```
 DP0678  DESIGNATION -  MCCAULEY
 DP0678  PID         -  DP0678
 DP0678  STATE/COUNTY-  TX/LUBBOCK
 DP0678  USGS QUAD   -  SHALLOWATER (1976)
 DP0678
 DP0678  HORZ DATUM  -  NAD 83 (1993)
 DP0678  VERT DATUM  -  NAVD 88
 DP0678
 DP0678  POSITION    -  33 38 04.27358(N)     101 52 43.05048(W)
ADJUSTED
 DP0678  93 minus 83 -       -00.00682              +00.00810
ADJUSTED
 DP0678  83 minus 27 -       +00.29340              +01.61338
ADJUSTED
 DP0678
 DP0678
 DP0678  HEIGHT      -       993.9     (meters)     3261.      (feet)
V_VERT ANG
 DP0678  88 minus 29 -        +0.4     (+/- 2 cm)
VERTCON
 DP0678. (NOTE - For assistance in applying shifts see file readme.dat)
 DP0678
*************************************************************************
 DP0678
 DP0678  LAPLACE CORR-          -2.42
DEFLEC93
 DP0678  GEOID HEIGHT-         -25.28
GEOID93
 DP0678
 DP0678
 DP0678  HORZ ORDER  -  FIRST
 DP0678
 DP0678
 DP0678.The horizontal position was established by classical geodetic
methods
 DP0678.and adjusted by the National Geodetic Survey in February 1996.
 DP0678
 DP0678.The NGVD 29 orthometric height was determined by vertical angle
observations.
 DP0678.The NAVD 88 height was computed by applying the VERTCON shift
value to
 DP0678.the NGVD 29 height.
 DP0678
 DP0678.The Laplace correction was computed from DEFLEC93 derived
deflections.
 DP0678
 DP0678.The geoid height was determined by GEOID93.
 DP0678
 DP0678;                      North          East       Scale
Converg.
 DP0678;SPC TXNC     -  2,223,259.610   286,613.803 0.99992424     -1 50
33.7  MT
 DP0678;UTM  14      -  3,725,350.672   232,988.392 1.00047904     -1 35
43.4  MT
 DP0678
 DP0678:                 Primary Azimuth Mark                     Grid Az
 DP0678:SPC TXNC     -   MCCAULEY RM 1 AZIMUTH                    190 40
36.8
 DP0678:UTM  14      -   MCCAULEY RM 1 AZIMUTH                    190 25
46.5
 DP0678
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 DP0678|--
-----|
 DP0678| Pid     Reference Object                        Distance       Geod.
AZ  |
 DP0678|
dddmmss.s
 DP0678|         LUBBOCK MUN AIRPORT AIR BCN
0603723.2
 DP0678| DP0669 IDALOU MUNICIPAL TANK                  APPROX.18.8 KM
0792508.3
 DP0678| DP0666 LORENZO MUNICIPAL TANK                 APPROX.32.2 KM
0824742.9
 DP0678| DP0672 SOUTHEAST LUBBOCK MUNICIPAL TK         APPROX. 7.3 KM
1453321.7
 DP0678|         NORTH LUBBOCK MUN WATER TK
1480731.6
 DP0678| DP0676 HOTEL LUBBOCK SILVER TANK              APPROX. 6.2 KM
1525321.4
 DP0678| DP0675 LUBBOCK MUN HS TIP OF DOME             APPROX. 6.5 KM
1650844.9
 DP0678| DP0674 LUBBOCK MUNICIPAL STANDPIPE            APPROX. 6.5 KM
1672031.6
 DP0678| DP0677 LUBBOCK W TEX INST ADMIN E CUP         APPROX. 5.7 KM
1755159.5
 DP0678| DP0671 LUBBOCK W TEX INST ADMIN W CUP         APPROX. 5.7 KM
1764346.3
 DP0678|         LUBBOCK W TEX TECH COL TK
1772552.2
 DP0678|         MCCAULEY RM 1 AZIMUTH
1885003.1
 DP0678|         MCCAULEY RM 3                         46.142 METERS 21731

 DP0678          MCCAULEY RM 2                         21.325 METERS 32455

 DP0678|-------------------------------------------------
-----|
 DP0678
 DP0678_STATION MARK IS A TRIANGULATION STATION DISK
 DP0678_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
 DP0678
 DP0678  HISTORY     - Year Condition              Recov. By
 DP0678  HISTORY     - 1932 STATION MONUMENTED     COAST AND GEODETIC
SURVEY
 DP0678  HISTORY     - 1935 GOOD                   COAST AND GEODETIC
SURVEY
 DP0678  HISTORY     - 1938 GOOD                   TEXAS HIGHWAY
DEPARTMENT
 DP0678  HISTORY     - 1943 GOOD                   COAST AND GEODETIC
SURVEY
 DP0678  HISTORY     - 1947 GOOD                   COAST AND GEODETIC
SURVEY
 DP0678  HISTORY     - 1955 GOOD                   COAST AND GEODETIC
SURVEY
 DP0678  HISTORY     - 1956 GOOD                   US GEOLOGICAL SURVEY
 DP0678  HISTORY     - 1966 GOOD                   US AIR FORCE
 DP0678  HISTORY     - 1975 GOOD                   NATIONAL GEODETIC
SURVEY
 DP0678  HISTORY     - 1978 GOOD                   DEFENSE MAP AGENCY
 DP0678  HISTORY     - 1982 GOOD                   NATIONAL GEODETIC
SURVEY
 DP0678
```

DP0678 STATION DESCRIPTION
DP0678
DP0678'DESCRIBED BY COAST AND GEODETIC SURVEY 1932 (CIA)
DP0678'THREE AND ONE-HALF MILES N AND 2 MILES W OF THE COURTHOUSE
DP0678'IN LUBBOCK, IN SECTION 12, ABOUT 0.5 MILE W AND 0.1 MILE S OF
DP0678'THE SE CORNER OF SECTION 2, BLOCK D4, ON LAND OWNED BY JOHN
DP0678'MC CAULEY, 63.85 METERS (209.5 FEET) SW OF THE SW CORNER OF
DP0678'A YELLOW BUNGALOW, ON HIGH SANDY GROUND AT THE NW END OF A
DP0678'SMALL DRY RESERVOIR, IN PASTURE LAND. IT IS 22.27 METERS
DP0678'(73.0 FEET) W OF AN E-W FENCE, AND 17 METERS (56 FEET) E OF
DP0678'AN OBLIQUE FENCE RUNNING NE AND SW. TO REACH STATION FROM
DP0678'LUBBOCK GO W ON BROADWAY TO COLLEGE AVENUE (STATE HIGHWAY 7).
DP0678'TURN N AND GO 1.4 MILES TO POINT WHERE HIGHWAY SWINGS TO
DP0678'LEFT AND FOLLOWS RAILROAD. LEAVE HIGHWAY AND CONTINUE N
DP0678'ACROSS RAILROAD 1.9 MILES TO FARM ROAD LEADING TO LEFT.
DP0678'TURN W ON FARM ROAD AND GO 0.35 MILE, THEN N 0.1 MILE AND W
DP0678'0.1 MILE TO YELLOW BUNGALOW AND STATION.
DP0678'
DP0678'SURFACE, UNDERGROUND, AND REFERENCE MARKS ARE STANDARD DISKS
DP0678'IN CONCRETE.
DP0678'
DP0678'REFERENCE MARK NO. 1 IS IN AN E-W FENCE LINE, 0.24 MILE
DP0678'(BY SPEEDOMETER) FROM STATION, S 08 DEG 50 MIN W.
DP0678'
DP0678'REFERENCE MARK NO. 2 IS IN THE OBLIQUE FENCE LINE 21.2 METERS
DP0678'(70 FEET) FROM STATION, N 35 DEG 04 MIN W.
DP0678'
DP0678'OTHER BEARINGS FROM STATION ARE LUBBOCK, MUNICIPAL STANDPIPE,
DP0678'S 12 DEG 39 MIN E. LUBBOCK, WEST TEXAS INSTITUTE OF
DP0678'TECHNOLOGY, WATER TANK, FINIAL, S 02 DEG 34 MIN E.
DP0678
DP0678 STATION RECOVERY (1935)
DP0678
DP0678'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1935 (CIA)
DP0678'STATION RECOVERED, ALL MARKS IN GOOD CONDITION. IT IS 3-1/2
DP0678'MILES N AND 2 MILES W OF THE COURTHOUSE IN LUBBOCK. ABOUT
DP0678'0.5 MILE W AND 0.1 MILE S OF THE SE CORNER OF SECTION 2,
DP0678'BLOCK D4, ON LAND OWNED BY JOHN MC CAULEY, 210 FEET SW OF THE
DP0678'SW CORNER OF A YELLOW BUNGALOW ON HIGH SANDY GROUND, AND 56
DP0678'FEET E OF THE NE-SW FENCE LINE.
DP0678'
DP0678'REFERENCE MARK NO. 1 (1932) IS 420 YARDS S OF STATION IN
DP0678'E-W FENCE LINE.
DP0678'
DP0678'REFERENCE MARK NO. 2 (1932) IS 21.325 METERS (69.96 FEET)
DP0678'W OF STATION IN NE-SW FENCE LINE.
DP0678'
DP0678'REFERENCE MARK NO. 3 (1935) IS 46.142 METERS (151.39 FEET)
DP0678'SW OF STATION AT E-W N-S FENCE CORNER.
DP0678'
DP0678'STATION IS REACHED FROM LUBBOCK BY GOING W ON BROADWAY TO
DP0678'COLLEGE AVENUE (ROUTE 7). TURN RIGHT (N) AND GO 1.4 MILES
DP0678'TO POINT WHERE HIGHWAY SWINGS TO LEFT AND FOLLOWS RAILROAD.
DP0678'LEAVE HIGHWAY 7 AND CONTINUE ACROSS RAILROAD FOR 1.9 MILES
DP0678'TO FARM ROAD LEADING TO LEFT. TURN LEFT (W) ON FARM ROAD
DP0678'AND GO 0.35 MILE THENCE N FOR 0.1 MILE THENCE W FOR 0.1
DP0678'MILE TO BUNGALOW AND STATION IN FIELD TO S.
DP0678
DP0678 STATION RECOVERY (1938)
DP0678
DP0678'RECOVERY NOTE BY TEXAS HIGHWAY DEPARTMENT 1938

DP0678'DESCRIPTION IS SATISFACTORY. STATION AND REFERENCE MARKS
DP0678'WERE FOUND IN GOOD CONDITION. NO ATTEMPT WAS MADE TO RECOVER
DP0678'THE AZIMUTH MARK.
DP0678
DP0678   STATION RECOVERY (1943)
DP0678
DP0678'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1943 (JM)
DP0678'ORIGINAL DESCRIPTION ADEQUATE.
DP0678
DP0678   STATION RECOVERY (1947)
DP0678
DP0678'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1947 (CAN)
DP0678'DESCRIPTION ADEQUATE. STATION AND REFERENCE MARK IN GOOD
DP0678'CONDITION.
DP0678
DP0678   STATION RECOVERY (1955)
DP0678
DP0678'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1955 (WTJ)
DP0678'STATION AND REFERENCE MARKS 2 AND 3 RECOVERED AS DESCRIBED
DP0678'IN GOOD CONDITION. REFERENCE MARK 1 WAS NOT RECOVERED, BELIEVED
DP0678'DESTROYED DURING CULTIVATION.
DP0678
DP0678   STATION RECOVERY (1956)
DP0678
DP0678'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1956
DP0678'STATION AND REFERENCE MARKS WERE FOUND IN GOOD CONDITION.
DP0678'A RECENTLY SET POWER POLE IS NOW IN LINE OF SIGHT BETWEEN
DP0678'STATION MARK AND REFERENCE MARK NO. 3. REFERENCE MARK NO.
DP0678'1 WAS FOUND UNDER WIND BLOWN SAND IN E-W FENCE LINE. SHIFTING
DP0678'SAND WILL PROBABLY COVER THIS MARK AGAIN.
DP0678'
DP0678'FOLLOWING IS A NEW ROUTE DESCRIPTION--FROM POST OFFICE IN
DP0678'LUBBOCK, PROCEED WEST ON BROADWAY FOR 1.6 MILES TO COLLEGE
DP0678'AVE. TURN RIGHT AND GO NORTH FOR 1.5 MILES. CROSS U.S. HIGHWAY
DP0678'84 (CLOVIS ROAD) AND CONTINUE NORTH FOR 2.4 MILES. TURN
DP0678'LEFT ON T ROAD WEST AND PROCEED 0.4 MILES TO ENTRANCE OF HILL
DP0678'CREST COUNTRY CLUB. GO SOUTH ON DIRT ROAD 0.3 MILE, THEN
DP0678'WEST AT RIGHT ANGLE BEND AND PROCEED 0.1 MILE TO TOP OF SMALL
DP0678'HILL AND STATION.
DP0678
DP0678   STATION RECOVERY (1966)
DP0678
DP0678'RECOVERY NOTE BY US AIR FORCE 1966 (DEA)
DP0678'THE STATION WAS FOUND AS DESCRIBED.
DP0678
DP0678   STATION RECOVERY (1975)
DP0678
DP0678'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975 (ARB)
DP0678'THE STATION AND REFERENCE MARKS 2 AND 3 WERE FOUND IN GOOD
DP0678'CONDITION. NO ATTEMPT WAS MADE TO RECOVER THE AZIMUTH MARK.
DP0678'
DP0678'THE FOLLOWING IS A NEW DESCRIPTION--
DP0678'
DP0678'FROM THE POST OFFICE IN LUBBOCK PROCEED WEST ON 15TH ST. 1.6
DP0678'MILES TO UNIVERSITY AVENUE. TURN RIGHT AND GO NORTH 1.7
DP0678'MILES. CROSS U.S. HIGHWAY 84 (CLOVIS ROAD) AND CONTINUE
DP0678'NORTH 1.75 MILES TO THE SOUTH DRIVEWAY OF THE LUBBOCKSTATE
DP0678'SCHOOL. TURN LEFT INTO THE DRIVEWAY AND PROCEED 0.7 MILES
DP0678'AROUND DRIVE TO BRICK DRIVEWAY ON LEFT. TURN LEFT AND FOLLOW
DP0678'DRIVE TO GREENHOUSE, NURSERY, AND STATION.
DP0678'

