Rec'd w/letter dated 12/7/94

YMP
Product
YMP-94-357.0
(11/28/94)

Tabular and spatial data sets for:

- Seismic hypocenter data from the Southern Great Basin Seismic Network.

- YMP project GPS, leveling line, and trilateration network data.

NR94071802

102.8

WBS 1.2.5.3.6
QA: NA

YMP Product Number YMP-94-357.0

The following information is provided for the NRC data request dated March 7,1994 (EG&G/EM Product number YMP-94-357.0). A digital copy of all information is provided on the 8mm tape.

The data dictionary for each file is provided in the "dictionary" file. All tabular files are provided in ASCII tab delimited format and ordered in the same sequence as the data dictionary. All ARC/INFO files are provided in double precision ARC/INFO export format. All coordinates are in geographic decimal degrees. The quality report containing lineage and source information for associated Data Tracking Number (DTN) is provided in the "quality" file. Each record contains a source key (skey) field. This field can be cross referenced to the source information in the quality report.

The "sienet.dat" file contains all data provided for the Southern Great Basin Seismic Network monitoring sites. This file provides site name, location and equipment gain etc. for the network sites. It is linked to the ARC/INFO coverage "geo04" through the "ref_no" field.

The data contained in c173p1568.dat is from the master file (c173p1568) for seismic events obtained from the Southern Great Basin Seismic Monitoring Network. It provides time, location, and magnitude information for all reported seismic events from Southern Great Basin currently processed into the YMP TDB. It is currently being updated with new and backlog data provided by the USGS. The seismic spatial files are provided by year in double precision ARC/INFO export file format. These ARC/INFO files are linked to the master file (c173p1568) through the "aref_no" field. Additional event data are provided in file c26p106.dat and c26p107.dat. YMP TDB file c26p106 contains computed event data analyzed from the individually recorded data from each detecting sensors. The sensor data is held in c26p107. This is a master (c26p106) detail (c26p106) relation. Data provided in c26p107.dat are used to compute the time difference from each site for a select sub-set of event epicenters.

Although not requested, a copy of the ARC/INFO coverage and data dictionary for the National Geodetic Data Center earthquake data set is also provided. These data are not specific to the Southern Great Basin but are provided for information. The associated tabular data is available from the YMP Data Support System (DSS) database held in GENISES.

Spatial and tabular master files for geodetic data are currently under development. However, the following data tracking numbers are provided as separate files.

GS930731174101.003 (table_1, table_geo, table_lv, table_t, table_sm)
GS930731174101.005 (qr20051.dat, qr20052.dat, qr20053.dat qr20054.dat)

GS931031174102.002 (qr94071201_1.dat,qr94071201_2.dat,qr94071201_3.dat,
qr94071201_4.dat, qr94071201_5.dat.qr94071201_6.dat,
qr94071201_7.dat)
GS931031174102.003 (qr94071201_1.dat,qr94071201_2.dat,qr94071201_3.dat,
qr94071201_4.datq,r94071201_5.dat, qr94071201_6.dat
qr94071201_7.dat)

Data Transfer

DATE: 4/28/94

1. ORGANIZATION: EG&G/EM
2. MEDIA ID: YMP-94-357
3. TRACKING NO: NR9407/802

4. SYSTEM HARDWARE:

___IBM and Compatibles
___Apple
X Sun
___Silicon Graphics
___Digital/DEC
___Data General

Other (specify): _____

5. DIGITAL MEDIA PROVIDED:

A. Capacity/Type:

___High Density Disk (3.5" or 5.25")
___Double Density Disk (3.5" or 5.25")
___150 MB 1/4" Data Cartridge
___Optical
___CD
X 8mm Data Tape
___9 Track/1600 BPI
___9 Track/6250 BPI
___4mm Data Tape

Other (specify): _____

B. Size and name of each file on media: (When possible, please attach listing of media in lieu of this area)

FILE NAME	# BYTES	FILE NAME	# BYTES
See Attachment			

Total No. Bytes: _____

C. Software used to generate file (if any):

___Wordperfect
___Excel
___Lotus 1-2-3
___Paradox
___Quatro Pro
___DBASE
X ARC/info
X INGRES
___Lynx GMS
___EarthVision
___Iris Explorer

Other (specify): _____

D. File/Record Format (check all that apply):

XX Tab delimited fields
___Comma delimited fields
___Space delimited fields

Other (specify): ARC/INFO Export Format

E. Media Format

XX Tar Format
___Copy (cp)
___Backup (CMS)

6. COMMENTS:

_____

_____

_____

```
 4414400 Nov  4 12:48 c173p1568.dat
    3798 Nov  1 15:45 c173p1568.footnotes
  341446 Nov 21 14:28 c26p106.dat
 4066866 Nov 21 15:02 c26p107.dat
  102056 Nov 28 12:22 dictionary
   30337 Nov  9 11:58 geo04.e00
11812558 Nov 17 20:38 ngdcsei.e00*
  149952 Nov 16 15:28 qr20051.dat
   34932 Nov 16 15:36 qr20052.dat
  777975 Nov 16 15:45 qr20053.dat
  154011 Nov 16 16:33 qr20054.dat
   26214 Nov  7 14:57 qr94071201_1.dat
  137800 Nov  7 15:05 qr94071201_2.dat
312459798 Nov  9 12:26 qr94071201_3.dat
 5865918 Nov  8 09:24 qr94071201_4.dat
   49700 Nov  8 09:29 qr94071201_5.dat
  380695 Nov  8 09:31 qr94071201_6.dat
  208278 Nov  8 09:33 qr94071201_7.dat
   19258 Nov 21 18:40 quality
    2791 Nov 23 09:37 readme.txt
    4602 Nov 28 09:40 readme.wp
  594802 Nov  9 11:58 sei7883.e00
   76936 Nov  9 11:58 sei80.e00
   72920 Nov  9 11:58 sei81.e00
  132520 Nov  9 11:58 sei84.e00
  218149 Nov  9 11:58 sei85.e00
  226197 Nov  9 11:58 sei86.e00
  179456 Nov  9 11:58 sei87.e00
  317366 Nov  9 11:58 sei88.e00
  322955 Nov  9 11:58 sei89.e00
  305163 Nov  9 11:58 sei90.e00
  262330 Nov  9 11:58 sei91.e00
   48832 Nov 16 17:41 seisnet.dat
  150672 Jul 25 08:14 table_1.dat
    7296 Jul 25 08:14 table_geo.dat
   14385 Jul 25 08:14 table_lv.dat
 1714944 Jul 25 14:41 table_sm.dat
    2040 Jul 25 08:14 table_t.dat
```

