0	725.0	12.6	7.1	69.1	879.3	660.3	211.1	9.3	1.000243
10000.0	711.9	11.7	6.4	70.1	866.4	659.1	216.0	9.8	1.000236
10500.0	699.1	10.7	5.7	70.7	853.6	658.0	213.1	9.3	1.000233
11000.0	686.5	10.0	4.1	66.8	840.9	657.0	208.3	8.6	1.000226
11500.0	674.0	8.9	2.8	65.3	828.8	655.7	202.7	8.1	1.000220
12000.0	661.7	7.8	1.8	65.9	817.3	654.3	196.6	7.4	1.000216
12500.0	649.6	6.6	.8	66.5	805.9	652.8	189.3	6.5	1.000211
13000.0	637.7	5.4	-.1	67.7	794.7	651.4	177.4	5.8	1.000207
13500.0	625.9	4.3	-.3	71.9	783.0	650.1	170.1	5.4	1.000204
14000.0	614.4	3.6	-1.6	68.9	770.8	649.1	176.9	4.9	1.000199
14500.0	603.0	2.8	-2.9	65.9	758.8	648.2	185.1	4.5	1.000194
15000.0	591.7	1.9	-4.4	63.3	747.5	647.0	193.7	4.1	1.000189
15500.0	580.7	.8	-5.9	60.9	736.5	645.6	186.7	4.0	1.000184
16000.0	569.8	-.2	-6.4	62.9	725.4	644.5	178.8	3.9	1.000181
16500.0	559.1	-1.0	-4.2	79.1	713.5	643.6	167.7	4.0	1.000182
17000.0	548.5	-[illegible].7	-8.4	60.1	702.4	642.6	157.1	4.2	1.000173
17500.0	538.1	-2.8	-8.6	63.8	691.7	641.3	142.4	4.3	1.000171
18000.0	527.9	-3.8	-8.9	67.6	681.2	640.1	129.3	4.6	1.000168
18500.0	517.8	-4.9	-9.3	70.8	670.9	638.8	125.6	4.0	1.000165
19000.0	507.9	-5.9	-10.7	68.7	660.8	637.5	119.4	3.6	1.000162
19500.0	498.1	-6.9	-11.9	67.5	650.6	636.2	103.3	4.4	1.000158
20000.0	488.5	-7.7	-12.1	70.2	639.8	635.4	93.7	5.9	1.000155
20500.0	479.0	-8.4	-12.3	72.9	629.1	634.5	91.4	9.5	1.000153
21000.0	469.8	-9.1	-12.6	75.6	618.6	633.6	93.0	12.0	1.000150
21500.0	460.6	-10.0	-13.7	74.7	608.7	632.5	96.7	13.6	1.000147
22000.0	451.5	-11.0	-14.9	73.1	599.1	631.2	94.6	14.6	1.000144
22500.0	442.7	-12.0	-16.1	71.6	589.7	630.0	91.9	15.9	1.000141
23000.0	434.0	-13.0	-17.3	70.0	580.4	628.8	89.2	18.2	1.000138
23500.0	425.5	-14.0	-18.5	68.4	571.2	627.5	88.7	22.4	1.000135

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84
ASCENSION NO. 7

1505 MDT

UPPER AIR DATA
2270430007
TULA SITE

TABLE 8 cont'd

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.0	-15.1	-19.8	67.2	562.4	626.1	87.3	25.7	1.000132
24500.0	408.7	-16.3	-21.1	66.1	553.7	624.7	84.4	27.6	1.000130
25000.0	400.5	-17.4	-22.4	65.1	545.1	623.3	83.1	27.4	1.000127
25500.0	392.4	-18.4	-23.2	65.5	536.2	622.1	82.3	26.4	1.000125
26000.0	384.5	-19.3	-24.0	66.0	527.3	620.9	80.9	22.9	1.000123
26500.0	376.7	-20.3	-24.9	66.6	518.6	619.7	77.7	19.2	1.000120
27000.0	369.1	-21.2	-26.0	65.0	509.9	618.6	68.6	15.7	1.000118
27500.0	361.6	-22.1	-27.7	59.8	501.4	617.5	57.2	14.6	1.000115
28000.0	354.1	-23.3	-29.0	59.2	493.5	616.0	47.3	15.5	1.000113
28500.0	346.8	-24.5	-30.2	58.7	485.7	614.5	39.2	18.4	1.000111
29000.0	339.7	-25.7	-31.5	58.1	478.1	612.9	34.0	21.8	1.000109
29500.0	332.7	-26.6	-36.4	38.5	469.9	611.8	32.0	24.9	1.000106
30000.0	325.7	-27.8	-42.1	23.8	462.4	610.3	31.9	27.2	1.000104
30500.0	318.8	-28.9	-43.6	22.5	454.7	608.9	33.8	28.5	1.000102
31000.0	312.1	-30.0	-45.1	21.3	447.2	607.5	34.8	28.7	1.000100
31500.0	305.5	-31.1	-46.6	20.1	439.8	606.1	35.5	28.4	1.000099
32000.0	299.1	-32.3	-48.0	19.0	432.5	604.7	36.1	26.7	1.000097
32500.0	292.7	-33.3	-46.4	25.2	425.1	603.3	36.6	24.7	1.000095
33000.0	286.4	-34.4	-43.2	40.0	417.8	602.1	38.7	21.8	1.000094
33500.0	280.3	-35.9	-43.4	45.3	411.4	600.2	41.6	19.0	1.000092
34000.0	274.2	-37.4	-44.2	49.0	405.2	598.2	42.4	17.5	1.000091
34500.0	268.2	-38.6	-45.6	47.0**	398.2	596.7	42.3	16.5	1.000089
35000.0	262.3	-39.4	-49.6	32.2**	390.8	595.7			1.000087
35500.0	256.6	-40.2	-55.5	17.3**	383.6	594.7			1.000086
36000.0	250.9	-41.0	-70.5	2.5**	376.5	593.6			1.000084