DP0678'STATION IS A STANDARD TRIANGULATION STATION DISK SET IN
DP0678'A CONCRETE CYLINDER ONE INCH ABOVE THE SURFACE OF THE GROUND.
DP0678'33.5 FT. NORTH OF THE NORTHWEST CORNER OF THE CONCRETE BASE
DP0678'OF A TRANSFORMER AT THE NORTHEAST CORNER OF A CHAINLINK FENCE
DP0678'AROUND A CORREGATED METAL BUILDING.
DP0678'
DP0678'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--ABOUT 3
DP0678'MILES NORTHWEST OF LUBBOCK
DP0678
DP0678 STATION RECOVERY (1978)
DP0678
DP0678'RECOVERY NOTE BY DEFENSE MAP AGENCY 1978 (P)
DP0678'MC CAULEY RECOVERED GOOD.
DP0678'
DP0678'NO. 2 RECOVERED GOOD.
DP0678'
DP0678'NO. 2 RECOVERED GOOD.
DP0678'
DP0678'STATION NOW LOCATED AT THE LUBBOCK STATE SCHOOL, ABOUT 0.4 MILE
DP0678'WEST OF THE ADMINISTRATION BLDG. ATOP THE SMALL HILL AT THE
DP0678'PLAYGROUND AND GREENHOUSE.
DP0678'
DP0678'DISTANCE AND DIRECTION FROM NEAREST TOWN--NW OF LUBBOCK.
DP0678
DP0678 STATION RECOVERY (1982)
DP0678
DP0678'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982 (RHK)
DP0678'THE STATION, REFERENCE MARK NO 1, NO 2, AND NO 3 WERE RECOVERED
IN
DP0678'GOOD CONDITION AS DESCRIBED IN 1956.

NGS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000

678 **********
678 DESIGNATION - MCCAULEY
678 PID - DP0678
678 STATE/COUNTY- TX/LUBBOCK
678 USGS QUAD - SHALLOWATER (1976)

NAD 27 INFO

678
678 *CURRENT SURVEY CONTROL
678
678* NAD 83(1993)- 33 38 04.27358(N) 101 52 43.05048(W) ADJUSTED
678* NAVD 88 - 993.9 (meters) 3261. (feet) VERTCON
678
678 LAPLACE CORR- -2.42 (seconds) DEFLEC99
678 GEOID HEIGHT- -24.97 (meters) GEOID99
678
678 HORZ ORDER - FIRST
678
678.The horizontal coordinates were established by classical geodetic methods
678.and adjusted by the National Geodetic Survey in February 1996.
678
678.The NAVD 88 height was computed by applying the VERTCON shift value to
678.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
678
678.The Laplace correction was computed from DEFLEC99 derived deflections.
678
678.The geoid height was determined by GEOID99.
678
678; North East Units Scale Converg.
678;SPC TXNC - 2,223,259.610 286,613.803 MT 0.99992424 -1 50 33.7
678;UTM 14 - 3,725,350.672 232,988.392 MT 1.00047904 -1 35 43.4
678
678: Primary Azimuth Mark Grid Az
678:SPC TXNC - MCCAULEY RM 1 AZIMUTH 190 40 36.8
678:UTM 14 - MCCAULEY RM 1 AZIMUTH 190 25 46.5
678

678	PID	Reference Object	Distance	Geod. Az
678				dddmmss.s
678		LUBBOCK MUN AIRPORT AIR BCN		0603723.2
678	DP0672	SOUTHEAST LUBBOCK MUNICIPAL TK	APPROX. 7.3 KM	1453321.7
678		NORTH LUBBOCK MUN WATER TK		1480731.6
678	DP0676	HOTEL LUBBOCK SILVER TANK	APPROX. 6.2 KM	1525321.4
678	DP0675	LUBBOCK MUN HS TIP OF DOME	APPROX. 6.5 KM	1650844.9
678	DP0674	LUBBOCK MUNICIPAL STANDPIPE	APPROX. 6.5 KM	1672031.6
678	DP0677	LUBBOCK W TEX INST ADMIN E CUP	APPROX. 5.7 KM	1755159.5
678	DP0671	LUBBOCK W TEX INST ADMIN W CUP	APPROX. 5.7 KM	1764346.3
678		LUBBOCK W TEX TECH COL TK		1772552.2

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678          MCCAULEY RM 1 AZIMUTH                                    1885003.1
             MCCAULEY RM 3                          46.142 METERS 21731
             MCCAULEY RM 2                          21.325 METERS 32455
678 ------------------------------------------------------------------------
678
678                          SUPERSEDED SURVEY CONTROL
678
678  NAD 83(1986)-   33 38 04.28040(N)     101 52 43.04238(W) AD(        ) 1
678  NAD 27       -   33 38 03.98700(N)     101 52 41.42900(W) AD(        ) 1
678  NGVD 29      -         993.5     (m)          3260.      (f) VERT ANG
678
```

TWARE: Corpscon for Windows 5.11.05
ntal Datum: State Plane, NAD27
ontal Zone: Texas North Central - 4202
izontal Units: U.S. Survey Feet
tical Datum: NGVD29
tical Units: U.S. Survey Feet
, 667778.80766, 743655.81714, 3260.00000

EAST NORTH

```
 DP0297  DESIGNATION -  J 71
 DP0297  PID         -  DP0297
 DP0297  STATE/COUNTY-  TX/LUBBOCK
 DP0297  USGS QUAD   -  SLATON (1977)
 DP0297
 DP0297  HORZ DATUM  -  NAD 83 (1993)
 DP0297  VERT DATUM  -  NAVD 88
 DP0297
 DP0297  POSITION    -  33 28 29.05197(N)    101 41 45.68379(W)
ADJUSTED
 DP0297  93 minus 83 -       -00.00810             +00.00827
ADJUSTED
 DP0297  83 minus 27 -       +00.31607             +01.57652
ADJUSTED
 DP0297
 DP0297
 DP0297  HEIGHT      -       958.516  (meters)    3144.73   (feet)
ADJUSTED
 DP0297  88 minus 29 -        +0.360                                  ADJ
UNCH
 DP0297  DY minus 88 -        -1.232
COMPUTED
 DP0297. (NOTE - For assistance in applying shifts see file readme.dat)
 DP0297
*********************************************************************
 DP0297
 DP0297  LAPLACE CORR-          -2.24
DEFLEC93
 DP0297  GEOID HEIGHT-         -25.29
GEOID93
 DP0297  ELLIP HEIGHT-         933.586
 DP0297  X           -  -1,079,763.092
 DP0297  Y           -  -5,215,801.792
 DP0297  Z           -   3,498,512.305
 DP0297  MODELED GRAV-     979,319.2
NAVD88
 DP0297
 DP0297
 DP0297  HORZ ORDER  -  SECOND
 DP0297  VERT ORDER  -  FIRST     CLASS 2
 DP0297  ELLP ORDER  -  FIFTH     CLASS 1
 DP0297
 DP0297
 DP0297.The horizontal position was established by classical geodetic
methods
 DP0297.and adjusted by the National Geodetic Survey in February 1996.
 DP0297
 DP0297.The orthometric height was determined by differential leveling
 DP0297.and adjusted by the National Geodetic Survey in June 1991.
 DP0297
 DP0297.The dynamic height is computed by dividing the NAVD 88
 DP0297.geopotential number by the normal gravity value computed on the
 DP0297.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DP0297.degrees latitude (G = 980.6199 gals.).
 DP0297
 DP0297.The Laplace correction was computed from DEFLEC93 derived
deflections.
 DP0297
 DP0297.The geoid height was determined by GEOID93.
 DP0297
 DP0297.The ellipsoidal height was determined by GPS observations
```

DP0297.and referenced to NAD 83.
DP0297
DP0297.The X, Y, and Z were computed from the position and the ellipsoidal ht.
DP0297
DP0297.The modeled gravity was interpolated from observed gravity values.
DP0297
DP0297;   North   East   Scale   Converg.
DP0297;SPC TXNC   - 2,205,017.060   303,006.732 0.99989980   -1 44 35.1 MT
DP0297;UTM 14   - 3,707,170.861   249,469.668 1.00037389   -1 29 16.1 MT
DP0297
DP0297_STATION MARK IS A BENCH MARK DISK
DP0297_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
DP0297_THE MARK IS STAMPED: J 71 1930 3143.550
DP0297_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
DP0297+STABILITY: SURFACE MOTION
DP0297_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
DP0297+SATELLITE: SATELLITE OBSERVATIONS - June 30, 1989
DP0297
DP0297 HISTORY   - Year Condition   Recov. By
DP0297 HISTORY   - 1930 STATION MONUMENTED   COAST AND GEODETIC SURVEY
DP0297 HISTORY   - 1932 GOOD   COAST AND GEODETIC SURVEY
DP0297 HISTORY   - 1934 GOOD   NATIONAL GEODETIC SURVEY
DP0297 HISTORY   - 1982 GOOD   NATIONAL GEODETIC SURVEY
DP0297 HISTORY   - 1988 GOOD   NATIONAL GEODETIC SURVEY
DP0297 HISTORY   - 1989 GOOD   NATIONAL GEODETIC SURVEY
DP0297
DP0297   STATION DESCRIPTION
DP0297
DP0297'DESCRIBED BY COAST AND GEODETIC SURVEY 1932 (CIA)
DP0297'ABOUT 1.2 MILES SE OF POSEY, ON PANHANDLE AND SANTA FE RAILWAY,
DP0297'AT NW END OF LARGEST CUT BETWEEN LUBBOCK AND SLATON, 51 FEET
DP0297'SW OF TRACK, AND 25 FEET NW OF MILEPOST 686.
DP0297'
DP0297'MARK IS STANDARD BENCH MARK DISK, STAMPED J 71 1930, SET IN
DP0297'TOP OF CONCRETE POST. STATION B.M. J71 ECCENTRIC IS 4.943
DP0297'METERS (16.22 FEET) FROM STATION N 24 DEG 04 MIN E.
DP0297
DP0297   STATION RECOVERY (1934)
DP0297
DP0297'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1934
DP0297'1.2 MI SE FROM POSEY.
DP0297'1.2 MILES SOUTHEAST ALONG THE PANHANDLE AND SANTA FE RAILWAY FROM
DP0297'POSEY, LUBBOCK COUNTY, 25 FEET NORTHWEST OF MILEPOST 686, AT THE
DP0297'NORTHWEST END OF THE LARGEST CUT BETWEEN LUBBOCK AND SLATON, 51 FEET
DP0297'SOUTHWEST OF THE TRACK, AND SET IN THE TOP OF A CONCRETE POST
DP0297'PROJECTING ABOUT 1 INCH ABOVE GROUND.
DP0297
DP0297   STATION RECOVERY (1982)

DP0297
DP0297'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982
DP0297'RECOVERED IN GOOD CONDITION, NEW DESCRIPTION FOLLOWS. 18.3 KM
(11.35
DP0297'MI) SOUTHEASTERLY ALONG THE SANTA FE RAILROAD FROM THE RAILROAD
DP0297'STATION IN LUBBOCK, 17.4 METERS (57.1 FT) NORTHEAST OF THE
CENTERLINE
DP0297'OF THE NORTHWEST BOUND LANES OF THE HIGHWAY, 17.1 METERS (56.1
FT)
DP0297'WEST OF RAILROAD MILEPOST 686, 14.9 METERS (48.9 FT) SOUTHWEST
OF THE
DP0297'NEAR RAIL, 10.1 METERS (33.1 FT) SOUTHEAST OF THE MOST WESTERLY
1 OF 2
DP0297'UTILITY POLES AND 4.0 METERS (13.1 FT) SOUTHEAST OF AN
UNDERGROUND
DP0297'CABLE WARNING SIGNPOST.
DP0297'THE MARK IS 0.3 METERS NW FROM A WITNESS POST.
DP0297'THE MARK IS ABOVE LEVEL WITH THE HIGHWAY.
DP0297
DP0297 STATION RECOVERY (1988)
DP0297
DP0297'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1988 (LDA)
DP0297'THE STATION IS LOCATED ABOUT 6.4 KM (4.0 MI)
DP0297'NORTHEAST OF SLAYTON, 19.3 KM (12.0 MI) SOUTHEAST OF LUBBOCK ON
DP0297'HIGHWAY RIGHT-OF-WAY AND BETWEEN THE HIGHWAY AND RAILROAD TRACK.
DP0297'THE MARK IS ALSO 13.4 KM (8.3 MI) SOUTHEAST ON US HIGHWAY 84
DP0297'FROM THE JUNCTION OF US HIGHWAY 84 AND LOOP 289 ON SOUTHEAST
SIDE
DP0297'OF LUBBOCK.
DP0297'OWNERSHIP--TEXAS DEPARTMENT OF HIGHWAYS, PO BOX 2708, AMARILLO
TX
DP0297'79105, PHONE 806-355-5671.
DP0297'
DP0297'TO REACH THE STATION FROM THE JUNCTION OF US HIGHWAY 84 AND FARM
DP0297'ROAD 41 ON THE WEST SIDE OF SLAYTON, GO NORTH ON US HIGHWAY 84
FOR
DP0297'2.7 KM (1.65 MI) TO AN OVERPASS. CONTINUE NORTHWEST ON US
HIGHWAY
DP0297'84 FOR 3.3 KM (2.05 MI) TO THE STATION ON THE RIGHT AT RAILROAD
DP0297'MILEPOST 686.
DP0297'
DP0297'THE STATION MARK IS A STANDARD CGS BENCH MARK DISK STAMPED---J
71
DP0297'1930---, SET IN THE TOP OF A 30 CM SQUARE CONCRETE POST
PROJECTING
DP0297'30 CM. LOCATED 17.5 METERS (57.4 FT) NORTHEAST OF THE CENTER OF
DP0297'THE NORTHBOUND LANES OF US HIGHWAY 84, 17.2 METERS (56.4 FT)
WEST
DP0297'OF RAILROAD MILEPOST 686, 14.9 METERS (48.9 FT) SOUTHWEST OF
DP0297'SOUTHWEST RAIL OF TRACKS, 10.0 METERS (32.8 FT) SOUTHEAST OF
DP0297'UTILITY POLE 4, 3.9 METERS (12.8 FT) SOUTHEAST OF CABLE ROUTE
POST
DP0297'AND 0.4 METER (1.3 FT) NORTHWEST OF A FIBERGLASS WITNESS POST.
DP0297'
DP0297'TRIMBLE GPS SURVEY, FAA AIRPORTS, NORTHWEST TEXAS.
DP0297'
DP0297'THIS STATION IS SUITABLE FOR GPS SURVEYS.
DP0297'
DP0297'DESCRIBED BY D.A. BOWLING.
DP0297
DP0297 STATION RECOVERY (1989)

DP0297
DP0297'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1989
DP0297'RECOVERED IN GOOD CONDITION.
1 National Geodetic Survey, Retrieval Date = APRIL 19, 1996

NGS Data Sheet

SE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000

297 **********
297 DESIGNATION - J 71
297 PID - DP0297
297 STATE/COUNTY- TX/LUBBOCK
297 USGS QUAD - SLATON (1977)

NAD 27 INFO

297
297 *CURRENT SURVEY CONTROL
297
297* NAD 83(1993)- 33 28 29.05197(N) 101 41 45.68379(W) ADJUSTED
297* NAVD 88 - 958.516 (meters) 3144.73 (feet) ADJUSTED
297
297 X - -1,079,763.092 (meters) COMP
297 Y - -5,215,801.792 (meters) COMP
297 Z - 3,498,512.305 (meters) COMP
297 LAPLACE CORR- -2.31 (seconds) DEFLEC99
297 ELLIP HEIGHT- 933.59 (meters) GPS OBS
297 GEOID HEIGHT- -24.95 (meters) GEOID99
297 DYNAMIC HT - 957.284 (meters) 3140.69 (feet) COMP
297 MODELED GRAV- 979,319.2 (mgal) NAVD 88
297
297 HORZ ORDER - SECOND
297 VERT ORDER - FIRST CLASS II
297 ELLP ORDER - FIFTH CLASS I
297
297.The horizontal coordinates were established by classical geodetic methods
297.and adjusted by the National Geodetic Survey in February 1996.
297
297.The orthometric height was determined by differential leveling
297.and adjusted by the National Geodetic Survey in June 1991.
297
297.The X, Y, and Z were computed from the position and the ellipsoidal ht.
297
297.The Laplace correction was computed from DEFLEC99 derived deflections.
297
297.The ellipsoidal height was determined by GPS observations
297.and is referenced to NAD 83.
297
297.The geoid height was determined by GEOID99.
297
297.The dynamic height is computed by dividing the NAVD 88
297.geopotential number by the normal gravity value computed on the
297.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
297.degrees latitude (G = 980.6199 gals.).
297
297.The modeled gravity was interpolated from observed gravity values.
297