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr20051
(File Id)

YMP Level Data: Geodetic Leveling and Section Observations (1992-1993) - Field Abstracts

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
avg_height	Average height of instrument(cm)	Integer
begin_time	Begin time	Character(10)
bscwl	Backsite center wire low scale rod reading	Integer
c	Collimation error in mm/m	Real
coll_time	Collimation check: Time	Character(8)
Date	Date of observation	Date
end_time	End time	Character(10)
file_id	Name of original file data was retrieved from	Character(50)
from_where	Reference to a bench mark name	Character(20)
fscwl	Foresite center wire low scale rod reading	Integer
level	Type of level (Manufacturer and model)	Character(25)
levelman	Levelman	Character(5)
line	NGS style line number	Character(10)
lower_temp_ht	Lower temperature probe height (cm)	Integer
match_rod_scales	Do the Rod scales match	Character(5)
mean_opt_temp	Mean optimum temperature for the rod pair - part of the instrument calibration	Real
micrometer	Was a micrometer used	Character(5)
part	NGS style part number	Integer
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)

rod_a	Rod A type	Character(12)
rod_a_sn	Rod A serial number	Character(10)
rod_b	Rod B type	Character(12)
rod_b_sn	Rod B Serial number	Character(10)
rod_grad	Rod graduations	Character(20)
sequence	Sequence Number which corresponds to items in Tables 2 and 3	Integer
serial_number	Serial Number of Level	Character(10)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
sky	The condition of the sky	Character(30)
stadia	Stadia wire reading	Integer
state	State	Character(5)
table_id	The field identifies the source table or appendix from which the data was taken.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
temp_units	Temperature probe units	Character(10)
time_zone	Time Zone	Character(20)
to_where	Reference to a bench mark name	Character(20)
upper_temp_ht	Upper temperature probe height (cm)	Integer
wind	The condition of the wind	Character(30)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr20052
(File Id)

YMP Level Data: Geodetic Leveling and Section Observations (1992-1993) - Distance Information

Attribute	Description	Domain
bs_stadia	Total measurement for the section (backsite)	Real
fs_stadia	Forsite stadia wire rod reading; the total measurement for the section	Real
high_scale	Total elevation difference for the section off the high scale readings	Real
length	Adding the section lengths from the bench mark names	Real
low_scale	Total elevation difference off of the low scale	Real
mean	Mean elevation difference between the high and low scale	Real
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
sequence	Seqence number to corresponding items in Tables 1 and 3	Integer
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr20053
(File Id)

YMP Level Data: Geodetic Leveling and Section Observations (1992-1993) - Detail Information

Attribute	Description	Domain
bscwh	Backsite center wire high scale rod reading	Integer
bscwl	Backsite center wire low scale rod reading	Integer
bsstad	Backsite stadia wire rod reading	Integer
fscwh	Foresite center wire high scale rod reading	Integer
fscwl	Foresite center wire low scale rod reading	Integer
fsstad	Foresite stadia wire rod reading	Integer
ltemp	Lower temperature probe reading	Real
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
sequence	Sequence number corresponding to items in Tables 1 and 2	Integer
setup	Instrument setup	Character(5)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
utemp	Upper temperature probe reading	Real

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr20054
(File Id)
This file contains geodetic field abstract data for the YMP
1992-93 geodetic leveling and quadrilateral observation results.

Attribute	Description	Domain
class_order	Order of Accuracy	Character(50)
corr_elev_diff	Elevation difference using temperature and rod information (MT)	Real
Date	Date of Observation	Character(5)
dist_total	Distance Total (km)	Real
duration	Period of Observations	Character(30)
f_and_b	(F+B) Total (MM) - Divergence	Real
f_or_b	Forward or Backward running	Character(1)
from_to	Reference to a bench mark name	Character(15)
from_where	Reference to a bench mark name	Character(15)
levelman	Levelman	Character(25)
line	NGS style line number	Character(10)
mean_corr_eldiff	Mean field elevation for the section (MT)	Real
obs_elev_diff	Mean elevation between the two points	Real
part	NGS style part number	Integer
project	Project	Character(50)
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
rej	Rejected section	Character(1)
sequence	Sequence Number	Integer
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source	Character(20)

	information is listed in the document file.	
spsn	Survey Point Serial Number	Character(5)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
to_where	Reference to a bench mark name	Character(15)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

c173p1568
(File Id)

This is the master table for seismic data obtained from the Southern Great Basin Seismic Monitoring Network. This file contains seismic events with location, time, and magnitude for all events recorded and analyzed in the southern great basin of Nevada and California. This file holds all TDB submittal which contain common data fields. The data in this file are linked to ARC/INFO coverages of the area.

Attribute	Description	Domain
azi_gap	Azimuthal gap is the largest angle subtended by the epicenter and any two circularly adjacent stations with positive phase weight. This data is provided in degrees.	Integer
depth	Depth in kilometers of the seismic event.	Real
dist_station	This field provides the distance in km to the minimum reporting station or source station.	Real
horiz_err	The horizontal error (km) equals the square root of sdx squared plus sdy squared where sdx and sdy refer to the HYPO71 standard errors in longitude and latitude, respectively.	Real
hypo_date	Seismic event date is provided in Universal Coordinated Time (hr:min:sec.00).	Date
hypo_type	Type of hypocenter: FF = earthquake location (free depth) develocorder film; FD = earthquake location (fixed depth) develocorder film; AF = earth. loc. (free depth) computer recordings; AD = earth. loc. (fixed depth) comp. record.; CF = probable explosion (free depth); CD = prob. explos. (fixed depth); LF = low-frequency event; BB = known chemical explosion; PA = hypocenter from USGS-Pasadena	Character(2)
lat	Latitude in geographic decimal degrees.	Real
lat_error	This field contains the amount of latitude error in Km.	Real
long	Longitude in geographic decimal degrees.	Real
long_error	Amount of longitude error in Km.	Real
mblg	Local magnitude value is calculated using the peak amplitudes from earthquakes recorded	Real