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84
ASCENSION NO. 7 1505 MDT

MANDATORY LEVELS
2270430007
TULA SITE

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

TABLE 9

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	5011.	24.0	14.1	54.	155.1	10.8
800.0	6741.	19.4	12.6	65.	169.2	9.9
750.0	8551.	14.0	12.6	91.	200.4	7.9
700.0	10456.	10.8	5.8	71.	213.4	9.3
650.0	12473.	6.6	.8	66.	189.7	6.5
600.0	14615.	2.6	-3.3	65.	187.4	4.4
550.0	16908.	-1.6	-8.4	60.	159.1	4.2
500.0	19377.	-6.8	-11.9	67.	106.1	4.2
450.0	22058.	-11.2	-15.1	73.	94.2	14.7
400.0	24992.	-17.5	-22.5	65.	83.1	27.4
350.0	28235.	-24.0	-29.7	59.	42.5	16.9
300.0	31867.	-32.1	-47.9	19.	36.0	27.0
250.0	36005.	-41.1				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84 1507 MDT
ASCENSION NO. 5

SIGNIFICANT LEVEL DATA
2270440005
SALT SOTIM

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
878.9	4023.4	30.8	15.2	39.0
873.4	4207.3	28.0	12.0	37.0
850.0	4995.3	25.3	12.2	44.0
787.7	7173.7	19.7	10.7	56.0
728.5	9364.0	13.0	10.5	85.0
720.1	9685.3	13.0	6.8	66.0
700.0	10467.1	11.8	5.2	64.0
650.5	12469.1	6.7	1.0	67.0
609.0	14242.6	4.0	-2.6	62.0
597.8	14738.3	2.7	-2.8	67.0
557.0	16610.8	-.3	-7.3	59.0
507.3	19051.3	-4.8	-14.4	47.0
500.0	19425.9	-5.6	-16.4	42.0
456.2	21776.0	-9.1	-19.1	44.0
443.9	22471.2	-9.6	-31.3	15.0
436.5	22897.2	-10.9	-29.4	20.0
425.8	23523.9	-11.6	-23.9	35.0
419.1	23922.8	-13.1	-21.8	48.0
400.0	25084.5	-16.9	-19.5	80.0
382.2	26204.5	-19.4	-21.3	85.0
361.5	27562.7	-21.2	-30.2	44.0
354.5	28036.8	-22.3	-35.8	28.0
325.7	30063.6	-27.9	-40.4	29.0
300.0	31991.8	-31.9	-44.9	26.0
259.0	35362.0	-38.9	-51.7	24.0
250.0	36157.6	-41.1		