```
297;                        North          East      Units   Scale       Converg.
297;SPC TXNC      - 2,205,017.060   303,006.732    MT  0.99989980 -1 44 35.1
297;UTM  14       - 3,707,170.861   249,469.668    MT  1.00037389 -1 29 16.1
297
297                          SUPERSEDED SURVEY CONTROL
297
297  ELLIP HT     -          933.33   (m)                          GP(          4 1
297  NAD 83(1986)-   33 28 29.06007(N)     101 41 45.67552(W) AD(          ) 2
297  NAD 27       -   33 28 28.74400(N)     101 41 44.09900(W) AD(          2
297  NGVD 29      -         958.156   (m)          3143.55    (f) ADJ UNCH    1 2
```

TWARE: Corpscon for Windows 5.11.05
ntal Datum: State Plane, NAD27
ontal Zone: Texas North Central - 4202
izontal Units: U.S. Survey Feet
tical Datum: NGVD29
tical Units: U.S. Survey Feet
, 720987.55678, 683295.68767, 3143.55000
EAST NORTH

```
 DP0673  DESIGNATION -  LUBBOCK MAGNETIC STATION
 DP0673  PID         -  DP0673
 DP0673  STATE/COUNTY-  TX/LUBBOCK
 DP0673  USGS QUAD   -  LUBBOCK EAST (1977)
 DP0673
 DP0673  HORZ DATUM  -  NAD 83 (1993)
 DP0673  VERT DATUM  -  NAVD 88
 DP0673
 DP0673  POSITION    -  33 35 05.56591(N)     101 49 54.14539(W)
ADJUSTED
 DP0673  93 minus 83 -       -00.00710              +00.00793
ADJUSTED
 DP0673  83 minus 27 -       +00.30301              +01.60546
ADJUSTED
 DP0673
 DP0673
 DP0673  HEIGHT      -       973.      (meters)     3192.      (feet)
V_SCALED
 DP0673  88 minus 29 -        +0.      (+/- 2 cm)
VERTCON
 DP0673. (NOTE - For assistance in applying shifts see file readme.dat)
 DP0673
*****************************************************************
 DP0673
 DP0673  LAPLACE CORR-          -2.37
DEFLEC93
 DP0673  GEOID HEIGHT-         -25.27
GEOID93
 DP0673  ELLIP HEIGHT-         947.527
 DP0673  X           -  -1,090,730.334
 DP0673  Y           -  -5,206,635.953
 DP0673  Z           -   3,508,705.056
 DP0673
 DP0673
 DP0673  HORZ ORDER  -  SECOND
 DP0673  ELLP ORDER  -  FIFTH     CLASS 1
 DP0673
 DP0673
 DP0673.The horizontal position was established by classical geodetic
methods
 DP0673.and adjusted by the National Geodetic Survey in February 1996.
 DP0673
 DP0673.The NGVD 29 orthometric height was scaled from a topographic
map.
 DP0673.The NAVD 88 height was computed by applying the VERTCON shift
value to
 DP0673.the NGVD 29 height.
 DP0673
 DP0673.The Laplace correction was computed from DEFLEC93 derived
deflections.
 DP0673
 DP0673.The geoid height was determined by GEOID93.
 DP0673
 DP0673.The ellipsoidal height was determined by GPS observations
 DP0673.and referenced to NAD 83.
 DP0673
 DP0673.The X, Y, and Z were computed from the position and the
ellipsoidal ht.
 DP0673
 DP0673;                    North         East       Scale
Converg.
```

```
 DP0673;SPC TXNC       2,217,617.878   290,789.671 0.99991581      -1 49
01.5  MT
 DP0673;UTM  14        3,719,724.040   237,190.984 1.00045159      -1 34
02.3  MT
 DP0673
 DP0673:                Primary Azimuth Mark                       Grid Az
 DP0673:SPC TXNC        MCCAULEY                                   323 29
32.1
 DP0673:UTM  14         MCCAULEY                                   323 14
32.9
 DP0673
 DP0673|--------
-----|
 DP0673| Pid     Reference Object                    Distance       Geod
AZ  |
 DP0673|
dddmmss.s |
 DP0673|        LUBBOCK MAG STATION AZ MK
0874610.4 |
 DP0673|        LUBBOCK MAG STATION RM 1             28.536 METERS 12424

 DP0673         LUBBOCK MAG STATION RM 2             28.753 METERS 23513

 DP0673| DP0678 MCCAULEY                            APPROX. 7.0 KM
3214030.6 |
 DP0673|-------------------------------------------------------------------
-----|
 DP0673
 DP0673_STATION MARK IS A TRIANGULATION STATION DISK
 DP0673_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
 DP0673_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DP0673+SATELLITE: SATELLITE OBSERVATIONS - 1986
 DP0673
 DP0673  HISTORY     - Year Condition            Recov. By
 DP0673  HISTORY     - 1935 STATION MONUMENTED   COAST AND GEODETIC
SURVEY
 DP0673  HISTORY     - 1938 GOOD                 TEXAS HIGHWAY
DEPARTMENT
 DP0673  HISTORY     - 1948 GOOD                 LOCAL SURVEYOR
 DP0673  HISTORY     - 1962 GOOD                 COAST AND GEODETIC
SURVEY
 DP0673  HISTORY     - 1975 GOOD                 NATIONAL GEODETIC
SURVEY
 DP0673  HISTORY     - 1978 GOOD                 DEFENSE MAP AGENCY
 DP0673  HISTORY     - 1982 UNKNOWN - MARK NOT F NATIONAL GEODETIC
SURVEY
 DP0673  HISTORY     - 1986 GOOD
 DP0673
 DP0673                          STATION DESCRIPTION
 DP0673
 DP0673'DESCRIBED BY COAST AND GEODETIC SURVEY 1935 (CIA)
 DP0673'STATION FOUND IN GOOD CONDITION.  TWO REFERENCE MARKS AND AN
 DP0673'AZIMUTH MARK WERE SET.  STATION IS LOCATED ON PROPERTY OWNED BY
 DP0673'LUBBOCK COMPANY, KNOWN AS SHANNON PARK ON THE E EDGE OF LUBBOCK.
 DP0673'
 DP0673'STATION MARK IS A STANDARD BRONZE DISK SET IN TOP OF CONCRETE
 DP0673'POST, PROJECTING 7 INCHES, LOCATED 55.5 FEET N OF E-W STONE
WALL,
 DP0673'95 FEET NE OF E GATE POST.  NO DATE IS STAMPED ON DISK.
 DP0673'
 DP0673'REFERENCE MARKS AND AZIMUTH MARK ARE STANDARD BRONZE DISKS SET
```

DP0673'IN A CONCRETE CYLINDER.
DP0673'
DP0673'REFERENCE MARK NO. 1 (1935) IS 28.536 METERS (93.62 FEET) SE
DP0673'OF STATION IN E-W STONE WALL, 55 FEET N OF CENTER LINE OF U.S.
DP0673'HIGHWAY 62.
DP0673'
DP0673'REFERENCE MARK NO. 2 (1935) IS 28.753 METERS (94.33 FEET) SW
DP0673'OF STATION SET AT CORNER POST IN E-W STONE WALL 60 FEET N OF
DP0673'CENTER LINE OF HIGHWAY 62.
DP0673'
DP0673'AZIMUTH MARK (1935) IS 0.6 MILE E OF STATION, 20 FEET W OF
DP0673'CENTER LINE OF ROAD LEADING TO MARK. REACHED FROM STATION BY
DP0673'GOING 0.6 MILE E ON U.S. HIGHWAY 62 TO T-ROAD ON N SIDE. GO N
DP0673'FOR 0.05 MILE TO AZIMUTH AT SIGN MARKED DIP.
DP0673'
DP0673'STATION IS REACHED FROM THE COURTHOUSE IN LUBBOCK BY GOING E
DP0673'ON U.S. HIGHWAY 62 FOR 0.7 MILE, THENCE TURN LEFT (N) INTO
DP0673'DRIVEWAY INTO SHANNON PARK AND STATION ON RIGHT.
DP0673
DP0673 STATION RECOVERY (1938)
DP0673
DP0673'RECOVERY NOTE BY TEXAS HIGHWAY DEPARTMENT 1938
DP0673'DESCRIPTION AS GIVEN BY C.I.A. IN REACHING STATION IS
SATISFACTORY.
DP0673'STATION AND REFERENCE MARKS WERE FOUND IN GOOD CONDITION. NO
DP0673'ATTEMPT WAS MADE TO RECOVER THE AZIMUTH MARK.
DP0673
DP0673 STATION RECOVERY (1948)
DP0673
DP0673'RECOVERY NOTE BY LOCAL SURVEYOR (INDIVIDUAL OR FIRM) 1948 (REM)
DP0673'LETTER OF MR. R.E. MILLER, STATE LAND SURVEYOR, LUBBOCK, TEX.,
DP0673'DATED 1/26/48--
DP0673'
DP0673'R.M.S 1 AND 2 WERE MOVED DUE TO WIDENING OF RIGHT-OF-WAY E OF
DP0673'LUBBOCK.
DP0673'
DP0673'A NEW REFERENCE MARK WAS SET 48.31 FEET CLOSER TO STATION, ON
DP0673'LINE WITH OLD R.M. 2 AND STATION MARK, AND IT IS NOW 46.07 FEET
DP0673'SW OF STATION. IT IS A BRASS CAP INSIDE OF TOP OF 4-1/2-INCH
DP0673'WELL CASING SET IN CONCRETE 6 INCHES ABOVE GROUND.
DP0673'
DP0673'ANOTHER NEW REFERENCE MARK WAS SET 43.55 FEET CLOSER TO STATION,
DP0673'ON LINE WITH OLD R.M. 2 AND STATION MARK, AND IT IS NOW 46.07
DP0673'FEET SW OF STATION. IT IS A BRASS CAP INSIDE OF TOP OF 4-1/2-
INCH
DP0673'WELL CASING SET IN CONCRETE 6 INCHES ABOVE GROUND.
DP0673'
DP0673'ANOTHER NEW REFERENCE MARK WAS SET 43.55 FEET CLOSER TO STATION,
DP0673'ON LINE WITH OLD R.M. 1 AND STATION MARK, AND IT IS NOW 50.10
DP0673'FEET SE OF STATION. IT IS A BRASS CAP INSIDE OF TOP OF 3-1/2-
INCH
DP0673'WELL CASING SET IN CONCRETE 6 INCHES ABOVE GROUND.
DP0673'
DP0673'NEW REFERENCE MARKS ARE ON N BOUNDARY LINE OF HIGHWAY 82.
DP0673'
DP0673'STATION MARK IS IN EXCELLENT CONDITION AND DESCRIPTION IS
ADEQUATE.
DP0673'
DP0673'A HOUSE HAS BEEN BUILT ALMOST OVER THE AZIMUTH MARK. A CAGE WAS
DP0673'BUILT AROUND THE AZIMUTH MARK AND BY USING A 20-FOOT FLAT IT CAN
DP0673'BEE SEEN FROM LUBBOCK MAGNETIC STATION.

DP0673'
DP0673'BEARING BETWEEN LUBBOCK MAGNETIC STATION AND COMPRESS W.T.
DP0673'(S.E. LUBBOCK MUNI. W.T.) IS S 19 DEG 42 MIN W, DISTANT 1936.7
DP0673'FEET.
DP0673'
DP0673'R.M.S MAG. LUBBOCK NO. 1 1935 AND MAG. LUBBOCK NO. 2 1935
DP0673'RETURNED TO THIS OFFICE 2/12/48.
DP0673
DP0673 STATION RECOVERY (1962)
DP0673
DP0673'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1962 (JJC)
DP0673'REFERENCE MARK NO. 3 WAS RECOVERED. R.M.S 1 AND 2 WERE NOT
DP0673'FOUND NOR THE STATION MARK.
DP0673'
DP0673'STATION PREVIOUSLY RECOVERED 1948, BUT DID NOT HAVE 1948
RECOVERY
DP0673'NOTE AND WAS NOT ABLE TO RECOVER STATION FROM R.M. NO. 3, 1948.
DP0673
DP0673 STATION RECOVERY (1975)
DP0673
DP0673'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975 (ARB)
DP0673'THE STATION AND REFERENCE MARK NO. 3 WERE FOUND AS DESCRIBED IN
DP0673'GOOD CONDITION.
DP0673'
DP0673'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--ON THE EAST
DP0673'EDGE OF LUBBOCK
DP0673
DP0673 STATION RECOVERY (1978)
DP0673
DP0673'RECOVERY NOTE BY DEFENSE MAP AGENCY 1978 (B)
DP0673'LUBBOCK MAGNETIC RECOVERED GOOD.
DP0673'
DP0673'LUBBOCK MAGNETIC 3 1947 RECOVERED GOOD.
DP0673'
DP0673'STATION LOCATED AT MACKENZIE PARK IN LUBBOCK, 407 E. BROADWAY,
DP0673'ABOUT 0.05 MILE EAST OF FAIR SIGN. 8.1 M. NE OF A 0.8 M ELM,
15M.
DP0673'NW OF POWER POLE WITH TRANS., 10.7 M. WEST OF GUIDE POLE FOR
POWER
DP0673'POLE, STATION IS ABOUT 3 CM. BELOW GROUND LEVEL.
DP0673'
DP0673'DISTANCE AND DIRECTION FROM NEAREST TOWN--AT LUBBOCK.
DP0673
DP0673 STATION RECOVERY (1982)
DP0673
DP0673'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982 (RHK)
DP0673'THE STATION, REFERENCE MARK NO 1, NO 2, AND THE AZIMUTH MARK
WERE NOT
DP0673'RECOVERED. REFERENCE MARK NO 3 WAS RECOVERED IN GOOD CONDITION
AS
DP0673'DESCRIBED IN 1961.
DP0673
DP0673 STATION RECOVERY (1986)
DP0673
DP0673'RECOVERED 1986
DP0673'RECOVERED IN GOOD CONDITION.