	using the USGS telemetered network. This value is the calculation of the magnitude using the formula that resembles the ordinal MbLg distance correction and helps provide the peak amplitude used in the shear-wave train on a vertical-component instrument.	
mca	This field holds the coda-average magnitude.	Real
md	The duration magnitude estimate. The Md formula will be unique to each local network and instrument type within a network. All instruments in the Southern Great Basin have similar responses and differences are absorbed in station corrections.	Real
mlc	This field holds the maximum of station magnitudes from overdrive(clipped) records.	Real
mlh	This field holds the local magnitude from horizontal-component instruments.	Real
mlv	This field holds the local magnitude from vertical-component instruments. For values provided during 1980 and 1981 are the average magnitude computed by the method of Lee, Bennet, and Meager (1972)	Real
num_phases	This field holds the number of phases having positive weight in the solution (P+S).	Real
quad	USGS quadrangle names in the southern Great Basin.	Character(30)
qual	This field provides two HYPO71 hypocenter quality estimates as defined by Lee and Lahr(1975).	Character(5)
rms_resid	This field hold the root-mean-square travel time residual.	Real
std_error_depth	Vertical error(km) is the HYPO71 standard error in depth(sdz).	Real
time	Seismic event Universal Coordinated Time.	Character(10)
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
depth_note	Notation of depth. This field indicates the method used to fix the depth-of-focus standard error estimate.	Character(10)
quad_note	Additional comments provided on the extent of the USGS quadrangle.	Character(10)
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)

skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
table_id	The field identifies the source table or appendix from which the data was taken.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Real

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei7883
(File Id)

ARC/INFO coverage of seismic event. These dataare the resulting analysis of recorded events from theSouthern Great Basin Seismic Network. This coverage islinked through the "aref_no" to tabular data in the TDB.These data were recorded 1978 through 1983. These data werecompared to the raw recorded data and event information wasadjusted by the originator.

Attribute Domain	Description	Date
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Character(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei80
(File Id)

Souther Great Basin Seismological data for1980. This data was processed as backlog data and is linked tothe tabular Ingres tables by the aref_no relate key.

Attribute Domain	Description	Date
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Character(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei81
(File Id)

Souther Great Basin Seismological data for1981. This is a GIS point coverage of the seismic events for1981. this coverage is linked to TDB data for qr92122915.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Character(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Integer
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei84
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1984. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Date
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei85
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1985. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Character(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei86
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1986. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Date
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei87
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1987. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Date(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei88
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1988. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Date(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei89
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1989. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Character(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
		Date

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei90
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1990. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Date(12)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

sei91
(File Id)

GIS coverage of seismic event data from the Southern Great Basin Seismic Network during 1991. this data is linked to statistical data in the YMP TDB.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
last_edited	This field holds the date when this file was last updated or modified. This would also indicate the version of this file.	Date
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC This data was not requested, however, this file with ARC/INFO data
is available from GENISES.

seismic_data_ngdc
(File Id)

Seismic event data reported to the national earthquake center 1800 to present. This data is provided from all detecting sensors around the earth. This file contains data greater than mag 1.0 within 500 miles of Yucca Mountain.

Attribute	Description	Domain
body_wave	Average body-wave value as determined by PDE program.	Integer
cultural_effects	Indicates reported casualties, damage, felt information.	Character(1)
Date	Date of seismic event	Date
depth_control	Depth control designator.	Character(1)
diastrophism_code	Diastrophism code for surface faulting, uplift or both.	Character(1)
flinn_engdahl	As described by Flinn and others (1974)	Character(3)
focal_depth	Focal depth of event.	Integer
fps	Fault plane solution. FPS indicates a faultplane solution was computed.	Character(3)
latitude	Geographic latitude in decimal degrees.	Real
local_mag	Local magnitude.	Real
longitude	Geographic longitude in decimal degrees.	Real
max_intensity	Maximum intensity expressed by modified Mercalli scale or converted to MM scale.	Character(1)
mb	Code for body wave data.	Character(2)
ms	code indicate for surface wave value.	Character(2)
no_of_stations	Number of stations reporting event.	Character(3)
non_tectonic	Non tectonic activities such as man made explosions.	Character(1)
origin_time	Computed or observed if controlled explosion with shot. Time of event.	Real
other_magnitude	Value obtained from several sources, unspecified magnitude type but generally MS.	Real

scale_auth	Authority for scale value.	Character(4)
surface_wave_valu	Surface wave value as computed by PDE program.	Real
tsunami_code	Code to indicate tsunami activity.	Character(1)
unusual_events	Non seismic events such as landslides, geysers.	Character(1)
z_or_h	MS computed for long-period vertical or horizontal.	Character(1)
auth_for_time	Authority for time and coordinates as well as quality indicators.	Character(1)
authority_mag	Authority for magnitude in other_magnitude attribute.	Character(3)
blank	Blank	Integer
data_source	Source from which all or most of the data were obtained.	Character(3)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Integer
scale	Magnitude scale used.	Character(2)
seiche_code	Code to indicate seiche activity.	Character(1)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
sp_event	International data exchange for earthquakes.	Character(1)
volcanism_code	Code to indicate volcanism activity.	Character(1)
wave_generated_co	Code for type of wave such as T-wave or Gravity wave.	Character(1)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

seinet.dat
(File Id)

This is the seismic monitoring sites for the Southern Great Basin Seismic Network provided in USGS OFR 91-572. This information is linked to the ARC/INFO coverage geo04 and is also provided in several TDB submittal on YMP seismic activity.

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
began	The date the monitoring site became operational.	Date
code	ARC/INFO code used to display data.	Integer
dd_lat	Latitude of site in geographic decimal degrees.	Real
dd_long	Longitude of site in geographic decimal degrees.	Real
dms_lat	Latitude of site in geographic in degree minutes and seconds.	Character(12)
dms_long	Longitude of site in geographic in degrees minutes and seconds.	Character(14)
ending	The date the monitoring site was taken out of operation.	Date
gain	Seismic equipment gain.	Integer
ground_elev_m	Ground elevation in meters.	Real
id	Monitoring site identification.	Character(20)
identifier	Monitoring site location name.	Character(30)
inst_code	Code	Integer
last_edit	Date this file was last edited.	Date
posit_comm	Position location comments.	Character(80)
position_date	Date of monitoring site location.	Date
positon_method	Method used to locate the monitoring site.	Character(10)

ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Integer
sei_meter_model	Seismic monitoring equipment used on this site.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
sp_lat	Latitude of site in geographic State Plane grid coordinate system.	Real
sp_long	Longitude of site in geographic State Plane grid coordinate system.	Real

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

geo04
(File Id)

Geographic location of the Southern Great Basin Seismic Monitoring Network. This data was taken from USGS OFR 91-572. This data is linked through the aref_no to Ingres file Seismic Network. This data was also provided in several seismic reports submitted to the YMP TDB.