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84 1507 MDT
ASCENSION NO. 5

UPPER AIR DATA
2270440005
SALT SOTIN

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 11

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4023.4	678.9	30.8	15.2	39.0	999.8	681.7	160.0	12.0	1.000294
4500.0	864.6	27.0	12.1	39.6	997.3	677.0	161.6	11.2	1.000282
5000.0	849.9	25.3	12.2	44.0	985.8	675.1	163.6	10.3	1.000280
5500.0	835.1	24.0	11.9	46.8	972.9	673.7	160.2	9.3	1.000277
6000.0	820.7	22.7	11.6	49.5	960.2	672.2	157.8	7.8	1.000273
6500.0	806.5	21.4	11.3	52.3	947.7	670.8	165.6	9.7	1.000270
7000.0	792.5	20.1	10.8	55.0	935.5	669.3	168.1	10.8	1.000266
7500.0	778.6	18.7	10.9	60.3	923.5	667.7	170.8	11.1	1.000264
8000.0	764.8	17.2	11.0	66.9	911.8	666.0	179.4	8.9	1.000262
8500.0	751.3	15.6	10.9	73.6	900.3	664.2	190.6	8.6	1.000260
9000.0	738.0	14.1	10.8	80.2	889.1	662.5	196.2	9.9	1.000258
9500.0	724.9	13.0	9.1	77.0	877.2	661.0	196.2	10.6	1.000249
10000.0	711.9	12.5	6.2	65.2	863.8	660.1	209.0	8.8	1.000236
10500.0	699.2	11.7	5.2	64.0	850.9	659.1	218.1	7.0	1.000231
11000.0	686.5	10.4	4.1	64.8	839.4	657.5	226.7	5.5	1.000226
11500.0	674.0	9.2	3.1	65.5	828.1	656.0	218.1	4.5	1.000221
12000.0	661.8	7.9	2.0	66.3	817.0	654.4	206.1	4.1	1.000216
12500.0	649.8	6.7	1.0	66.9	805.9	652.9	195.4	4.5	1.000211
13000.0	637.8	5.9	-.1	65.5	793.4	651.9	203.7	4.1	1.000206
13500.0	626.0	5.1	-1.1	64.1	781.0	651.0	218.9	3.8	1.000202
14000.0	614.5	4.4	-2.1	62.7	768.9	650.0	234.2	4.1	1.000197
14500.0	603.2	3.3	-2.7	64.6	757.6	648.8	237.3	4.6	1.000194
15000.0	591.9	2.3	-3.4	65.9	746.4	647.5	231.2	5.0	1.000190
15500.0	580.9	1.5	-4.6	63.7	734.7	646.5	214.4	4.8	1.000185
16000.0	570.0	.7	-5.8	61.6	723.2	645.5	196.6	5.0	1.000181
16500.0	559.3	-.1	-7.0	59.5	711.9	644.5	185.3	5.5	1.000177
17000.0	548.8	-1.0	-8.4	57.1	700.9	643.4	180.1	6.3	1.000173
17500.0	538.4	-1.9	-9.8	54.6	690.1	642.2	177.0	7.2	1.000169
18000.0	528.1	-2.9	-11.3	52.2	679.4	641.1	164.0	8.0	1.000165
18500.0	518.1	-3.8	-12.7	49.7	669.0	639.9	152.9	9.3	1.000161
19000.0	508.3	-4.7	-14.2	47.3	658.6	638.8	144.2	11.0	1.000157
19500.0	498.6	-5.7	-16.5	42.1	648.6	637.5	136.2	12.8	1.000153
20000.0	488.9	-6.5	-17.1	42.5	637.9	636.6	130.4	13.4	1.000151
20500.0	479.5	-7.2	-17.6	42.9	627.3	635.7	124.8	12.8	1.000148
21000.0	470.2	-7.9	-18.2	43.3	616.9	634.8	116.0	11.3	1.000145
21500.0	461.1	-8.7	-18.8	43.8	606.8	633.9	104.1	10.0	1.000143
22000.0	452.2	-9.3	-22.0	34.7	596.4	633.1	92.1	10.3	1.000139
22500.0	443.4	-9.7	-31.2	15.3	586.1	632.5	82.5	10.8	1.000133
23000.0	434.7	-11.0	-28.3	22.5	577.4	630.9	81.7	10.8	1.000132
23500.0	426.2	-11.6	-24.1	34.4	567.2	630.3	80.9	10.7	1.000131