```
 DP0693  CBN CONTROL -  This is a Cooperative Base Network Control
Station.
 DP0693  DESIGNATION -  LUBBOCK RRP
 DP0693  PID         -  DP0693
 DP0693  STATE/COUNTY-  TX/LUBBOCK
 DP0693  USGS QUAD   -  LUBBOCK EAST (1977)
 DP0693
 DP0693  HORZ DATUM  -  NAD 83 (1993)
 DP0693  VERT DATUM  -  NAVD 88
 DP0693
 DP0693  POSITION    -  33 31 27.66286(N)    101 48 14.12040(W)
ADJUSTED
 DP0693  93 minus 83 -       -00.00003             -00.00034
ADJUSTED
 DP0693  83 minus 27 -       +00.31073             +01.59126
NADCON
 DP0693
 DP0693
 DP0693  HEIGHT      -       964.0     (meters)    3163.      (feet)  GPS
OBS
 DP0693  88 minus 29 -        +0.4     (+/- 2 cm)
VERTCON
 DP0693. (NOTE - For assistance in applying shifts see file readme.dat)
 DP0693
********************************************************************
 DP0693
 DP0693  LAPLACE CORR-          -2.43
DEFLEC93
 DP0693  GEOID HEIGHT-         -25.20
GEOID93
 DP0693  ELLIP HEIGHT-         939.023
 DP0693  X           -  -1,088,963.074
 DP0693  Y           -  -5,210,790.166
 DP0693  Z           -   3,503,104.773
 DP0693
 DP0693
 DP0693  HORZ ORDER  -  A
 DP0693  ELLP ORDER  -  FOURTH    CLASS 2
 DP0693
 DP0693
 DP0693.This is a Cooperative Base Network Control Station.
 DP0693.The horizontal coordinates were established by GPS observations
 DP0693.and adjusted by the National Geodetic Survey in April 1994.
 DP0693
 DP0693.The orthometric height was determined by GPS observations.
 DP0693
 DP0693.The Laplace correction was computed from DEFLEC93 derived
deflections.
 DP0693
 DP0693.The geoid height was determined by GEOID93.
 DP0693
 DP0693.The ellipsoidal height was determined by GPS observations
 DP0693.and referenced to NAD 83.
 DP0693
 DP0693.The X, Y, and Z were computed from the position and the
ellipsoidal ht.
 DP0693
 DP0693;                    North         East        Scale
Converg.
 DP0693;SPC TXNC     -  2,210,826.861   293,156.388 0.99990656      -1 48
07.0  MT
```

```
 DP0693;UTM  14      -  3,712,939.849   239,588.721 1.00043613      -1 32
58.0  MT
 DP0693
 DP0693_STATION MARK IS A TRIANGULATION STATION DISK
 DP0693_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
 DP0693_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DP0693+STABILITY: SURFACE MOTION
 DP0693_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DP0693+SATELLITE: SATELLITE OBSERVATIONS - May 20, 1993
 DP0693
 DP0693  HISTORY      - Year Condition            Recov. By
 DP0693  HISTORY      - UNK  STATION MONUMENTED
 DP0693  HISTORY      - 1992 GOOD
 DP0693  HISTORY      - 1993 GOOD                 NATIONAL GEODETIC
SURVEY
 DP0693
 DP0693                            STATION DESCRIPTION
 DP0693
 DP0693'DESCRIBED 1992
 DP0693'RECOVERED IN GOOD CONDITION.
 DP0693
 DP0693                            STATION RECOVERY (1993)
 DP0693
 DP0693'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
 DP0693'THE STATION IS LOCATED IN THE SOUTHEAST SIDE OF LUBBOCK, IN THE
TEXAS
 DP0693'DEPARTMENT OF TRANSPORTATION MAINTENANCE YARD, BENEATH A
PERMANENT 6
 DP0693'METER (19.7 FT) TALL STEEL TOWER.  OWNERSHIP--TEXAS DEPARTMENT
OF
 DP0693'TRANSPORTATION, LUBBOCK, TX.  CONTACT SAM BULLION, 806-745-4688
OR
 DP0693'4441, FOR PERMISSION TO USE STATION.
 DP0693'TO REACH THE STATION FROM THE JUNCTION OF LOOP 289 AND U.S.
HIGHWAY 84
 DP0693'IN THE SOUTHEAST SIDE OF LUBBOCK, GO SOUTHEAST ON HIGHWAY 84 FOR
 DP0693'APPROXIMATELY 1.45 KM (0.90 MI) TO THE ENTRANCE TO THE
MAINTENANCE
 DP0693'YARD ON THE RIGHT. TURN RIGHT, SOUTHWEST, THROUGH GATE ON WEST
SIDE
 DP0693'OF MAIN BUILDING AND CONTINUE SOUTH ALONG BUILDING FOR 0.08 KM.
TURN
 DP0693'RIGHT, WEST, ACROSS YARD FOR 0.08 KM (0.05 MI) TO THE STATION
BENEATH
 DP0693'A 6 M (19.7 FT) STEEL TOWER.
 DP0693'STATION MARK IS AN ALUMINUM DISK SET IN THE TOP OF A 20 CM ROUND
 DP0693'CONCRETE POST RECESSED 8 CM BELOW GROUND.  IT IS 37.2 M (122.0
FT)
 DP0693'EAST-NORTHEAST OF THE SOUTHEAST LEG OF A RAISED METAL TANK, 30.3
M
 DP0693'(99.4 FT) NORTH OF AN EAST-WEST CHAIN LINK FENCE, 24.9 M (81.7
FT)
 DP0693'NORTHWEST  OF THE NORTHWEST CORNER OF A CONCRETE WALL BUNKER,
AND 3.0
 DP0693'M (9.8 FT) SOUTH OF TWO METAL REFLECTOR POSTS.
1        National Geodetic Survey,   Retrieval Date = APRIL 19, 1996
```

NGS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000
673 **********
673 DESIGNATION - LUBBOCK MAGNETIC STATION
673 PID - DP0673
673 STATE/COUNTY- TX/LUBBOCK
673 USGS QUAD - LUBBOCK EAST (1977)
673
673 *CURRENT SURVEY CONTROL
673* NAD 83(1993)- 33 35 05.56591(N) 101 49 54.14539(W) ADJUSTED
673* NAVD 88 - 973. (meters) 3192. (feet) SCALED
673 LAPLACE CORR- -2.43 (seconds)
673 GEOID HEIGHT- -24.94 (meters) DEFLEC99 GEOID99
673
673 HORZ ORDER - SECOND
673
673.The horizontal coordinates were established by classical geodetic methods
673.and adjusted by the National Geodetic Survey in February 1996.
673
673.The orthometric height was scaled from a topographic map.
673
673.The Laplace correction was computed from DEFLEC99 derived deflections.
673
673.The geoid height was determined by GEOID99.
673
673;

	North	East	Units	Scale	Converg.
673;SPC TXNC	- 2,217,617.878	290,789.671	MT	0.99991581	-1 49 01.5
673;UTM 14	- 3,719,724.040	237,190.984	MT	1.00045159	-1 34 02.3

673
673:

	Primary Azimuth Mark	Grid Az
673:SPC TXNC	- MCCAULEY	323 29 32.1
673:UTM 14	- MCCAULEY	323 14 32.9

673

PID	Reference Object	Distance	Geod. Az
			dddmmss.s
	LUBBOCK MAG STATION AZ MK		0874610.4
	LUBBOCK MAG STATION RM 1	28.536 METERS	12424
	LUBBOCK MAG STATION RM 2	28.753 METERS	23513
DP0678	MCCAULEY	APPROX. 7.0 KM	3214030.6

673
673 SUPERSEDED SURVEY CONTROL
673
673 NAD 83(1986)- 33 35 05.57301(N) 101 49 54.13746(W) AD( ) 2
673 NAD 27 - 33 35 05.27000(N) 101 49 52.53200(W) AD( ) 2

NAD 27 INFO

TWARE: Corpscon for Windows 5.11.05
ontal Datum: State Plane, NAD27
ontal Zone: Texas North Central - 4202
izontal Units: U.S. Survey Feet
tical Datum: NGVD29
tical Units: U.S. Survey Feet
MAG , 681302.03704, 725016.32915, 0.00000

EAST NORTH

```
 DP0654  DESIGNATION -  SHEPARD
 DP0654  PID         -  DP0654
 DP0654  STATE/COUNTY-  TX/LUBBOCK
 DP0654  USGS QUAD   -  SLIDE (1985)
 DP0654
 DP0654  HORZ DATUM  -  NAD 83 (1993)
 DP0654  VERT DATUM  -  NAVD 88
 DP0654
 DP0654  POSITION    -  33 28 33.75915(N)    101 53 58.55716(W)
ADJUSTED
 DP0654  93 minus 83 -       -00.00813             +00.00832
ADJUSTED
 DP0654  83 minus 27 -       +00.30528             +01.59784
ADJUSTED
 DP0654
 DP0654
 DP0654  HEIGHT      -       989.76   (meters)     3247.2    (feet)
V_LEVELING
 DP0654  88 minus 29 -        +0.37   (+/- 2 cm)
VERTCON
 DP0654. (NOTE - For assistance in applying shifts see file readme.dat)
 DP0654
*****************************************************************
 DP0654
 DP0654  LAPLACE CORR-          -2.71
DEFLEC93
 DP0654  GEOID HEIGHT-          -24.95
GEOID93
 DP0654
 DP0654
 DP0654  HORZ ORDER  -  FIRST
 DP0654  VERT ORDER  -  THIRD ?
 DP0654
 DP0654
 DP0654.The horizontal position was established by classical geodetic
methods
 DP0654.and adjusted by the National Geodetic Survey in February 1996.
 DP0654
 DP0654.The NGVD 29 orthometric height was determined by differential
leveling.
 DP0654.The vertical network tie was performed by a horz. field party
for horz.
 DP0654.obs reductions. Reset procedures were used to establish the
elevation.
 DP0654.The NAVD 88 height was computed by applying the VERTCON shift
value to
 DP0654.the NGVD 29 height.
 DP0654
 DP0654.The Laplace correction was computed from DEFLEC93 derived
deflections.
 DP0654
 DP0654.The geoid height was determined by GEOID93.
 DP0654
 DP0654;                    North         East       Scale
Converg.
 DP0654;SPC TXNC     -  2,205,755.838   284,100.357 0.99989997     -1 51
14.8  MT
 DP0654;UTM  14      -  3,707,825.994   230,550.101 1.00049520     -1 36
01.3  MT
 DP0654
 DP0654:               Primary Azimuth Mark                    Grid Az
```