Attribute	Description	Domain
ACTIVITY_ID	Site identification	Character(10)
ACTIVITY_TYPE	Type or purpose of monitoring site.	Character(20)
AREA	Area size in map unites.	Real
CODE	Database code used to select data.	Integer
ENDING_DATE	Date site was taken out of service.	Date
GAIN	Equipment gain	Integer
GEO04_SP#	ARC/INFO reserved field.	Integer
GEO04_SP-ID	ARC/INFO Coverage record identification.	Integer
LASTEDIT	Last date this file was edited	Character(12)
LOCATION	General area name for monitoring site	Character(20)
LOCATION_METHOD	Type of location method used to locate site.	Character(20)
PERIMETER	ARC/INFO perimeter size in map unites.	Real
POSITION_DATE	Date location of site was generated	Character(20)
START_DATE	Date site became operational	Date
SYMBOL	ARC/INFO symbol for presenting site on map or Arc/View.	Integer
TYPE_MONITOR	Type of monitoring equipment	Character(20)
X-COORD	X coordinates in map unites	Real
Y-COORD	Y coordinates in map unites	Real
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
ref_no	The ref_no is used as the linking item from the spatial location to the spatial datasets.	Integer

	This attribute is closely controlled by the database administrator and is not used for any other purpose.	
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_1
(File Id)

Survey of Deformation of 50-KM-Aperture Trilateration Network using GPS and A Geodolite; Centered on Yucca Mountain; Observation Data 1993 - Master Information

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
agency	Agency	Character(40)
antenna_east	Eccentricities of antenna center relative to marker to the east (meters)	Real
antenna_ht	Antenna height - Height of bottom surface of antenna above marker	Real
antenna_id	Antenna number	Character(20)
antenna_model	Antenna type	Character(20)
antenna_north	Eccentricities of antenna center relative to marker to the north (meters)	Real
day_first_obs	Day of first observation	Date
day_last_obs	Day of Last observation	Date
freq_l1	wavelength factor for L1; 1=full cycle ambiguities; 2=half cycle ambiguities (squaring)	Integer
freq_l2	wavelength factor for L2; 1=full cycle ambiguities; 2=half cycle ambiguities (squaring); 0=single frequency instrument	Integer
interval	Observation interval in seconds	Integer

obs_type1	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type2	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type3	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type4	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type5	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type6	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type7	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type8	Observation type; L1-L2=phase measurements onCharacter(2) L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)
obs_type9	Observation type; L1-L2=phase measurements onCharacter(2)

	L1 and L2 (full cycles); C1=pseudorange using C/A-Code on L1 (meters);P1-P2=pseudorange using P-Code on L1 and L2 (meters); D1-D2=Doppler frequency on L1 and L2 (Hz); T1-T2=transit Integrated Doppler on 150 (T1) and 400 MHz (T2) (cycles)	
operator	Operator	Character(20)
position_x	Approximate marker x position	Real
position_y	Approximate marker y position	Real
position_z	Approximate marker z position	Real
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
receiver_id	Receiver number	Character(20)
receiver_model	Receiver type	Character(20)
relate_index	Index used to relate tables 1; 2; and 3	Integer
station_name	Station Name	Character(60)
time_first_obs	Time of first observation	Character(20)
time_last_obs	Time of last observation	Character(20)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_2
(File Id)

Survey of Deformation of 50-KM-Aperture Trilateration Network using GPS and A Geodolite; Centered on Yucca Mountain; Observation Data 1993 - Number of Observations

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
num_obs_1	Number of Observations for observation type 1	Integer
num_obs_2	Number of Observations for observation type 2	Integer
num_obs_3	Number of Observations for observation type 3	Integer
num_obs_4	Number of Observations for observation type 4	Integer
num_obs_5	Number of Observations for observation type 5	Integer
num_obs_6	Number of Observations for observation type 6	Integer
num_obs_7	Number of Observations for observation type 7	Integer
num_obs_8	Number of Observations for observation type 8	Integer
num_obs_9	Number of Observations for observation type 9	Integer
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
relate_index	Index relating Tables 1; 2; and 3	Integer
satellite	Satellite Number	Integer

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_3
(File Id)

Survey of Deformation of 50-KM-Aperture Trilateration Network using GPS and A Geodolite; Centered on Yucca Mountain; Observation Data 1993 - Detail Data

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
clock_offset	receiver clock offset (seconds)	Real
event_flag	Event flag; 0=OK; 1=power failure between previous and current epoch; 2=start moving antenna; 3=new site occupation; 4=header information follows; 5=external event; 6=cycle slip records follow to optionally report detected and repaired cycle slips	Integer
lli_1	Observation 1 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_2	Observation 2 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_3	Observation 3 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer

lli_4	Observation 4 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_5	Observation 5 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_6	Observation 6 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_7	Observation 7 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_8	Observation 8 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
lli_9	Observation 9 Loss of lock indicator; 0 or blank=OK or not known; Bit 0 set=lost lock between previous and current observation: cycle slip possible; Bit 1 set=Inverse wavelength factor to default; Bit 2 set=observation under Antispoofing	Integer
obs_1	Observation 1	Real
obs_2	Observation 2	Real
obs_3	Observation 3	Real
obs_4	Observation 4	Real
obs_5	Observation 5	Real
obs_6	Observation 6	Real
obs_7	Observation 7	Real
obs_8	Observation 8	Real
obs_9	Observation 9	Real
obs_date	observation date	Date
obs_time	Observation time	Character(20)
qualified_data	This field indicates if the data was reported	Character(1)

	to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	
relate_index	Index relating tables 1; 2; and 3	Integer
satellite	Satellite Number	Integer
signal_strength_1	Observation 1 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_2	Observation 2 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_3	Observation 3 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_4	Observation 4 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_5	Observation 5 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_6	Observation 6 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_7	Observation 7 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_8	Observation 8 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer
signal_strength_9	Observation 9 Signal strength projected into interval 1-9; 1=minimum possible signal strength; 5=threshold for good S/N ratio; 9=maximum possible signal strength; 0 or blank=not known or don't care	Integer

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_4
(File Id)

Survey of Deformation of 50-KM-Aperture Network using GPS and A Geodolite; Centered on Yucca Mountain; Navigation Data 1993