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84 1507 MDT
ASCENSION NO. 5

UPPER AIR DATA
2270440005
SALT SOTIM

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 11

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.8	-13.4	-21.5	50.1	559.7	628.2	82.1	10.8	1.000131
24500.0	409.5	-15.0	-20.3	63.9	552.0	626.3	83.3	11.0	1.000130
25000.0	401.4	-16.6	-19.6	77.7	544.4	624.3	78.1	12.8	1.000129
25500.0	393.3	-17.8	-20.2	81.9	536.0	622.9	74.1	14.7	1.000127
26000.0	385.4	-18.9	-20.9	84.1	527.5	621.5	67.6	17.2	1.000124
26500.0	377.6	-19.8	-22.9	76.1	518.7	620.4	62.5	20.0	1.000121
27000.0	369.9	-20.5	-26.0	61.0	509.6	619.5	54.3	22.8	1.000118
27500.0	362.4	-21.1	-29.6	45.9	500.7	618.6	47.9	25.5	1.000115
28000.0	355.0	-22.2	-35.3	29.2	492.7	617.2	43.5	27.4	1.000112
28500.0	347.7	-23.6	-36.8	28.2	485.2	615.5	40.9	29.0	1.000110
29000.0	340.5	-25.0	-37.9	28.5	477.8	613.8	39.1	30.2	1.000108
29500.0	333.5	-26.3	-39.1	28.7	470.6	612.1	37.7	29.8	1.000106
30000.0	326.6	-27.7	-40.2	29.0	463.4	610.4	37.4	28.8	1.000104
30500.0	319.7	-28.8	-41.4	28.3	455.7	609.0	38.2	27.7	1.000103
31000.0	313.0	-29.8	-42.6	27.5	448.0	607.7	41.0	27.5	1.000101
31500.0	306.4	-30.9	-43.7	26.8	440.4	606.4	42.1	26.6	1.000099
32000.0	299.9	-31.9	-44.9	26.0	433.0	605.1	42.3	25.3	1.000097
32500.0	293.4	-33.0	-45.9	25.7	425.5	603.8	41.2	26.5	1.000095
33000.0	287.1	-34.0	-46.9	25.4	418.2	602.5	40.7	27.8	1.000094
33500.0	280.9	-35.0	-47.9	25.1	410.9	601.2	42.0	29.0	1.000092
34000.0	274.8	-36.1	-49.0	24.8	403.8	599.9	39.7	30.2	1.000090
34500.0	268.9	-37.1	-50.0	24.5	396.9	598.6	34.8	31.7	1.000089
35000.0	263.1	-38.1	-51.0	24.2	390.0	597.2			1.000087
35500.0	257.4	-39.3	-53.6	19.8**	383.4	595.8			1.000086
36000.0	251.8	-40.7	-65.7	4.8**	377.2	594.0			1.000084

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84 1507 MDT
ASCENSION NO. 5

MANDATORY LEVELS
2270440005
SALT SOTIM

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 12

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4992.	25.3	12.2	44.	163.6	10.3
800.0	6729.	20.8	11.1	54.	167.0	10.3
750.0	8547.	15.5	10.9	74.	191.6	8.8
700.0	10457.	11.8	5.2	64.	217.4	7.2
650.0	12477.	6.7	1.0	67.	195.7	4.4
600.0	14624.	3.0	-2.8	66.	235.5	4.7
550.0	16922.	-.9	-8.2	57.	180.5	6.2
500.0	19399.	-5.6	-16.4	42.	137.3	12.5
450.0	22091.	-9.4	-23.9	29.	89.5	10.4
400.0	25043.	-16.9	-19.5	80.	77.5	13.0
350.0	28294.	-23.1	-36.4	28.	41.6	28.5
300.0	31929.	-31.9	-44.9	26.	42.3	25.4
250.0	36079.	-41.1				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84 1632 MDT
ASCENSION NO. E

SIGNIFICANT LEVEL DATA
2270430008
TULA SITE

TABLE 13

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
876.1	4112.8	29.6	14.6	40.0
875.1	4146.2	28.2	13.7	41.0
850.0	4991.6	25.3	14.4	51.0
765.6	7968.6	16.1	11.3	73.0
720.4	9663.0	13.2	4.1	54.0
700.0	10455.8	11.6	3.6	58.0
633.6	13169.8	5.7	.1	67.0
624.5	13559.0	5.0	-.6	67.0
569.1	15116.7	1.5	-5.4	60.0
560.5	15506.3	1.0	-4.2	68.0
563.1	16310.3	.0	-6.6	61.0
539.9	17416.1	-1.7	-9.3	56.0
500.0	19412.1	-5.8	-11.7	63.0
459.5	21571.6	-10.7	-13.5	80.0
443.7	22455.0	-12.4	-14.4	85.0
440.7	22625.7	-12.4	-14.5	84.0
426.3	23460.8	-12.8	-22.2	45.0
418.8	23905.9	-13.4	-28.3	27.0
400.0	25048.9	-16.7	-28.8	34.0
382.6	26144.6	-18.6	-29.6	37.0
368.5	27062.3	-20.8	-32.2	35.0
347.8	28458.7	-24.6	-32.4	48.0
330.0	29710.2	-27.7	-38.1	36.0
314.3	30858.9	-29.9	-41.2	32.0
304.0	31638.0	-31.5	-40.3	41.0
300.0	31946.3	-32.2	-38.7	52.0
298.2	32086.1	-32.6	-38.0	58.0
291.8	32588.9	-33.2	-37.9	62.0
285.8	33068.7	-34.3	-40.0	56.0
273.8	34051.3	-37.1	-47.9	31.0
250.0	36102.3	-41.6		