```
 DP0654:SPC TXNC     -   LUBBOCK MUNICIPAL STANDPIPE                018 32
11.3
 DP0654:UTM  14      -   LUBBOCK MUNICIPAL STANDPIPE                018 16
57.8
 DP0654
 DP0654|-------------------------------------------------------------
-----|
 DP0654| Pid     Reference Object                    Distance      Geod.
AZ  |
 DP0654|
dddmmss.s |
 DP0654|         LUBBOCK W TEX TECH COL TK
0093132.7 |
 DP0654| DP0671 LUBBOCK W TEX INST ADMIN W CUP      APPROX.12.1 KM
0104802.5 |
 DP0654| DP0677 LUBBOCK W TEX INST ADMIN E CUP      APPROX.12.1 KM
0111155.8 |
 DP0654| DP0674 LUBBOCK MUNICIPAL STANDPIPE         APPROX.11.7 KM
0164056.5 |
 DP0654| DP0675 LUBBOCK MUN HS TIP OF DOME          APPROX.11.9 KM
0174016.1 |
 DP0654|         NORTH LUBBOCK MUN WATER TK
0210013.9 |
 DP0654| DP0676 HOTEL LUBBOCK SILVER TANK           APPROX.13.0 KM
0213112.8 |
 DP0654| DP0672 SOUTHEAST LUBBOCK MUNICIPAL TK      APPROX.13.0 KM
0275520.6 |
 DP0654| DP0669 IDALOU MUNICIPAL TANK               APPROX.29.3 KM
0440803.1 |
 DP0654|         SHEPARD RM 1 AZIMUTH
0880447.4 |
 DP0654|         SHEPARD RM 1 AZIMUTH
0880447.2 |
 DP0654| DP0636 SLATON COTTON COMPRESS TANK         APPROX.23.9 KM
0980337.0 |
 DP0654| DP0638 SLATON MUNICIPAL TANK               APPROX.24.1 KM
0993030.0 |
 DP0654|         SHEPARD RM 1                        70.604 METERS 28950

 DP0654          SHEPARD RM 2                       24.069 METERS 35306

 DP0654|-------------------------------------------------------
-----|
 DP0654
 DP0654 STATION MARK IS A TRIANGULATION STATION DISK
 DP0654 WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
 DP0654
 DP0654  HISTORY     - Year Condition            Recov. By
 DP0654  HISTORY     - 1932 STATION MONUMENTED   COAST AND GEODETIC
SURVEY
 DP0654  HISTORY     - 1935 GOOD                 COAST AND GEODETIC
SURVEY
 DP0654  HISTORY     - 1937 GOOD                 TOBIN SURVEYS
INCORPORATED
 DP0654  HISTORY     - 1957 GOOD                 US GEOLOGICAL SURVEY
 DP0654  HISTORY     - 1958 GOOD                 COAST AND GEODETIC
SURVEY
 DP0654
 DP0654                          STATION DESCRIPTION
 DP0654
 DP0654'DESCRIBED BY COAST AND GEODETIC SURVEY 1932 (CIA)
```

DP0654'ABOUT 7-1/2 MILES SOUTH AND 3-1/4 MILES WEST OF THE COURTHOUSE
DP0654'IN LUBBOCK, 11 MILES WEST OF POSEY, 0.7 MILE WEST OF THE
DP0654'NORTHEAST CORNER OF SECTION 4, BLOCK AK, ON LAND OWNED BY T.
DP0654'L. SHEPARD OF LUBBOCK. STATION IS SOUTH OF THE ROAD IN THE
DP0654'NORTHEAST CORNER OF BARNYARD, 11.8 METERS (38.7 FEET) SOUTH
DP0654'OF AN EAST-AND-WEST FENCE, 2.5 METERS (8 FEET) WEST OF A
DP0654'NORTH-AND-SOUTH FENCE, 17.4 METERS (57 FEET) SOUTH OF CENTER
DP0654'LINE OF ROAD. TO REACH STATION FROM LUBBOCK, GO WEST ON
DP0654'BROADWAY TO INTERSECTION WITH COLLEGE AVENUE. TURN SOUTH
DP0654'AND GO 0.45 MILE TO CONCRETE HIGHWAYS NOS. 137 AND 24, WHICH
DP0654'GO WEST ALONG THE SOUTH SIDE OF WEST TEXAS TECHNOLOGICAL
DP0654'COLLEGE CAMPUS. GO WEST 1.0 MILE ON CONCRETE TO SECTION LINE
DP0654'ROAD TO SOUTH. THENCE SOUTH 6.9 MILES TO SECTION LINE ROAD
DP0654'TO WEST WITH SIGN T.L. SHEPARD FARM. GO WEST 0.7 MILE TO
DP0654'SHEPARD FARM AND STATION. SURFACE AND UNDERGROUND MARKS ARE
DP0654'STANDARD DISKS STATION STANDARD REFERENCE DISKS IN
DP0654'CONCRETE. NO. 1 IS 1 FOOT SOUTH OF THE FENCE
DP0654'SOUTH OF ROAD, NEAR THE FOURTH POST EAST OF CORNER,
DP0654'AND 0.25 MILE (BY SPEEDOMETER) FROM STATION,
DP0654'N 88 DEG 05 MIN E. NO. 2 IS IN FENCE LINE NORTH OF
DP0654'ROAD, AND 24.09 METERS (79 FEET) FROM STATION,
DP0654'N 06 DEG 54 MIN W. OTHER BEARINGS FROM STATION
DP0654'ARE--LUBBOCK, WEST TEXAS INSTITUTE OF TECHNOLOGY, WATER
DP0654'TANK, FINIAL N 09 DEG 32 MIN E. LUBBOCK, MUNICIPAL
DP0654'STANDPIPE, N 16 DEG 41 MIN E.
DP0654
DP0654 STATION RECOVERY (1935)
DP0654
DP0654'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1935 (WRP)
DP0654'THIS STATION IS ABOUT 7-1/2 MILES SOUTH AND 3-1/4 MILES
DP0654'WEST OF THE COURTHOUSE IN LUBBOCK, 11 MILES WEST OF POSEY,
DP0654'0.7 MILE WEST OF THE NORTHEAST CORNER OF SECTION 4, BLOCK
DP0654'AK, ON LAND OWNED BY T.L. SHEPARD OF LUBBOCK. IT IS SOUTH
DP0654'OF A GRADED ROAD IN THE NORTHEAST CORNER OF A BARNYARD, 60
DP0654'FEET SOUTH OF THE CENTER LINE OF THE GRADED ROAD, 38.3 FEET
DP0654'SOUTH OF THE SOUTH RIGHT-OF-WAY FENCE, 13 FEET SOUTHWEST
DP0654'OF A NORTHWEST FENCE CORNER, AND 78.8 FEET EAST-NORTHEAST
DP0654'OF THE NORTHEAST CORNER OF A RED, GALVANIZED SHED. THE MARK
DP0654'PROJECTS 4 INCHES.
DP0654'
DP0654'REFERENCE MARK NO. 1 WAS ESTABLISHED NEW. IT IS WEST-NORTHWEST
DP0654'OF THE STATION AND PROJECTS 8 INCHES. IT IS 21 FEET NORTH
DP0654'OF THE CENTER LINE OF A GRADED ROAD, AND 133.2 FEET
DP0654'NORTH-NORTHEAST OF THE NORTHWEST CORNER OF A FARMHOUSE.
DP0654'
DP0654'REFERENCE MARK NO. 2 IS NORTH-NORTHWEST OF THE STATION
DP0654'AND PROJECTS 6 INCHES. IT IS 20 FEET NORTH OF THE CENTER
DP0654'LINE OF THE GRADED ROAD AND 46 FEET NORTHWEST OF A FENCE
DP0654'T-INTERSECTION.
DP0654'
DP0654'THE AZIMUTH MARK IS EAST-NORTHEAST OF THE STATION AND PROJECTS
DP0654'4 INCHES. IT IS 21 FEET SOUTH OF THE CENTER LINE OF THE
DP0654'GRADED ROAD AND 1 FOOT SOUTH OF THE SOUTH RIGHT-OF-WAY FENCE.
DP0654'(THIS MARK WAS STAMPED R.M. NO. 1 IN 1932, BUT AZIMUTH WAS
DP0654'STAMPED OVER THE PREVIOUS STAMPING.)
DP0654'
DP0654'THIS STATION WAS RECOVERED AS DESCRIBED. THE STATION MARK,
DP0654'THE AZIMUTH MARK, AND REFERENCE MARK WERE RECOVERED AND ARE
DP0654'IN EXCELLENT CONDITION.
DP0654'
DP0654'THE STATION IS REACHED FROM THE COURTHOUSE IN LUBBOCK, TEXAS,

DP0654'BY GOING SOUTH ON U.S. HIGHWAY 385 FOR 7.2 MILES TO A CROSS
DP0654'ROAD WITH A WHITE HOUSE IN THE SOUTHWEST ANGLE. GO WEST
DP0654'ON A GRADED ROAD FOR 3.1 MILES (0.7 MILE BEYOND GRADED
DP0654'CROSSROADS) TO T.L. SHEPARDS FARM BUILDINGS AND WINDMILL ON
DP0654'THE SOUTH SIDE OF THE ROAD AND THE STATION.
DP0654'
DP0654'SURFACE, UNDERGROUND, REFERENCE AND AZIMUTH MARKS ARE STANDARD
DP0654'BRONZE DISKS ARE SET.
DP0654'
DP0654'HEIGHT OF LIGHT ABOVE STATION MARK - 11.73 METERS.
DP0654
DP0654 STATION RECOVERY (1937)
DP0654
DP0654'RECOVERY NOTE BY TOBIN SURVEYS INCORPORATED 1937
DP0654'DESCRIPTION SATISFACTORY.
DP0654
DP0654 STATION RECOVERY (1957)
DP0654
DP0654'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1957
DP0654'STATION MARK IN GOOD CONDITION. REFERENCE MARK NO. 1 COULD
DP0654'NOT BE FOUND, REFERENCE MARK NO. 2 IS LYING ON TOP OF GROUND.
DP0654'AZIMUTH MARK COULD NOT BE FOUND. ROAD HAS BEEN WIDENED AND
DP0654'SURFACED. GROUND HAS BEEN DISTURBED 35 FEET NORTH AND SOUTH
DP0654'OF CENTERLINE, SINCE THE REFERENCE AND AZIMUTH MARKS WERE SET
DP0654'20 FEET FROM THE CENTERLINE, IT IS LIKELY THAT BOTH REFERENCE
DP0654'MARKS AND THE AZIMUTH MARK HAVE BEEN DESTROYED.
DP0654
DP0654 STATION RECOVERY (1958)
DP0654
DP0654'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1958 (WCR)
DP0654'THIS STATION WAS RECOVERED IN GOOD CONDITION AS DESCRIBED.
DP0654'THE AZIMUTH MARK HAS BEEN PULLED OUT BY FARMING ACTION AND IS
DP0654'LOST.
National Geodetic Survey, Retrieval Date = APRIL 19, 1996

GS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000