Trilateration

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
agency	Agency	Character(20)
cic	Satellite location information - Cic (radian)	Real
cis	Satellite location information - CIS (radian)	Real
crc	Satellite location information - Crc (meters)	Real
crs	Satellite location information - Crs (meters)	Real
cuc	Satellite location information - Cuc (radian)	Real
cus	Satellite location information - Cus (radian)	Real
delta_n	Satellite location information - Delta n (radian/sec)	Real
eccentricity	Satellite location information - e Eccentricity	Real
epoch_date	Epoch Date	
epoch_time	Epoch Time	Character(15)
gps_week	Satellite location information - GPS Week #	Real

	(to go with TOE)	
i0	Satellite location information - i0 (radian)	Real
idot	Satellite location information - IDOT (radian/sec)	Real
iodc_issue_data	Satellite location information - IODC Issue of Data; Clock	Real
iode	Satellite location information - Issue of Data; Ephemeris	Real
l2_codes	Satellite location information - Codes on L2 channel	Real
l2_p_dataflag	Satellite location information - L2 P data flag	Real
m0	Satellite location information - M0 (radian)	Real
omega1	Satellite location information - OMEGA (radian)	Real
omega2	Satellite location information - omega (radian)	Real
omega_dot	Satellite location information - OMEGA DOT (radian/sec)	Real
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
satellite	Satellite Number	Integer
spare1	Satellite location information - spare	Real
spare2	Satellite location information - spare	Real
spare3	Satellite location information - spare	Real
sqrta	Satellite location information - sqrt (A) (sqrt(m))	Real
sv_accuracy	Satellite location information - SV accuracy	Real
sv_clock_bias	SV Clock Bias	Real
sv_clock_drift	SV Clock Drift	Real
sv_clock_rate	SV Clock Rate	Real
sv_health	Satellite location information - SV health (MSB only)	Real
tgd	Satellite location information - TGD (seconds)	Real
trans_time_msg	Satellite location information - Transmission time of message (sec of GPS week; derived e.g. from Z-count in Hand Over Word (HOW))	Real
tte	Satellite location information - Toe Time of	Real

Ephemeris (sec of GPS week)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_5
(File Id)

Survey of Deformation of 50-KM-Aperture Trilateration Network using GPS and A Geodolite; Centered on Yucca Mountain; 1983-84 & 1993 - Master Information

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
air_speed	Airspeed; knots	Integer
airspeed_correct	Airspeed correction	Real
bat_volt1	Battery Voltage	Real
bat_volt2	Battery Voltage	Real
data_error	Indicator of where bad data occurred if any	Integer
date	Observation date	Date
direction	Direction of measurement; 1=geodolite to reflector 2=reflector to geodolite	Integer
end_time	End Time	Integer
hygristor_lot	Hygristor lot	Integer
mean_temp	Mean Temperature	Real
obs_int	Number of integrations in observation	Integer
pass_num	Pass Number	Integer
print_id	Printer Id	Integer
probe_id1	Probe Id	Integer

probe_id2	Probe Id	Integer
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
read_int	Number of integrations in last reading	Integer
rel_humid1	Mean Relative Humidity	Real
rel_humid2	Mean Relative Humidity	Real
relate_index	Index relating tables 5 and 6	Integer
start_time	Start Time	Integer
temp	Temperature; Celsius	Real

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_6
(File Id)

Survey of Deformation of 50-KM-Aperture Trilateration Network using GPS and A Geodolite; Centered on Yucca Mountain; 1983-84 & 1993 - Detail Information

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
lt_probe_hyg	Left probe hygristor reading	Integer
lt_probe_therm	Left probe thermistor reading	Integer
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
reading	Reading Number	Character(20)
relate_index	Index relating table 5 and 6	Integer
rt_probe_hyg	Right probe hygristor reading	Integer
rt_probe_therm	Right probe thermistor reading	Integer

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

Geologic

qr94071201_7
(File Id)

Survey of Deformation of 50-KM-Aperture Trilateration Network using GPS and A Geodolite; Centered on Yucca Mountain; 1983-84 & 1993 - Geodetic Data

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
alt_correct	Altimeter Correction	Character(10)
alt_reading	Altimeter Reading	Real
altimeter_sn	Altimeter Serial Number	Character(10)
barom_id	Barometer Id	Character(10)
barom_read	Barometer Reading (inches unless otherwise indicated)	Character(10)
Date	Date of Test	Date
geo_height	Geodolite Height (cm)	Real
geo_sn	Geodolite Serial Number	Character(10)
geo_station	Geodolite Station	Character(10)
initials	Tester's Initials	Character(7)
inst_const	Instrument Constant (feet)	Real
mast_osc_freq	Master Oscillator Frequency	Real
null_freq1	Null Frequency	Real
null_freq2	Null Frequency	Real
null_freq3	Null Frequency	Real

offset1	Offset Reading 1	Real
offset2	Offset Reading 2	Real
offset3	Offset Reading 3	Real
offset4	Offset Reading 4	Real
offset_time	Time Offset values acquired	Integer
press_trans_id1	Pressure Transducer Id	Character(7)
press_trans_id2	Pressure Transducer Id	Character(7)
press_trans_id3	Pressure Transducer Id	Character(7)
press_trans_read1	Pressure Transducer Reading	Real
press_trans_read2	Pressure Transducer Reading	Real
press_trans_read3	Pressure Transducer Reading	Real
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
range1	Range Reading 1	Real
range10	Range Reading 10	Real
range2	Range Reading 2	Real
range3	Range Reading 3	Real
range4	Range Reading 4	Real
range5	Range Reading 5	Real
range6	Range Reading 6	Real
range7	Range Reading 7	Real
range8	Range Reading 8	Real
range9	Range Reading 9	Real
range_time	Time Range values acquired	Integer
reading_group	Reading Group Number	Integer
reflect_bar_heigh	Reflector Barometer Height	Real
reflect_bar_id	Reflector Barometer Id	Character(10)
reflect_const	Reflection Constant	Real
reflect_height	Reflector Height (cm)	Real
reflect_id	Reflection Id	Character(5)
reflect_station	Reflector Station	Character(10)
temp1	Temperature	Character(10)

temp2	Temperature	Character(10)
temp3	Temperature	Character(10)

WBS:1.2.5.3.6

GENISES Data Dictionary QA: N/A

File Name: table_geo.dat

Description: Geodetic Leveling and Trilateration Surveys(1988). This file contains information on quadrilateral geodetic distances in meters. Information includes the trench name, the orientation of the trench, the distance in meters from 1983 through 1988.