UPPER AIR DATA
2270430008
TULA SITE

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84 1632 MDT
ASCENSION NO. 8

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

TABLE 14

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4112.8	876.1	29.6	14.6	40.0	1000.9	680.3	160.0	1.9	1.000292
4500.0	864.5	27.0	14.1	45.2	996.4	677.3	152.9	2.6	1.000290
5000.0	849.7	25.3	14.4	51.1	984.7	675.5	147.9	3.5	1.000290
5500.0	835.0	23.7	14.1	54.8	972.6	673.7	144.9	4.4	1.000286
6000.0	820.4	22.2	13.7	58.5	960.8	671.9	142.9	5.3	1.000282
6500.0	806.1	20.6	13.1	62.1	949.1	670.1	163.3	5.6	1.000278
7000.0	792.1	19.1	12.6	65.8	937.6	668.3	180.5	6.8	1.000274
7500.0	778.3	17.5	11.9	69.5	926.4	666.5	191.2	9.6	1.000269
8000.0	764.7	16.0	11.1	72.6	915.2	664.7	197.8	11.4	1.000264
8500.0	751.1	15.2	9.1	67.0	902.2	663.5	203.6	12.6	1.000254
9000.0	737.8	14.3	7.0	61.4	889.4	662.3	208.9	11.3	1.000244
9500.0	724.6	13.5	4.8	55.8	876.7	661.1	214.8	9.8	1.000235
10000.0	711.7	12.5	3.9	55.7	864.1	659.9	221.3	8.1	1.000230
10500.0	698.9	11.5	3.6	58.1	851.6	658.7	221.8	7.1	1.000227
11000.0	686.2	10.4	3.0	59.8	839.4	657.4	219.8	6.3	1.000223
11500.0	673.7	9.3	2.3	61.5	827.4	656.1	209.0	5.6	1.000219
12000.0	661.4	8.2	1.7	63.1	815.6	654.8	198.3	5.3	1.000215
12500.0	649.4	7.2	1.0	64.8	804.0	653.5	194.6	5.4	1.000211
13000.0	637.6	6.1	.3	66.4	792.5	652.2	194.1	5.3	1.000207
13500.0	625.9	5.1	-.5	67.0	780.8	651.0	191.8	4.8	1.000203
14000.0	614.3	4.0	-2.0	65.0	769.6	649.6	186.2	4.2	1.000198
14500.0	602.9	2.9	-3.5	62.8	758.6	648.2	189.4	3.7	1.000192
15000.0	591.7	1.8	-5.0	60.5	747.8	646.8	192.9	2.8	1.000188
15500.0	580.6	1.0	-4.2	67.9	735.7	646.0	188.6	2.3	1.000186
16000.0	569.8	.4	-5.7	63.7	723.7	645.2	171.8	2.5	1.000182
16500.0	559.1	-.3	-7.1	60.1	712.0	644.3	158.3	3.1	1.000177
17000.0	548.5	-1.1	-8.3	57.9	700.7	643.3	130.5	2.9	1.000173
17500.0	538.2	-1.9	-9.4	56.3	689.6	642.3	85.7	3.3	1.000169
18000.0	527.9	-2.9	-10.0	58.0	679.1	641.1	60.0	4.5	1.000166
18500.0	517.9	-3.9	-10.6	59.8	668.7	639.9	50.1	5.5	1.000163
19000.0	508.0	-5.0	-11.2	61.6	658.6	638.6	49.2	5.4	1.000160
19500.0	498.3	-6.0	-11.7	63.7	648.5	637.4	48.6	5.2	1.000156
20000.0	488.6	-7.1	-12.1	67.6	638.7	636.0	48.9	4.8	1.000155
20500.0	479.2	-8.3	-12.5	71.6	629.0	634.6	42.9	4.3	1.000153
21000.0	469.9	-9.4	-12.9	75.5	619.5	633.3	26.5	4.0	1.000150
21500.0	460.8	-10.5	-13.4	79.4	610.2	631.9	14.6	3.8	1.000148
22000.0	451.8	-11.5	-13.9	82.4	600.5	630.7	8.4	3.8	1.000145
22500.0	442.9	-12.4	-14.4	84.7	590.7	629.6	28.4	4.3	1.000143
23000.0	434.2	-12.6	-17.5	66.5	579.7	629.3	47.4	5.6	1.000138
23500.0	425.6	-12.9	-22.7	43.4	569.1	628.8	61.1	7.8	1.000132