```
654 ***********************************************************************
654  DESIGNATION -  SHEPARD
654  PID         -  DP0654
654  STATE/COUNTY-  TX/LUBBOCK
654  USGS QUAD   -  SLIDE (1985)
654
654                         *CURRENT SURVEY CONTROL
654 ______________________________________________________________________
654* NAD 83(1993)-  33 28 33.75915(N)     101 53 58.55716(W)      ADJUSTED
654* NAVD 88      -       989.76   (+/-2cm)     3247.2    (feet)  VERTCON
654 ______________________________________________________________________
654  LAPLACE CORR-           -2.78  (seconds)                      DEFLEC99
654  GEOID HEIGHT-          -24.61  (meters)                       GEOID99
654
654  HORZ ORDER  -  FIRST
654  VERT ORDER  -  THIRD ? (See Below)
654
654.The horizontal coordinates were established by classical geodetic methods
654.and adjusted by the National Geodetic Survey in February 1996.
654
654.The NAVD 88 height was computed by applying the VERTCON shift value to
654.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
654.The vertical order pertains to the superseded datum.
654
654.The Laplace correction was computed from DEFLEC99 derived deflections.
654
654.The geoid height was determined by GEOID99.
654
654;                      North          East      Units   Scale       Converg.
654;SPC TXNC      - 2,205,755.838   284,100.357    MT   0.99989997 -1 51 14.8
654;UTM  14       - 3,707,825.994   230,550.101    MT   1.00049520 -1 36 01.3
654
654:                  Primary Azimuth Mark                        Grid Az
654:SPC TXNC      -  LUBBOCK MUNICIPAL STANDPIPE                  018 32 11.3
654:UTM  14       -  LUBBOCK MUNICIPAL STANDPIPE                  018 16 57.8
654
654|-----------------------------------------------------------------------|
654|  PID    Reference Object                        Distance       Geod. Az |
654|                                                                dddmmss.s|
654|         LUBBOCK W TEX TECH COL TK                             0093132.7|
654|  DP0671 LUBBOCK W TEX INST ADMIN W CUP      APPROX.12.1 KM    0104802.5|
654|  DP0677 LUBBOCK W TEX INST ADMIN E CUP      APPROX.12.1 KM    0111155.8|
654|  DP0674 LUBBOCK MUNICIPAL STANDPIPE         APPROX.11.7 KM    0164056.5|
654|  DP0675 LUBBOCK MUN HS TIP OF DOME          APPROX.11.9 KM    0174016.1|
654|         NORTH LUBBOCK MUN WATER TK                           0210013.9|
654|  DP0676 HOTEL LUBBOCK SILVER TANK           APPROX.13.0 KM    0213112.8|
```

NAD 27 INFO

654	DP0672	SOUTHEAST LUBBOCK MUNICIPAL TK	APPROX.13.0 KM	0275520.6
654		SHEPARD RM 1 AZIMUTH		0880447.4
654		SHEPARD RM 1 AZIMUTH		0880447.2
654	DP0636	SLATON COTTON COMPRESS TANK	APPROX.23.9 KM	0980337.0
654		SHEPARD RM 1	70.604 METERS	28950
654		SHEPARD RM 2	24.069 METERS	35306

654 ---

654

654 SUPERSEDED SURVEY CONTROL

654

654 NAD 83(1986) - 33 28 33.76728(N) 101 53 58.54884(W) AD( ) 1

654 NAD 27 - 33 28 33.46200(N) 101 53 56.95100(W) AD( ) 1

654 NGVD 29 - 989.39 (m) 3246.0 (f) LEVELING 3

654

TWARE: Corpscon for Windows 5.11.05
ntal Datum: State Plane, NAD27
ontal Zone: Texas North Central - 4202
izontal Units: U.S. Survey Feet
tical Datum: NGVD29
tical Units: U.S. Survey Feet
ARD , 658985.17779, 686310.62454, 3246.00000
EAST NORTH

<HTML>
<HEAD>
<TITLE> Data Sheet Retrieval </TITLE></HEAD>
<BODY>
<h2> The NGS Data Sheet </h2>
<pre>
DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
Starting Datasheet Retrieval...
Msg=No marks found, Increasing radius to 3.00 miles
Msg=No marks found, Increasing radius to 5.00 miles
1   National Geodetic Survey,   Retrieval Date = FEBRUARY 8,
 DP0693
****
 DP0693 CBN   - This is a Cooperative Base Network Control
Station.
 DP0693 DESIGNATION - LUBBOCK RRP
 DP0693 PID   - DP0693
 DP0693 STATE/COUNTY- TX/LUBBOCK
 DP0693 USGS QUAD   - LUBBOCK EAST (1977)
 DP0693
 DP0693   *CURRENT SURVEY CONTROL
 DP0693
____
 DP0693* NAD 83(1993)- 33 31 27.66286(N)   101 48 14.12040(W)
ADJUSTED
 DP0693* NAVD 88   -   963.866 (meters)   3162.28   (feet)
ADJUSTED
 DP0693
____
 DP0693 X   - -1,088,963.074 (meters)   COMP
 DP0693 Y   - -5,210,790.166 (meters)   COMP
 DP0693 Z   -   3,503,104.773 (meters)   COMP
 DP0693 LAPLACE CORR-   -2.49 (seconds)
DEFLEC99
 DP0693 ELLIP HEIGHT-   939.02 (meters)   GPS
OBS
 DP0693 GEOID HEIGHT-   -24.87 (meters)
GEOID99
 DP0693 DYNAMIC HT   -   962.622 (meters)   3158.20   (feet) COMP
 DP0693 MODELED GRAV-   979,312.8   (mgal)   NAVD
88
 DP0693
 DP0693 HORZ ORDER   - A
 DP0693 VERT ORDER   - FIRST   CLASS II
 DP0693 ELLP ORDER   - FOURTH   CLASS II
 DP0693
 DP0693.The horizontal coordinates were established by GPS observations
 DP0693.and adjusted by the National Geodetic Survey in April 1994.
 DP0693
 DP0693.The orthometric height was determined by differential leveling
 DP0693.and adjusted by the National Geodetic Survey in February 2000.
 DP0693.WARNING-GPS observations at this control monument resulted in a
GPS
 DP0693.derived orthometric height which differed from the leveled
height by
 DP0693.more than one decimeter (0.1 meter).
 DP0693
 DP0693.The X, Y, and Z were computed from the position and the
ellipsoidal ht.
 DP0693
 DP0693.The Laplace correction was computed from DEFLEC99 derived

```
deflections.
 DP0693
 DP0693.The ellipsoidal height was determined by GPS observations
 DP0693.and is referenced to NAD 83.
 DP0693
 DP0693.The geoid height was determined by GEOID99.
 DP0693
 DP0693.The dynamic height is computed by dividing the NAVD 88
 DP0693.geopotential number by the normal gravity value computed on the
 DP0693.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DP0693.degrees latitude (G = 980.6199 gals.).
 DP0693
 DP0693.The modeled gravity was interpolated from observed gravity
values.
 DP0693
 DP0693;                      North         East      Units   Scale
Converg.
 DP0693;SPC TXNC      - 2,210,826.861   293,156.388    MT  0.99990656 -1
48 07.0
 DP0693;UTM  14       - 3,712,939.849   239,588.721    MT  1.00043613 -1
32 58.0
 DP0693
 DP0693                              SUPERSEDED SURVEY CONTROL
 DP0693
 DP0693  ELLIP HT     -          939.02  (m)                          GP(
) 3 1
 DP0693  ELLIP HT     -          939.09  (m)                          GP(
) 4 1
 DP0693  ELLIP HT     -          939.09  (m)                          GP(
) 3 1
 DP0693  NAD 83(1993)-  33 31 27.66289(N)     101 48 14.12074(W) AD(
) A
 DP0693  ELLIP HT     -          939.09  (m)                          GP(
) 1 1
 DP0693  NGVD 29      -        964.0     (m)           3163.      (f) GPS OBS
 DP0693
 DP0693.Superseded values are not recommended for survey control.
 DP0693.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 DP0693.See file dsdata.txt to determine how the superseded data were
derived.
 DP0693
 DP0693_MARKER: DD = SURVEY DISK
 DP0693_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
 DP0693_MAGNETIC: N = NO MAGNETIC MATERIAL
 DP0693_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DP0693+STABILITY: SURFACE MOTION
 DP0693_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
 DP0693+SATELLITE: SATELLITE OBSERVATIONS - October 04, 1996
 DP0693
 DP0693  HISTORY      - Date     Condition        Recov. By
 DP0693  HISTORY      - UNK      MONUMENTED
 DP0693  HISTORY      - 19920203 GOOD
 DP0693  HISTORY      - 19930520 GOOD             NGS
 DP0693  HISTORY      - 19961004 GOOD             NGS
 DP0693
 DP0693                              STATION DESCRIPTION
 DP0693
 DP0693'DESCRIBED 1992
 DP0693'RECOVERED IN GOOD CONDITION.
 DP0693
 DP0693                              STATION RECOVERY (1993)
```

DP0693
DP0693'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993
DP0693'THE STATION IS LOCATED IN THE SOUTHEAST SIDE OF LUBBOCK, IN THE TEXAS
DP0693'DEPARTMENT OF TRANSPORTATION MAINTENANCE YARD, BENEATH A PERMANENT 6
DP0693'METER (19.7 FT) TALL STEEL TOWER. OWNERSHIP--TEXAS DEPARTMENT OF
DP0693'TRANSPORTATION, LUBBOCK, TX. CONTACT SAM BULLION, 806-745-4688 OR
DP0693'4441, FOR PERMISSION TO USE STATION.
DP0693'TO REACH THE STATION FROM THE JUNCTION OF LOOP 289 AND U.S. HIGHWAY 84
DP0693'IN THE SOUTHEAST SIDE OF LUBBOCK, GO SOUTHEAST ON HIGHWAY 84 FOR
DP0693'APPROXIMATELY 1.45 KM (0.90 MI) TO THE ENTRANCE TO THE MAINTENANCE
DP0693'YARD ON THE RIGHT. TURN RIGHT, SOUTHWEST, THROUGH GATE ON WEST SIDE
DP0693'OF MAIN BUILDING AND CONTINUE SOUTH ALONG BUILDING FOR 0.08 KM. TURN
DP0693'RIGHT, WEST, ACROSS YARD FOR 0.08 KM (0.05 MI) TO THE STATION BENEATH
DP0693'A 6 M (19.7 FT) STEEL TOWER.
DP0693'STATION MARK IS AN ALUMINUM DISK SET IN THE TOP OF A 20 CM ROUND
DP0693'CONCRETE POST RECESSED 8 CM BELOW GROUND. IT IS 37.2 M (122.0 FT)
DP0693'EAST-NORTHEAST OF THE SOUTHEAST LEG OF A RAISED METAL TANK, 30.3 M
DP0693'(99.4 FT) NORTH OF AN EAST-WEST CHAIN LINK FENCE, 24.9 M (81.7 FT)
DP0693'NORTHWEST OF THE NORTHWEST CORNER OF A CONCRETE WALL BUNKER, AND 3.0
DP0693'M (9.8 FT) SOUTH OF TWO METAL REFLECTOR POSTS.
DP0693
DP0693 STATION RECOVERY (1996)
DP0693
DP0693'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1996 (GAS)
DP0693'3.9 KM (2.40 MI) SOUTHEASTERLY ALONG U.S. HIGHWAY 84 FROM THE
DP0693'JUNCTION OF INTERSTATE HIGHWAY 27 IN LUBBOCK, 125.0 M (410.1 FT) SOUTH
DP0693'AND THEN 80.0 M (262.5 FT) EAST OF THE DEPARTMENT OF TRANSPORTATION
DP0693'MAINTENANCE YARD ENTRANCE GATE, NEAR THE CENTER OF A 20-FOOT TOWER,
DP0693'31.3 M (102.7 FT) NORTHEAST OF THE SOUTHEAST LEG OF A RAISED EMULSION
DP0693'TANK, 30.5 M (100.1 FT) NORTH OF A CHAIN-LINK FENCE ENCLOSING THE
DP0693'YARD, 25.0 M (82.0 FT) NORTHWEST OF THE NORTHWEST CORNER OF A CONCRETE
DP0693'BUNKER, 1.1 M (3.6 FT) SOUTH OF THE NORTH LEG OF THE TOWER, AND THE
DP0693'MONUMENT IS RECESSED 0.1 M (0.3 FT) BELOW THE GROUND SURFACE.
1 National Geodetic Survey, Retrieval Date = FEBRUARY 8, 2000
AB6381
****
AB6381 CORS - This is a GPS Continuously Operating Reference Station.
AB6381 DESIGNATION - LUBBOCK RRP CORS L1 PHASE CENTER
AB6381 CORS_ID - LUBB
AB6381 PID - AB6381

```
 AB6381  STATE/COUNTY-  TX/LUBBOCK
 AB6381  USGS QUAD    -  LUBBOCK EAST (1977)
 AB6381
 AB6381                          *CURRENT SURVEY CONTROL
 AB6381
______________________________________________________________________
 AB6381* NAD 83(CORS)-  33 32 07.49062(N)     101 50 34.16329(W)
ADJUSTED
 AB6381* NAVD 88      -        982.02   (meters)     3221.8     (feet)  GPS
OBS
 AB6381
______________________________________________________________________
 AB6381  EPOCH DATE   -         1997.00
 AB6381  X           -  -1,092,364.666 (meters)                        COMP
 AB6381  Y           -  -5,209,401.010 (meters)                        COMP
 AB6381  Z           -   3,504,137.872 (meters)                        COMP
 AB6381  ELLIP HEIGHT-          957.24  (meters)                        GPS
OBS
 AB6381  GEOID HEIGHT-          -24.82  (meters)
GEOID99
 AB6381
 AB6381  HORZ ORDER   -  SPECIAL (CORS)
 AB6381  ELLP ORDER   -  SPECIAL (CORS)
 AB6381
 AB6381.<a href="itrf_ret.prl?PID=AB6381">ITRF positions </a>are
available for this station.
 AB6381.The coordinates were established by GPS observations
 AB6381.and adjusted by the National Geodetic Survey in April 1996.
 AB6381.The coordinates are valid at the epoch date displayed above.
 AB6381.The epoch date for horizontal control is a decimal equivalence
 AB6381.of Year/Month/Day.
 AB6381
 AB6381.The orthometric height was determined by GPS observations and a
 AB6381.high-resolution geoid model using precise GPS observation and
 AB6381.processing techniques.
 AB6381
 AB6381.The XYZ, and position/ellipsoidal ht. are equivalent.
 AB6381
 AB6381.The ellipsoidal height was determined by GPS observations
 AB6381.and is referenced to NAD 83.
 AB6381
 AB6381.The geoid height was determined by GEOID99.
 AB6381
 AB6381;                    North         East      Units   Scale
Converg.
 AB6381;SPC TXNC      - 2,212,167.488   289,583.820   MT  0.99990817 -1
49 23.4
 AB6381
 AB6381                            SUPERSEDED SURVEY CONTROL
 AB6381
 AB6381  NAD 83(CORS)-  33 32 07.49062(N)     101 50 34.16329(W)
AD(1996.00) c
 AB6381  ELLIP HT     -          957.24  (m)
GP(1996.00) c c
 AB6381
 AB6381.Superseded values are not recommended for survey control.
 AB6381.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AB6381.See file dsdata.txt to determine how the superseded data were
derived.
 AB6381
 AB6381 STATION IS THE L1 PHASE CENTER OF THE GPS ANTENNA
```