Column # in file:	Description:	Domain:
1 (id)	Name or ID of the leveling point. Example: Fran Ridge.	Character(30)
2 (orien)	Orientation of the line. Example: NW-NE,(Northwest to Northeast). This information is provided for each record.	Character(10)
3 (geo_1983)	Geodetic Distances for 1983 in meters. Instrument used is the Hewlett-Packard 3805A.	Real
4 (geo_83_84)	Geodetic Distance for 1983 and 1984 in meters. The instrument used was the Hewlett-Packard 3805A. Values for Fran Ridge and Trench 14 had "apparent setup problems" and were re-observed.	Real
5 (geo_84)	Geodetic distances for 1984 in meters. Instrument used was the Hewlett-Packard 3805A.	Real
6 (hp3805)	Geodetic distances for 1985 through 1986 in meters. Instrument used was the HP-3805A.	Real
7 (nikon_85_86)	Geodetic distances for 1985-1986 in meters. Instrument used was the Nikon ND-21.	Real
8 (geo_1988)	Geodetic Distances for 1988 in meters. Instrument used was the Nikon ND-21.	Real

WBS:1.2.5.3.6

GENISES Data Dictionary QA: N/A

File Name: table_1.dat

File Description: Geodetic Leveling and Trilateration Surveys (1988). This file contains the description of the bench marks in text form. It provides step by step guidelines for finding the benchmark. Example: From U.S Highway 95 proceed SE to graded road, then 5.6 miles to etc. etc.

Column # in file: Parameter	Description:	Domain:
1 (bm_name)	Bench mark name or designator. Example: Trench 1 Quadrilateral`	Character(30)
2 (comments)	This field contains the text description how to find the benchmark and a description of the location of the bench mark.	Character(1000)

WBS:1.2.5.3.6

GENISES Data Dictionary QA: N/A

File Name: table_lv.dat

Description: Geodetic Leveling and Trilateration Surveys (1988). This file contains information on the 94-km level line and five spur lines to bedrock ties. Ties were re-observed to first-order, class 1 standards. 1983,1983-1984, 1985-1986, and 1988 elevation differences are provided for each section for comparison purposes.

Column # in file:	Description:	Domain:
1 (mark)	Level line mark designation. This is the reference description for the mark location. Example: BM 1 JD 1952.	Character(20)
2 (dist_km)	Section distance in kilometers.	Real
3 (accum)	Accumulated distance in kilometers.	Real
4 (elev_85_86)	Unadjusted elevation in meters for 1985 and 1986.	Real
5 (elev_83)	Difference in meters for 1983 elevation.	Real
6 (elev_83_84)	Difference in meters for 1985-1996 elevation.	Real
7 (elev_85_86_dif)	Difference in meters for 1985-86 elevation.	Real
8 (elev_88)	Difference in meters for 1988 elevation.	Real

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

File Name: table_sm.dat

File Description: Seismicity and Focal Mechanisms for the Southern Great Basin of Nevada and California in 1990

Column # in file	Description	Domain	Parameters
1 (hypo_type) C239	Type of hypocenter: FF = earthquake location (free depth) develocorder film; FD = earthquake location (fixed depth) develocorder film; AF = earth. loc. (free depth) computer recordings; AD = earth. loc. (fixed depth) comp. record.; CF = probable explosion (free depth); CD = prob. explos. (fixed depth); LF = low-frequency event; BB = known chemical explosion; PA = hypocenter from USGS-Pasadena	Character(2)	
2 (yr)	year	Integer	
3 (mo)	month	Integer	
4 (day)	day	Integer	
5 (hr)	hour	Integer	
6 (minute)	minute	Integer	
7 (sec)	seconds	Integer	
8 (rms_resid)	rms residual of travel times	Real	
9 (num_phases)	# phases used in solution (P+S)	Integer	
10 (mca)	Mca (magnitude from coda amplitude)	Real	
11 (lat)	latitude (deg) (+ is north)	Real	
12 (lat_error)	Standard error in Lat. (Km)	Real	
13 (mlc)	Maximum of station magnitudes from	Real	

		overdrive (clipped) records	
14	(long)	longitude (deg) (+ is east)	Real
15	(long_error)	Standard error in Longitude (Km)	Real
16	(large_azi_gap)	largest azimuthal gap (deg)	Integer
17	(md)	Md (coda decay magnitude)	Real
18	(quality_1)	quality 1	Character(1)
19	(depth_event)	depth of event in km (positive down)	Real
20	(std_err_depth)	standard error of depth (km)	Real
21	(mlh)	MLh (horizontal ML magnitude)	Real
22	(mlv)	MLv (vertical ML magnitude)	Real
23	(dist_station)	distance of closest station (km)	Real
24	(quality_2)	quality 2	Character(1)
25	(quad_epi)	USGS quadrangle of epicenter	Character(23)

WBS:1.2.5.3.6

GENISES Data Dictionary QA: N/A

File Name: table_t.dat

File Description: Geodetic Leveling and Trilateration Surveys (1988). This file contains information on the quadrilateral relative elevations in meters. Elevation differences are reported for each trench in the years 1983 through 1988.

Column # in file:	Description:	Domain
1 (id)	Identifier for relative elevations.	Character(30)
2 (orien)	Orientation of elevation line. Example NW or Northwest.	Character(10)
3 (elev_1983)	The 1983 relative elevation in meters for each corner of the trench. The lowest corner was designated 0.00 meters and the other three corners are relative to it.	Real
4 (elev_83_84)	The 1983,84 relative elevations in meters. The lowest corner was designated 0.00 meters and the other three corners are relative to it.	Real
5 (elev_84)	The 1984 relative elevations in meters. The lowest corner was designated 0.00 meters and the other three corners are relative to it.	Real
6 (elev_84_86)	The 1985,86 relative elevations in meters. The lowest corner was designated 0.00 meters and the oter three corners are relative to it.	Real
7 (elev_88)	The 1988 relative elevation in meters. First-order differential leveling was performed between two corners. Elevations for the other corners were determined by vertical angle methods.	Real

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

c26p106
(File Id)

Southern Great Basin Seismological Data for 1981 - Header Information for Hypocenters; Phase Readings; Durations; and First Motion Directions for 1981 Earthquakes