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84 1632 MDT
ASCENSION NO. 8

UPPER AIR DATA
2270430008
TULA SITE

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

TABLE 14 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.2	-13.7	-28.4	27.6	559.8	627.7	68.4	11.8	1.000128
24500.0	408.9	-15.1	-28.5	30.6	551.8	626.0	71.4	16.5	1.000126
25000.0	400.8	-16.6	-28.8	33.7	543.8	624.2	72.0	22.2	1.000124
25500.0	392.7	-17.5	-29.1	35.2	534.9	623.1	73.3	26.5	1.000122
26000.0	384.9	-18.3	-29.5	36.6	525.9	622.0	75.4	29.6	1.000120
26500.0	377.1	-19.5	-30.6	36.2	517.5	620.7	77.9	29.8	1.000118
27000.0	369.4	-20.7	-32.0	35.1	509.5	619.2	80.5	29.2	1.000116
27500.0	361.9	-22.0	-32.1	39.1	501.7	617.5	80.6	28.1	1.000114
28000.0	354.5	-23.4	-32.2	43.7	494.1	615.9	78.4	26.9	1.000113
28500.0	347.2	-24.7	-32.6	47.6	486.6	614.2	73.3	26.0	1.000111
29000.0	340.0	-25.9	-34.8	42.8	478.9	612.6	67.3	26.6	1.000109
29500.0	332.9	-27.2	-37.1	38.0	471.4	611.1	62.9	28.2	1.000107
30000.0	326.0	-28.3	-38.9	35.0	463.6	609.7	61.6	31.0	1.000105
30500.0	319.1	-29.2	-40.2	33.2	455.6	608.5	59.6	31.5	1.000103
31000.0	312.4	-30.2	-41.0	33.6	447.9	607.3	56.6	30.7	1.000101
31500.0	305.8	-31.2	-40.4	39.4	440.2	606.0	52.0	28.8	1.000099
32000.0	299.3	-32.4	-38.4	54.3	432.9	604.6	48.0	27.9	1.000098
32500.0	292.9	-33.1	-38.0	61.3	425.0	603.7	44.4	27.6	1.000096
33000.0	286.7	-34.1	-39.7	56.9	417.7	602.4	44.4	28.2	1.000094
33500.0	280.5	-35.5	-43.2	45.0	411.1	600.6	45.3	28.7	1.000092
34000.0	274.4	-37.0	-47.4	32.3	404.7	598.8	47.5	29.1	1.000091
34500.0	268.4	-38.1	-50.9	24.2**	397.7	597.3	48.2	29.2	1.000089
35000.0	262.5	-39.2	-55.0	16.7**	390.9	595.9			1.000087
35500.0	256.8	-40.3	-60.6	9.1**	384.1	594.5			1.000086
36000.0	251.1	-41.4	-73.9	1.5**	377.5	593.1			1.000084

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4112.79 FEET MSL
14 AUG. 84
ASCENSION NO. 8 1632 MDT

MANDATORY LEVELS
2270430008
TULA SITE

GEODETIC COORDINATES
33.07436 LAT DEG
106.18294 LON DEG

TABLE 15

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4988.	25.3	14.4	51.	147.9	3.5
800.0	6724.	20.0	12.9	64.	171.6	5.9
750.0	8537.	15.1	8.9	67.	204.0	12.6
700.0	10446.	11.6	3.6	58.	222.0	7.2
650.0	12466.	7.2	1.0	65.	194.8	5.4
600.0	14613.	2.6	-3.9	62.	190.4	3.6
550.0	16909.	-1.0	-8.1	58.	137.7	2.9
500.0	19386.	-5.8	-11.7	63.	48.6	5.3
450.0	22067.	-11.7	-14.0	83.	12.4	3.8
400.0	25008.	-16.7	-28.8	34.	72.0	22.6
350.0	28257.	-24.2	-32.3	47.	75.4	26.4
300.0	31883.	-32.2	-38.7	52.	48.4	28.0
250.0	36024.	-41.6				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84 1632 MDT
ASCENSION NO. 6

SIGNIFICANT LEVEL DATA
2270440006
SALT SOTIM

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 16 Cont'd

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
877.8	4023.4	30.6	15.1	39.0
865.0	4453.2	27.4	13.0	41.0
850.0	4960.9	25.7	12.9	45.0
796.6	6821.1	20.2	11.4	57.0
763.6	8015.0	16.4	10.5	68.0
746.8	8637.6	15.4	9.7	69.0
743.8	8749.9	14.8	8.5	66.0
727.2	9378.2	14.2	8.4	68.0
724.4	9485.3	13.6	7.2	65.0
700.0	10431.8	11.3	5.2	66.0
695.5	10609.0	10.6	4.7	67.0
668.4	10890.4	10.7	2.8	58.0
651.2	12405.6	7.5	.9	63.0
630.2	13292.0	6.1	-1.8	57.0
561.2	16382.3	-.3	-8.5	54.0
558.6	16504.6	.0	-10.8	44.0
550.1	16908.3	-.4	-12.3	40.0
544.2	17191.5	-1.4	-10.7	49.0
541.6	17317.1	-1.6	-9.4	55.0
535.6	17608.7	-2.1	-9.9	55.0
515.9	18588.2	-2.5	-11.0	52.0
500.0	19401.4	-5.4	-12.5	57.0
477.4	20590.9	-7.9	-12.0	72.0
469.6	21011.7	-9.0	-16.1	56.0
467.1	21148.0	-7.7	-15.8	52.0
451.4	22022.2	-8.5	-18.3	45.0
442.7	22518.2	-9.4	-18.1	49.0
430.5	23226.5	-11.4	-19.5	51.0
415.3	24129.7	-14.0	-20.4	58.0
400.0	25064.1	-16.2	-20.5	69.0
393.1	25494.3	-17.7	-21.5	72.0
376.4	26558.4	-20.4	-24.3	71.0
365.7	27260.4	-21.3	-24.5	75.0
354.5	28012.2	-23.9	-26.2	81.0
341.6	28899.1	-26.4	-27.8	88.0
328.0	29861.9	-28.6	-28.9	97.0
314.4	30857.8	-30.2	-32.0	84.0
300.0	31951.6	-32.4	-36.7	65.0
297.5	32145.7	-33.0	-37.6	63.0
290.5	32695.8	-34.3	-38.5	65.0