```
 AB6381
 AB6381                              STATION DESCRIPTION
 AB6381
 AB6381'DESCRIBED BY NATIONAL GEODETIC SURVEY
 AB6381'STATION IS A GPS CORS.  LATEST INFORMATION INCLUDING POSITIONS
AND
 AB6381'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES
ACCESSIBLE
 AB6381'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
 AB6381'    FTP CORS.NGS.NOAA.GOV: CORS/COORD  AND  CORS/STATION_LOG
 AB6381'    HTTP://WWW.NGS.NOAA.GOV  UNDER PRODUCTS AND SERVICES.
1        National Geodetic Survey,   Retrieval Date = FEBRUARY  8, 2000
 AF9540
**********************************************************************
 AF9540  CORS          -  This is a GPS Continuously Operating Reference
Station.
 AF9540  DESIGNATION -  LUBBOCK RRP CORS ARP
 AF9540  CORS_ID       -  LUBB
 AF9540  PID           -  AF9540
 AF9540  STATE/COUNTY-  TX/LUBBOCK
 AF9540  USGS QUAD     -  LUBBOCK EAST (1977)
 AF9540
 AF9540                          *CURRENT SURVEY CONTROL
 AF9540
______________________________________________________________________
 AF9540* NAD 83(CORS)-  33 32 07.49057(N)     101 50 34.16324(W)
ADJUSTED
 AF9540* NAVD 88       -       981.95   (meters)     3221.6     (feet)  GPS
OBS
 AF9540
______________________________________________________________________
 AF9540  EPOCH DATE    -        1997.00
 AF9540  X             -  -1,092,364.653 (meters)                      COMP
 AF9540  Y             -  -5,209,400.950 (meters)                      COMP
 AF9540  Z             -   3,504,137.829 (meters)                      COMP
 AF9540  ELLIP HEIGHT-          957.17   (meters)                      GPS
OBS
 AF9540  GEOID HEIGHT-          -24.82   (meters)
GEOID99
 AF9540
 AF9540  HORZ ORDER    -  SPECIAL (CORS)
 AF9540  ELLP ORDER    -  SPECIAL (CORS)
 AF9540
 AF9540.<a href="itrf_ret.prl?PID=AF9540">ITRF positions </a>are
available for this station.
 AF9540.The coordinates were established by GPS observations
 AF9540.and adjusted by the National Geodetic Survey in April 1996.
 AF9540.The coordinates are valid at the epoch date displayed above.
 AF9540.The epoch date for horizontal control is a decimal equivalence
 AF9540.of Year/Month/Day.
 AF9540
 AF9540.The orthometric height was determined by GPS observations and a
 AF9540.high-resolution geoid model using precise GPS observation and
 AF9540.processing techniques.
 AF9540
 AF9540.The XYZ, and position/ellipsoidal ht. are equivalent.
 AF9540
 AF9540.The ellipsoidal height was determined by GPS observations
 AF9540.and is referenced to NAD 83.
 AF9540
 AF9540.The geoid height was determined by GEOID99.
```

```
 AF9540
 AF9540;                      North         East      Units   Scale
Converg.
 AF9540;SPC TXNC      - 2,212,167.486   289,583.821   MT  0.99990817 -1
49 23.4
 AF9540
 AF9540                            SUPERSEDED SURVEY CONTROL
 AF9540
 AF9540  NAD 83(CORS)-  33 32 07.49057(N)     101 50 34.16324(W)
AD(1996.00) c
 AF9540  ELLIP HT     -         957.17  (m)
GP(1996.00) c c
 AF9540
 AF9540.Superseded values are not recommended for survey control.
 AF9540.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AF9540.See file dsdata.txt to determine how the superseded data were
derived.
 AF9540
 AF9540_STATION IS THE ANTENNA REFERENCE POINT OF THE GPS ANTENNA
 AF9540
 AF9540                            STATION DESCRIPTION
 AF9540
 AF9540'DESCRIBED BY NATIONAL GEODETIC SURVEY 1996
 AF9540'STATION IS A GPS CORS.  LATEST INFORMATION INCLUDING POSITIONS
AND
 AF9540'VELOCITIES ARE AVAILABLE IN THE COORDINATE AND LOG FILES
ACCESSIBLE
 AF9540'BY ANONYMOUS FTP OR THE WORLDWIDE WEB.
 AF9540'   FTP CORS.NGS.NOAA.GOV: CORS/COORD  AND  CORS/STATION_LOG
 AF9540'   HTTP://WWW.NGS.NOAA.GOV  UNDER PRODUCTS AND SERVICES.
 Elapsed Time = 00:00:23


 ------------------------------------------------------------
------
 -   This listing contains control for which complete digital
     data sheets where not provided.  The complete data sheets were
     not provided for the reason listed below.  The reason below is
     associated with a horizontal control Nonpub code shown under
     the heading 'H' and/or a vertical control Nonpub code shown under
     the heading 'v'


     The format of the records are as follows:
         Pid  = Station Permanent Identifier)
         Name = Station Designation
         Lat  = Approx. Latitude (Degrees, Minutes, truncated Seconds)
         Lon  = Approx. Longitude (Degrees, Minutes, truncated Seconds)
         O    = Horizontal Order
```

o = Vertical Order

H = Horizontal Nonpub Code

v = Vertical Nonpub Code

H Nonpub	HORIZONTAL CONTROL NONPUB REASON
X	Surface Mark Reported Destroyed
Y	Surface and underground mark reported destroyed
A	A-Order Horizontal mark not tied to an adjusted HARN
C	C-Nonoperational CORS Station
W	Weakly determined position
P	Purpose of position is not for network control
D	No Descriptive Text available
R	Restricted position

v Nonpub	VERTICAL CONTROL NONPUB REASON
X	Surface Mark Reported Destroyed
Y	Surface and underground mark reported destroyed
F	Bench Mark not yet adjusted.
D	No Descriptive Text available
Z	Presumed destroyed
R	Restricted elevation

NOTE - Stations found in this listing may still have a valid datasheet produced by use of other publishable values For example, an ADJUSTED height may be non-publishable but a good GPS height might be found on the datasheet. - This listing does not imply that values found on the datasheet -

are restricted. If it's on the datasheet, use it

```
 ------------------------------------------
------
  Pid    Name                              Lat        Lon          Elev
O o Hv
  ------ ------------------------------ -----
- - --
 >DP0692 LUBE                           33 31 27.7/101 48 14.0
A   D
</pre></body></html>
```

DP0389 DESIGNATION - V 905
DP0389 PID - DP0389
DP0389 STATE/COUNTY- TX/LUBBOCK
DP0389 USGS QUAD - NEW DEAL (1977)
DP0389
DP0389 HORZ DATUM - NAD 83
DP0389 VERT DATUM - NAVD 88
DP0389
DP0389 POSITION - 33 39 21. (N) 101 50 00. (W)
SCALED
DP0389 83 minus 27 - +00. +02.
NADCON
DP0389
DP0389
DP0389 HEIGHT - 988.353 (meters) 3242.62 (feet)
ADJUSTED
DP0389 88 minus 29 - +0.377 ADJ
UNCH
DP0389 DY minus 88 - -1.278
COMPUTED
DP0389. (NOTE - For assistance in applying shifts see file readme.dat)
DP0389
****
DP0389
DP0389 GEOID HEIGHT- -25.39
GEOID93
DP0389 MODELED GRAV- 979,309.7
NAVD88
DP0389
DP0389
DP0389 VERT ORDER - FIRST CLASS 2
DP0389
DP0389
DP0389.The horizontal coordinates were scaled from a topographic map
and have
DP0389.an estimated accuracy of +/- 6 seconds.
DP0389
DP0389.The orthometric height was determined by differential leveling
DP0389.and adjusted by the National Geodetic Survey in June 1991.
DP0389
DP0389.The dynamic height is computed by dividing the NAVD 88
DP0389.geopotential number by the normal gravity value computed on the
DP0389.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DP0389.degrees latitude (G = 980.6199 gals.).
DP0389
DP0389.The geoid height was determined by GEOID93.
DP0389
DP0389.The modeled gravity was interpolated from observed gravity
values.
DP0389
DP0389; North East Estimated Accuracy
DP0389;SPC TXNC - 2,225,490. 290,890. (+/- 180 meters
Scaled) MT
DP0389
DP0389_STATION MARK IS A BENCH MARK DISK
DP0389_WITH SETTING: SET IN A MASSIVE STRUCTURE
DP0389_THE MARK IS STAMPED: V 905 1945
DP0389_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DP0389
DP0389 HISTORY - Year Condition Recov. By
DP0389 HISTORY - 1945 STATION MONUMENTED COAST AND GEODETIC

TEMP PT SET OUT SIDE OF ADA OF LUBBOCK AIRPT. ELEV = 986.969 M 3238.08 FT

SURVEY
 DP0389 HISTORY   - 1955 GOOD   NATIONAL GEODETIC
SURVEY
 DP0389 HISTORY   - 1975 GOOD   NATIONAL GEODETIC
SURVEY
 DP0389
 DP0389   STATION DESCRIPTION
 DP0389
 DP0389'DESCRIBED BY NATIONAL GEODETIC SURVEY 1955
 DP0389'IN LUBBOCK.
 DP0389'AT LUBBOCK MUNICIPAL AIRPORT, LUBBOCK COUNTY, 1.0 MILE WEST OF
THE
 DP0389'CENTRAL CONTROL TOWER, AT THE MUNICIPAL HANGAR, IN THE EAST
BRICK
 DP0389'WALL, 10.3 FEET SOUTH OF THE NORTHEAST CORNER, 3 FEET ABOVE THE
 DP0389'GROUND, AND SET VERTICALLY.
 DP0389
 DP0389   STATION RECOVERY (1975)
 DP0389
 DP0389'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975
 DP0389'RECOVERED IN GOOD CONDITION.

NGS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000

389 **********
389 DESIGNATION - V 905
389 PID - DP0389
389 STATE/COUNTY- TX/LUBBOCK
389 USGS QUAD - NEW DEAL (1977)

NAD 27 INFO

389
389 *CURRENT SURVEY CONTROL
389
389* NAD 83(1986)- 33 39 21. (N) 101 50 00. (W) SCALED
389* NAVD 88 - 988.353 (meters) 3242.62 (feet) ADJUSTED
389
389 GEOID HEIGHT- -25.08 (meters) GEOID99
389 DYNAMIC HT - 987.075 (meters) 3238.43 (feet) COMP
389 MODELED GRAV- 979,309.7 (mgal) NAVD 88
389
389 VERT ORDER - FIRST CLASS II
389
389.This mark is at Lubbock Intl (LBB) Airport (LBB)
389
389.The horizontal coordinates were scaled from a topographic map and have
389.an estimated accuracy of +/- 6 seconds.
389
389.The orthometric height was determined by differential leveling
389.and adjusted by the National Geodetic Survey in June 1991.
389
389.The geoid height was determined by GEOID99.
389
389.The dynamic height is computed by dividing the NAVD 88
389.geopotential number by the normal gravity value computed on the
389.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
389.degrees latitude (G = 980.6199 gals.).
389
389.The modeled gravity was interpolated from observed gravity values.
389
389; North East Units Estimated Accuracy
389;SPC TXNC - 2,225,490. 290,890. MT (+/- 180 meters Scaled)
389
389 SUPERSEDED SURVEY CONTROL
389
389 NGVD 29 - 987.976 (m) 3241.38 (f) ADJ UNCH 1 2
389