Attribute	Description	Domain
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
avfm	Average magnitude computed by the method of Lee; Bennett; and Meagher (1972)	Real
avxm	Average magnitude computed by the method of Eaton; O'Neill; and Murdock (1970)	Real
Date	Date	Date
depth	Depth (km)	Real
erh	Standard error of epicenter (kilometers); Hypo71 notation (Lee and Lahr; 1975)	Real
erx	standard error in latitude (kilometers)	Real
ery	Standard error in longitude (kilometers)	Real
erz	Standard error in depth (kilometers)	Real
event	Event type; Local-Event or Local-Blast	Character(50)
gap	Largest azimuthal separation between stations (degrees)	Integer
latitude	Latitude	Character(15)
location	Geographic Location	Character(50)
longitude	Longitude	Character(15)
nm	Number of station readings used for computing avxm	Real
no	Number of station readings	Integer
q	Solution quality of hypocenter - Average of qs and qd; A=epicenter->excellent; focal depth->good; B=epicenter->good; focal depth->fair; C=epicenter->fair; focal depth ->poor; D=epicenter->poor; focal depth->poor	Character(1)

qd	statistical rating of station distribution; A=(No = >6; Gap = <90; Error in Depth = <depth or 5 KM) B=(No = >6; Gap = <135; Error in Depth = <2*depth or 10 KM) C=(No = >6; Gap = <180; Error in Depth = <50 KM) D=(No = OTHERS)	Character(1)
qs	Statistical rating of solution; A=(RMS = <0.15; ERH = <1.0; ERZ = <2.0) B=(RMS = <0.30; ERH = <2.5; ERZ = <5.0) C = (RMS = <0.50; ERH = <5.0) D=(RMS = OTHERS)	Character(1)
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
rms	Root-mean-square of travel-time residuals (seconds)	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source information is listed in the document file.	Character(20)
solution	Type of solution	Character(50)
table_index	Index relating the header information to the detail information of Appendix D	Integer
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
time	Origin time	Character(15)

WBS: 1.2.5.3.6

QA: NA

GENISES Data Dictionary

SEISMIC

c26p107
(File Id)

Southern Great Basin Seismological Data for 1981 - Detail Information for Hypocenters; Phase Readings; Durations; and First Motion Directions for 1981 Earthquakes

Attribute	Description	Domain
ain	Angle of incidence to downward vertical (degrees)	Integer
amp	Peak voltage response of seismometer system to maximum surface-wave amplitude; in digital counts. 2048 counts represents a 5 volt response. Not use in this bulletin.	Integer
aref_no	The aref_no is used as the linking item from the spatial location to the spatial datasets. This attribute is closely controlled by the database administrator and is not used for any other purpose.	Character(20)
azi	Station-to-epicenter azimuth taken clockwise from north (degrees)	Integer
dist	Great circle distance to event (kilometers)	Real
dur	Duration (seconds) of coda of wave train from a local event	Integer
fmag	Station magnitude computed by the method of Lee; Bennett; and Meagher (1972)	Real
per	Period of phase; (hundredths of a second)	Integer
phase	Phase identification; I or E indicates the Character of phase arrival (I=impulsive; E=emergent)	Character(5)
qualified_data	This field indicates if the data was reported to have been captured and processed under an approved Quality Assurance program. The item is Y for yes and N for no. This information is taken from area one of the TDIF.	Character(1)
remarks	Descriptive Information	Character(60)
res	Phase travel-time residual (O-C) (Seconds)	Real
skey	The skey is used as the linking item to all source material and data log entries. All new data or modifications to data are initiated through the data log and all source	Character(20)

	information is listed in the document file.	
station	Station Code	Character(5)
table_index	Index relating Appendix D header information to the detail information	Integer
tcal	Calculated travel-time (C) (Seconds)	Real
tdif_no	The field holds the TDIF number assigned by the ATDT when the TDIF in input. It is not the data tracking number, but can be used to query the ATDT.	Integer
time	Arrival time of phase in hours; minutes; and seconds (coordinated universal time)	Character(15)
tobs	Observed travel-time (O) (Seconds)	Real
xmag	Station magnitude computed by the method of Eaton; O'Neill; and Murdock(1970); Not used in this bulletin	Real

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS900983117411.001 Qualified: N Wbs: 1.2.3.2.8.4.1

Report No: USGS-OFR-81-1086

Title: Southern Great Basin Seismological Data Report for 1980 and preliminary Data Analysis. Earthquake data for the calendar year 1980 and earthquakes.

PI: handi

Submittal Date: 09/10/90

Activity Number: 8.3.1.17.4.1.1.

Governing Plan: Not Provided

Test No: N/A Sample No: N/A

Test Location: USGS, Denver, CO.

Start Date: 01/01/80 End Date: 12/31/80

GENISES PROCESSING INFORMATION

Date Received: 09/10/90 Source Key (skey) da0076

Tracking No: qr92122815 GENISES Document Tracking Number: DA0076

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 11/04/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS900983117411.003 Qualified: N Wbs: 1.2.3.2.8.4.1

Report No: USGS-OFR-83-669

Title: Southern Great Basin Seismological Data Report for 1981 and Preliminary Data Analysis

PI: handi

Submittal Date: 09/10/90

Activity Number: 8.3.1.17.4.1.1.

Governing Plan: Not Provided

Test No: N/A Sample No: N/A

Test Location: USGS,Denver,CO

Start Date: 01/01/81 End Date: 12/31/81

GENISES PROCESSING INFORMATION

Date Received: 09/10/90 Source Key (skey) da0102

Tracking No: qr92122915 GENISES Document Tracking Number: DA0102

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 11/04/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS900983117411.005 Qualified: N Wbs: 1.2.3.2.8.4.1

Report No: USGS-OFR-87-596

Title: Earthquake location data for the Southern Great Basin of Nevada and California: 1984 through 1986

PI: handi

Submittal Date: 09/17/90

Activity Number: 8.3.1.17.4.1.1

Governing Plan: N/A

Test No: N/A Sample No: N/A

Test Location: USGS, Denver, CO

Start Date: 01/01/84 End Date: 12/31/86

GENISES PROCESSING INFORMATION

Date Received: 09/17/90 Source Key (skey) qr92123025

Tracking No: qr92123025 GENISES Document Tracking Number: DA0144

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 10/25/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS900983117411.006 Qualified: N Wbs: 1.2.3.2.8.4.1

Report No: USGS-OFR-87-408

Title: Data for earthquakes forthe calendar years 1982 and 1983. During the period of August, 1978 to December, 1983, several earthquakes were located within and adjacent to the Southern Great Basin.