[illegible] ALTITUDE [illegible] FEET [illegible]
14 AUG. [illegible]
ASCENSION NO. [illegible]

1632 MDT

[illegible] DATA
[illegible]
SALT SOTIN

GEODETIC COORDINATES
33.12355 LAT DEG
106.75907 LON DEG

TABLE 16 Cont'd

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
284.5	33176.1	-34.9	-39.4	63.0
267.1	34617.0	-36.1	-45.7	44.0
250.0	36106.7	-41.4		

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84
ASCENSION NO. 6 1632 MDT

UPPER AIR DATA
2270440006
SALT SOTIM

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 17

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4023.4	877.8	30.6	15.1	39.0	999.3	681.5	190.0	9.9	1.000293
4500.0	863.6	27.2	13.0	41.4	995.0	677.4	183.6	9.7	1.000285
5000.0	848.8	25.6	12.9	45.3	983.3	675.6	176.6	9.5	1.000282
5500.0	834.2	24.1	12.6	48.5	971.1	673.9	169.5	9.6	1.000279
6000.0	819.7	22.6	12.2	51.7	959.2	672.2	168.8	8.6	1.000275
6500.0	805.6	21.1	11.7	54.9	947.4	670.5	174.5	6.9	1.000272
7000.0	791.6	19.6	11.3	58.6	935.8	668.7	186.2	6.4	1.000268
7500.0	777.7	18.0	11.0	63.3	924.4	666.9	199.1	6.2	1.000265
8000.0	764.0	16.4	10.5	67.9	913.3	665.1	207.8	6.3	1.000261
8500.0	750.5	15.6	9.9	68.8	899.8	664.1	215.6	6.4	1.000256
9000.0	737.1	14.6	8.5	66.8	887.5	662.7	211.5	5.2	1.000249
9500.0	724.0	13.6	7.1	65.0	875.0	661.4	205.2	4.0	1.000242
10000.0	711.0	12.3	6.1	65.5	863.2	659.9	201.9	3.9	1.000236
10500.0	698.3	11.0	5.0	66.4	851.9	658.3	199.8	4.1	1.000231
11000.0	685.6	10.5	2.7	58.4	838.7	657.4	203.1	5.5	1.000222
11500.0	673.2	9.4	2.1	60.0	826.7	656.2	205.0	6.5	1.000218
12000.0	661.0	8.4	1.4	61.7	814.8	654.9	206.4	7.2	1.000214
12500.0	648.9	7.4	.6	62.4	802.9	653.7	207.5	6.3	1.000210
13000.0	637.0	6.6	-.9	59.0	790.7	652.7	205.2	4.4	1.000204
13500.0	625.3	5.7	-2.2	56.6	778.8	651.5	191.3	2.4	1.000199
14000.0	613.7	4.6	-3.3	56.3	767.3	650.3	179.5	2.4	1.000194
14500.0	602.3	3.6	-4.4	55.8	756.0	649.0	185.5	2.6	1.000190
15000.0	591.1	2.6	-5.5	55.3	744.9	647.7	193.1	2.9	1.000186
15500.0	580.1	1.5	-6.5	54.9	733.9	646.5	203.1	2.7	1.000182
16000.0	569.3	.5	-7.6	54.4	723.1	645.2	220.3	2.2	1.000179
16500.0	558.7	-.0	-10.7	44.4	711.3	644.4	234.8	1.9	1.000172
17000.0	548.2	-.7	-11.7	42.9	699.8	643.6	245.5	1.5	1.000169
17500.0	537.8	-1.9	-9.7	55.0	689.3	642.3	119.2	1.2	1.000169
18000.0	527.6	-2.3	-10.3	53.8	677.2	641.8	100.0	4.0	1.000165
18500.0	517.6	-2.5	-10.9	52.3	664.9	641.6	98.8	7.3	1.000162
19000.0	507.8	-4.0	-11.8	54.5	655.9	639.8	98.1	10.1	1.000159
19500.0	498.1	-5.6	-12.5	58.2	647.4	637.8	96.9	11.2	1.000157
20000.0	488.5	-6.7	-12.2	64.5	637.4	636.6	91.2	12.0	1.000155
20500.0	479.1	-7.7	-12.1	70.9	627.6	635.3	74.3	13.2	1.000153
21000.0	469.8	-9.0	-16.0	56.4	618.7	633.7	61.2	15.3	1.000147
21500.0	460.7	-8.0	-16.8	49.2	604.5	634.8	52.0	18.3	1.000144
22000.0	451.8	-8.5	-18.2	45.2	593.9	634.2	45.5	21.6	1.000140
22500.0	443.0	-9.4	-18.1	48.9	584.3	633.1	46.7	20.7	1.000138
23000.0	434.4	-10.8	-19.0	50.4	576.0	631.4	51.0	19.5	1.000136
23500.0	425.8	-12.2	-19.7	53.1	567.8	629.7	64.8	18.5	1.000134