```
 DQ0023  DESIGNATION -  Y 905
 DQ0023  PID         -  DQ0023
 DQ0023  STATE/COUNTY-  TX/LUBBOCK
 DQ0023  USGS QUAD   -  WOLFFORTH (1985)
 DQ0023
 DQ0023  HORZ DATUM  -  NAD 83
 DQ0023  VERT DATUM  -  NAVD 88
 DQ0023
 DQ0023  POSITION    -  33 34 41.      (N)    102 01 34.      (W)
SCALED
 DQ0023  83 minus 27 -       +00.                  +02.
NADCON
 DQ0023
 DQ0023
 DQ0023  HEIGHT      -      1011.011  (meters)    3316.96   (feet)
ADJUSTED
 DQ0023  88 minus 29 -        +0.376                                 ADJ
UNCH
 DQ0023  DY minus 88 -        -1.312
COMPUTED
 DQ0023. (NOTE - For assistance in applying shifts see file readme.dat)
 DQ0023
*****************************************************************************
 DQ0023
 DQ0023  GEOID HEIGHT-         -24.90
GEOID93
 DQ0023  MODELED GRAV-     979,304.2
NAVD88
 DQ0023
 DQ0023
 DQ0023  VERT ORDER  -  SECOND    CLASS 0
 DQ0023
 DQ0023
 DQ0023.The horizontal coordinates were scaled from a topographic map
and have
 DQ0023.an estimated accuracy of +/- 6 seconds.
 DQ0023
 DQ0023.The orthometric height was determined by differential leveling
 DQ0023.and adjusted by the National Geodetic Survey in June 1991.
 DQ0023
 DQ0023.The dynamic height is computed by dividing the NAVD 88
 DQ0023.geopotential number by the normal gravity value computed on the
 DQ0023.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DQ0023.degrees latitude (G = 980.6199 gals.).
 DQ0023
 DQ0023.The geoid height was determined by GEOID93.
 DQ0023
 DQ0023.The modeled gravity was interpolated from observed gravity
values.
 DQ0023
 DQ0023;                      North         East       Estimated Accuracy
 DQ0023;SPC TXNC     -  2,217,450.      272,730.     (+/- 180 meters
Scaled)    MT
 DQ0023
 DQ0023_STATION MARK IS A BENCH MARK DISK
 DQ0023_WITH SETTING: SET IN TOP OF CONCRETE MONUMENT (ROUND)
 DQ0023_THE MARK IS STAMPED: Y 905 1945
 DQ0023_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
 DQ0023+STABILITY: SURFACE MOTION
 DQ0023
 DQ0023  HISTORY     - Year Condition              Recov. By
```

DQ0023 HISTORY   - 1945 STATION MONUMENTED   COAST AND GEODETIC SURVEY
DQ0023
DQ0023   STATION DESCRIPTION
DQ0023
DQ0023'DESCRIBED BY COAST AND GEODETIC SURVEY 1945
DQ0023'8.1 MI E FROM SMYER.
DQ0023'IN LUBBOCK COUNTY, 8.1 MILES EAST ALONG STATE HIGHWAY 290 FROM THE
DQ0023'PANHANDLE AND SANTA FE RAILWAY STATION AT SMYER, HOCKLEY COUNTY, AT
DQ0023'THE JUNCTION OF AN ASPHALT ROAD LEADING NORTH TO REESE AIR FORCE BASE,
DQ0023'103.7 FEET NORTH OF THE CENTERLINE OF THE HIGHWAY, 49 FEET WEST OF THE
DQ0023'CENTERLINE OF THE ASPHALT ROAD, 1 FOOT EAST OF THE MILITARY
DQ0023'RESERVATION FENCE, AND 1 FOOT SOUTH OF A WHITE WOODEN WITNESS POST. A
DQ0023'STANDARD DISK, STAMPED Y 905 1945 AND SET IN THE TOP OF A CONCRETE
DQ0023'POST PROJECTING 5 INCHES ABOVE GROUND.

NGS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000
023 **********
023 DESIGNATION - Y 905
023 PID - DQ0023
023 STATE/COUNTY- TX/LUBBOCK
023 USGS QUAD - WOLFFORTH (1985)

NAD 27 INFO

023
023 *CURRENT SURVEY CONTROL
023
023* NAD 83(1986)- 33 34 41. (N) 102 01 34. (W) SCALED
023* NAVD 88 - 1011.011 (meters) 3316.96 (feet) ADJUSTED
023
023 GEOID HEIGHT- -24.57 (meters) GEOID99
023 DYNAMIC HT - 1009.699 (meters) 3312.65 (feet) COMP
023 MODELED GRAV- 979,304.2 (mgal) NAVD 88
023
023 VERT ORDER - SECOND CLASS 0
023
023.The horizontal coordinates were scaled from a topographic map and have
023.an estimated accuracy of +/- 6 seconds.
023
023.The orthometric height was determined by differential leveling
023.and adjusted by the National Geodetic Survey in June 1991.
023
023.The geoid height was determined by GEOID99.
023
023.The dynamic height is computed by dividing the NAVD 88
023.geopotential number by the normal gravity value computed on the
023.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
023.degrees latitude (G = 980.6199 gals.).
023
023.The modeled gravity was interpolated from observed gravity values.
023
023; North East Units Estimated Accuracy
023;SPC TXNC - 2,217,450. 272,730. MT (+/- 180 meters Scaled)
023
023 SUPERSEDED SURVEY CONTROL
023
023 NGVD 29 1010.635 (m) 3315.72 (f) ADJ UNCH 2 0
023

DP0380 DESIGNATION - B 71
DP0380 PID - DP0380
DP0380 STATE/COUNTY- TX/LUBBOCK
DP0380 USGS QUAD - SHALLOWATER (1976)
DP0380
DP0380 HORZ DATUM - NAD 83
DP0380 VERT DATUM - NAVD 88
DP0380
DP0380 POSITION - 33 37 57. (N) 101 55 13. (W)
SCALED
DP0380 83 minus 27 - +00. +02.
NADCON
DP0380
DP0380
DP0380 HEIGHT - 988.514 (meters) 3243.15 (feet)
ADJUSTED
DP0380 88 minus 29 - +0.413 ADJ
UNCH
DP0380 DY minus 88 - -1.284
COMPUTED
DP0380. (NOTE - For assistance in applying shifts see file readme.dat)
DP0380
****
DP0380
DP0380 GEOID HEIGHT- -25.21
GEOID93
DP0380 MODELED GRAV- 979,304.7
NAVD88
DP0380
DP0380
DP0380 VERT ORDER - FIRST CLASS 2
DP0380
DP0380
DP0380.The horizontal coordinates were scaled from a topographic map
and have
DP0380.an estimated accuracy of +/- 6 seconds.
DP0380
DP0380.The orthometric height was determined by differential leveling
DP0380.and adjusted by the National Geodetic Survey in June 1991.
DP0380
DP0380.The dynamic height is computed by dividing the NAVD 88
DP0380.geopotential number by the normal gravity value computed on the
DP0380.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
DP0380.degrees latitude (G = 980.6199 gals.).
DP0380
DP0380.The geoid height was determined by GEOID93.
DP0380
DP0380.The modeled gravity was interpolated from observed gravity
values.
DP0380
DP0380; North East Estimated Accuracy
DP0380;SPC TXNC - 2,223,160. 282,740. (+/- 180 meters
Scaled) MT
DP0380
DP0380_STATION MARK IS A BENCH MARK DISK
DP0380_WITH SETTING: SET IN A MASSIVE STRUCTURE
DP0380_THE MARK IS STAMPED: 3241.795 B 71 1930
DP0380_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
DP0380
DP0380 HISTORY - Year Condition Recov. By
DP0380 HISTORY - 1930 STATION MONUMENTED COAST AND GEODETIC

TEMP. PT SET AWAY FROM RR. TRESTLE ELEV. = 987.569 MT 3240.05 FT

SURVEY
 DP0380 HISTORY   - 1934 GOOD   NATIONAL GEODETIC
SURVEY
 DP0380 HISTORY   - 1982 GOOD   NATIONAL GEODETIC
SURVEY
 DP0380
 DP0380   STATION DESCRIPTION
 DP0380
 DP0380'DESCRIBED BY NATIONAL GEODETIC SURVEY 1934
 DP0380'0.25 MI SE FROM BROADVIEW.
 DP0380'1/4 MILE SOUTHEAST ALONG THE PANHANDLE AND SANTA FE RAILWAY FROM
 DP0380'BROADVIEW, LUBBOCK COUNTY, AT BRIDGE 84A, IN THE SOUTHEAST PIER,
AND
 DP0380'ON THE SOUTHWEST SIDE OF THE TRACK.
 DP0380
 DP0380   STATION RECOVERY (1982)
 DP0380
 DP0380'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982
 DP0380'RECOVERED IN GOOD CONDITION, NEW DESCRIPTION FOLLOWS. 9.2 KM
(5.7 MI)
 DP0380'NORTHWESTERLY ALONG THE SANTA FE RAILROAD FROM THE RAILROAD
STATION IN
 DP0380'LUBBOCK, 0.1 KM (0.05 MI) SOUTHEAST OF MILEPOST 84, IN TOP OF
THE
 DP0380'SOUTHWEST END OF THE SOUTHEAST CONCRETE ABUTMENT OF A RAILROAD
TRESTLE
 DP0380'AND 2.1 METERS (6.9 FT) SOUTHWEST OF THE NEAR RAIL.
 DP0380'THE MARK IS 0.6 M BELOW THE TRACKS.
1   National Geodetic Survey,   Retrieval Date = APRIL 19, 1996

GS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000

380 **********
380 DESIGNATION - B 71
380 PID - DP0380
380 STATE/COUNTY- TX/LUBBOCK
380 USGS QUAD - SHALLOWATER (1976)

NAD 27 INFO

380
380 *CURRENT SURVEY CONTROL
380
380* NAD 83(1986)- 33 37 57. (N) 101 55 13. (W) SCALED
380* NAVD 88 - 988.514 (meters) 3243.15 (feet) ADJUSTED
380
380 GEOID HEIGHT- -24.89 (meters) GEOID99
380 DYNAMIC HT - 987.231 (meters) 3238.94 (feet) COMP
380 MODELED GRAV- 979,304.7 (mgal) NAVD 88
380
380 VERT ORDER - FIRST CLASS II
380
380.The horizontal coordinates were scaled from a topographic map and have
380.an estimated accuracy of +/- 6 seconds.
380
380.The orthometric height was determined by differential leveling
380.and adjusted by the National Geodetic Survey in June 1991.
380
380.The geoid height was determined by GEOID99.
380
380.The dynamic height is computed by dividing the NAVD 88
380.geopotential number by the normal gravity value computed on the
380.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
380.degrees latitude (G = 980.6199 gals.).
380
380.The modeled gravity was interpolated from observed gravity values.
380
380; North East Units Estimated Accuracy
380;SPC TXNC - 2,223,160. 282,740. MT (+/- 180 meters Scaled)
380
380 SUPERSEDED SURVEY CONTROL
380
380 NGVD 29 988.101 (m) 3241.79 (f) ADJ UNCH 1 2
380

```
 DP0382  DESIGNATION -  M 905
 DP0382  PID         -  DP0382
 DP0382  STATE/COUNTY-  TX/LUBBOCK
 DP0382  USGS QUAD   -  LUBBOCK EAST (1977)
 DP0382
 DP0382  HORZ DATUM  -  NAD 83
 DP0382  VERT DATUM  -  NAVD 88
 DP0382
 DP0382  POSITION    -  33 36 13.     (N)    101 50 10.     (W)
SCALED
 DP0382  83 minus 27 -       +00.                  +02.
NADCON
 DP0382
 DP0382
 DP0382  HEIGHT      -       965.096  (meters)    3166.32   (feet)
ADJUSTED
 DP0382  88 minus 29 -        +0.370                                 ADJ
UNCH
 DP0382  DY minus 88 -        -1.248
COMPUTED
 DP0382. (NOTE - For assistance in applying shifts see file readme.dat)
 DP0382
**********************************************************************
 DP0382
 DP0382  GEOID HEIGHT-         -25.30
GEOID93
 DP0382  MODELED GRAV-     979,310.4
NAVD88
 DP0382
 DP0382
 DP0382  VERT ORDER  -  FIRST     CLASS 2
 DP0382
 DP0382
 DP0382.The horizontal coordinates were scaled from a topographic map
and have
 DP0382.an estimated accuracy of +/- 6 seconds.
 DP0382
 DP0382.The orthometric height was determined by differential leveling
 DP0382.and adjusted by the National Geodetic Survey in June 1991.
 DP0382
 DP0382.The dynamic height is computed by dividing the NAVD 88
 DP0382.geopotential number by the normal gravity value computed on the
 DP0382.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
 DP0382.degrees latitude (G = 980.6199 gals.).
 DP0382
 DP0382.The geoid height was determined by GEOID93.
 DP0382
 DP0382.The modeled gravity was interpolated from observed gravity
values.
 DP0382
 DP0382;                      North         East       Estimated Accuracy
 DP0382;SPC TXNC     -  2,219,710.      290,450.     (+/- 180 meters
Scaled)    MT
 DP0382
 DP0382_STATION MARK IS A BENCH MARK DISK
 DP0382_WITH SETTING: SET IN A LIGHT STRUCTURE
 DP0382_THE MARK IS STAMPED: M 905 1945
 DP0382_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY
 DP0382
 DP0382  HISTORY     - Year Condition            Recov. By
 DP0382  HISTORY     - 1945 STATION MONUMENTED   COAST AND GEODETIC
```

TEMP PT SET AWAY FROM BRIDGE
ELEV = 967.471 MT 3174.11 FT

SURVEY
 DP0382
 DP0382 STATION DESCRIPTION
 DP0382
 DP0382'DESCRIBED BY COAST AND GEODETIC SURVEY 1945
 DP0382'1.4 MI N FROM LUBBOCK.
 DP0382'1.4 MILES NORTH ALONG U.S. HIGHWAY 87 FROM THE COURTHOUSE AT
LUBBOCK,
 DP0382'LUBBOCK COUNTY, 0.2 MILE SOUTH OF AN UNDERPASS, AT AN 8- BY 20-
FOOT
 DP0382'CONCRETE CULVERT, IN THE TOP OF THE NORTH END OF THE WEST
HEADWALL, 18
 DP0382'FEET WEST OF THE CENTERLINE OF THE HIGHWAY, AND ABOUT 1/2 FOOT
HIGHER
 DP0382'THAN THE HIGHWAY.
1 National Geodetic Survey, Retrieval Date = APRIL 19, 1996

NGS Data Sheet

BASE = Sybase ,PROGRAM = datasheet, VERSION = 6.08
ting Datasheet Retrieval...
National Geodetic Survey, Retrieval Date = FEBRUARY 11, 2000

382 **********
382 DESIGNATION - M 905
382 PID - DP0382
382 STATE/COUNTY- TX/LUBBOCK
382 USGS QUAD - LUBBOCK EAST (1977)

NAD 27 INFO

382
382 *CURRENT SURVEY CONTROL
382
382* NAD 83(1986)- 33 36 13. (N) 101 50 10. (W) SCALED
382* NAVD 88 - 965.096 (meters) 3166.32 (feet) ADJUSTED
382
382 GEOID HEIGHT- -24.97 (meters) GEOID99
382 DYNAMIC HT - 963.848 (meters) 3162.22 (feet) COMP
382 MODELED GRAV- 979,310.4 (mgal) NAVD 88
382
382 VERT ORDER - FIRST CLASS II
382
382.The horizontal coordinates were scaled from a topographic map and have
382.an estimated accuracy of +/- 6 seconds.
382
382.The orthometric height was determined by differential leveling
382.and adjusted by the National Geodetic Survey in June 1991.
382
382.The geoid height was determined by GEOID99.
382
382.The dynamic height is computed by dividing the NAVD 88
382.geopotential number by the normal gravity value computed on the
382.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45
382.degrees latitude (G = 980.6199 gals.).
382
382.The modeled gravity was interpolated from observed gravity values.
382
382; North East Units Estimated Accuracy
382;SPC TXNC - 2,219,710. 290,450. MT (+/- 180 meters Scaled)
382
382 SUPERSEDED SURVEY CONTROL
382
382 NGVD 29 964.726 (m) 3165.11 (f) ADJ UNCH 1 2