STATION ALTITUDE 4023.37 FEET MSL
14 AUG. 84 1632 MDT
ASCENSION NO. 6

UPPER AIR DATA
2270440006
SALT SOTIM

TABLE 17 Cont'd

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	417.4	-13.6	-20.3	57.0	559.7	627.9	74.7	19.6	1.000132
24500.0	409.2	-14.9	-20.4	62.4	551.3	626.4	80.0	21.2	1.000130
25000.0	401.0	-16.0	-20.5	68.2	542.8	625.0	80.2	21.4	1.000128
25500.0	393.0	-17.7	-21.5	72.0	535.4	623.0	80.7	21.3	1.000126
26000.0	385.1	-19.0	-22.8	71.5	527.3	621.4	81.5	21.1	1.000123
26500.0	377.3	-20.3	-24.1	71.1	519.3	619.8	79.2	21.6	1.000121
27000.0	369.6	-21.0	-24.4	73.5	510.2	618.9	76.6	22.2	1.000119
27500.0	362.1	-22.1	-25.1	76.9	502.1	617.5	73.6	23.1	1.000117
28000.0	354.7	-23.9	-26.2	80.9	495.3	615.3	71.9	23.7	1.000115
28500.0	347.3	-25.3	-27.1	84.8	487.8	613.6	71.9	23.5	1.000113
29000.0	340.1	-26.6	-27.9	88.9	480.3	611.9	72.6	23.6	1.000111
29500.0	333.0	-27.8	-28.5	93.6	472.5	610.5	74.3	24.0	1.000109
30000.0	326.1	-28.8	-29.3	95.2	464.6	609.1	76.3	23.9	1.000107
30500.0	319.2	-29.6	-30.9	88.7	456.4	608.1	78.6	23.3	1.000105
31000.0	312.5	-30.5	-32.6	81.5	448.4	607.0	79.5	21.2	1.000102
31500.0	305.9	-31.5	-34.7	72.8	440.7	605.7	78.2	18.9	1.000100
32000.0	299.4	-32.5	-36.9	64.5	433.3	604.4	66.8	17.2	1.000098
32500.0	293.0	-33.8	-38.2	64.3	426.4	602.5	56.9	18.0	1.000096
33000.0	286.7	-34.7	-39.1	63.7	418.7	601.7	50.9	20.1	1.000095
33500.0	280.5	-35.6	-40.8	58.7	411.3	600.5	49.7	22.5	1.000093
34000.0	274.4	-36.7	-42.9	52.1	404.3	599.1	45.9	24.9	1.000091
34500.0	268.5	-37.8	-45.2	45.5	397.4	597.6	42.3	26.9	1.000089
35000.0	262.6	-38.9	-49.1	32.7**	390.6	596.2			1.000087
35500.0	256.8	-40.1	-55.1	17.9**	383.8	594.8			1.000086
36000.0	251.2	-41.2	-69.0	3.2**	377.2	593.4			1.000084

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4027.37 FEET MSL
14 AUG. 84
ASCENSION NO. 1632 MDT

MANDATORY LEVELS
2270440006
SALT SOTIM

GEODETIC COORDINATES
33.12355 LAT DEG
106.35907 LON DEG

TABLE 18

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4958.	25.7	12.9	45.	177.2	9.5
800.0	6695.	20.6	11.5	56.	178.9	6.7
750.0	8511.	15.6	9.9	69.	215.5	6.4
700.0	10422.	11.3	5.2	66.	199.2	3.9
650.0	12443.	7.4	.9	63.	207.4	6.4
600.0	14593.	3.4	-4.6	56.	187.2	2.7
550.0	16892.	-.4	-12.3	40.	243.1	1.6
500.0	19375.	-5.4	-12.5	57.	97.1	10.9
450.0	22068.	-8.6	-18.2	46.	45.4	21.7
400.0	25023.	-16.2	-20.5	69.	80.2	21.5
350.0	28268.	-24.9	-26.7	83.	71.9	23.6
300.0	31859.	-32.4	-36.7	65.	68.3	17.4
250.0	36029.	-41.4				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

NO
FIC