PI: N/A

Submittal Date: 09/17/90

Activity Number: 8.3.1.17.4.1.1.

Governing Plan: N/A

Test No: N/A Sample No: N/A

Test Location: USGS, Denver, CO

Start Date: 08/01/78 End Date: 12/31/83

GENISES PROCESSING INFORMATION

Date Received: 09/17/90 Source Key (skey) da0142

Tracking No: qr92123023 GENISES Document Tracking Number: DA0142

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 09/29/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS920483117412.014 Qualified: N Wbs: 1.2.3.2.8.4

Report No: N/A

Title: 1990 SEISMIC and focal mechanisms for the SGB of Nevada and California.

PI: Harmsen S C

Submittal Date: 11/09/93

Activity Number: 8.3.1.17.4.1.2

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: N/A

Start Date: 01/01/90 End Date: 12/31/90

GENISES PROCESSING INFORMATION

Date Received: 11/10/93 Source Key (skey) de92011869

Tracking No: qr93111705 GENISES Document Tracking Number: D1130

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 01/10/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS920783117412.022 Qualified: Y Wbs: 1.2.3.2.8.4.1

Report No: USGS-OFR-92-340

Title: Seismicity and Focal Mechanisms For The Southern Great Basin Of Nevada And California in 1991

PI: shedl

Submittal Date: 07/06/92

Activity Number: 8.3.1.17.4.1.2

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: USGS

Start Date: 01/01/91 End Date: 12/31/91

GENISES PROCESSING INFORMATION

Date Received: 07/06/92 Source Key (skey) hns93042201

Tracking No: qr93111704 GENISES Document Tracking Number: D1242

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 01/10/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS920983117412.032 Qualified: N Wbs: 1.2.32.8.4.1

Report No: USGS-OFR-91-572

Title: Seismicity and focal mechanism for the southern great basin of nevada and california: 1987 through 1989 by S C Harmsen and C G Bufe

PI: Shedlock, K M

Submittal Date: 11/09/93

Activity Number: 8.3.1.17.4.1.2

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: USGS/BGRA

Start Date: 01/01/87 End Date: 12/31/89

GENISES PROCESSING INFORMATION

Date Received: 11/10/93 Source Key (skey) ofr91-572

Tracking No: qr93111703 GENISES Document Tracking Number: L3502

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 01/10/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS930731174101.003 Qualified: N Wbs: 1.2.3.2.8.4.10

Report No: N/A

Title: 1983 - 1988 Leveling Results, 1983 - 1988 Quadrilateral Results and Various Earlier Data

PI: pera

Submittal Date: 07/20/93

Activity Number: 8.3.1.17.4.10.1

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: USGS, Denver, CO

Start Date: 01/01/83 End Date: 12/31/88

GENISES PROCESSING INFORMATION

Date Received: 10/19/93 Source Key (skey) qr93102003

Tracking No: qr93102003 GENISES Document Tracking Number:

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 02/17/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS930731174101.005 Qualified: Y Wbs: 1.2.3.2.8.4.10

Report No: N/A

Title: YMP Level Data: Geodetic Leveling and Section Observations, 1992 - 1993

PI: pera

Submittal Date: 07/20/93

Activity Number: 8.3.1.17.4.10.1

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: USGS, Denver, CO

Start Date: 11/01/92 End Date: 04/01/93

GENISES PROCESSING INFORMATION

Date Received: 10/19/93 Source Key (skey) qr93102005

Tracking No: qr93102005 GENISES Document Tracking Number: D1819

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 09/20/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS931031174102.002 Qualified: N Wbs: 1.2.3.2.8.4.10

Report No: N/A

Title: SURVEY OF DEFORMATION OF 50-KM-APERTURE TRILATERATION NETWORK USING A GEODOLITE, CENTERED ON YUCCA MOUNTAIN, 1983-1984

PI: sava

Submittal Date: 10/01/93

Activity Number: 8.3.1.17.4.10.2

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: 116 45'00"W 36 35'00"N 116 00'00"W 37 10'00"N

Start Date: 06/01/83 End Date: 07/31/84

GENISES PROCESSING INFORMATION

Date Received: 07/19/94 Source Key (skey) qr94071201

Tracking No: qr94071201 GENISES Document Tracking Number:

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 08/26/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS931031174102.003 Qualified: Y Wbs: 1.2.3.2.8.4.10

Report No: N/A

Title: SURVEY OF DEFORMATION OF 50-KM-APERTURE TRILATERATION NETWORK USING GPS AND A GEODOLITE, CENTERED ON YUCCA MOUNTAIN, 1993.

PI: sava

Submittal Date: 10/01/93

Activity Number: 8.3.1.17.4.10.2

Governing Plan: SCPB

Test No: N/A Sample No: N/A

Test Location: 116 45'00W 36 35'00"N 116 00'00"W 37 10'00"N

Start Date: 04/01/93 End Date: 05/30/93

GENISES PROCESSING INFORMATION

Date Received: 07/19/94 Source Key (skey) qr94071204

Tracking No: qr94071204 GENISES Document Tracking Number:

Processing Equipment: SUN SPARCserver 1000

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES: 08/24/94

Date All Processing was completed :

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

TRENCH 1 QUADRILATERAL Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. highway 95 for 14.0 miles. Turn northerly onto graded road, thence 5.6 miles to a T-intersection East, thence East 3.2 miles to a bend in road; proceed northeasterly 4.0 miles to T-intersection East; thence 1.05 miles East-Southeast on graded road to T-intersection East and track road West; thence West on track road for 0.5 mile to NE corner. All marks are standard aluminum caps stamped "TRENCH 1 1983" plus the corner designation and set in concrete is for horizontal stabilization; the caps are set on the top of driven rods). All marks are monumented with rock cairns.

YUCCA RIDGE QUADRILATERAL Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 mi. north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 mi. to the intersecton of roads "F" and "H" (1.3 mi. NW of a guard station); turn west onto road "H" and proceed 7.5 miles to Fortymile Wash. Cross the wash and continue on hard surface road north and west for another 3.55 miles to a cross roads. Turn left and proceed 0.3 miles to a track road west. Turn right onto track road and proceed west 1.2 miles. The NE and SE corners of the quadrilateral are on high rocky points immediately to the right and left, about 330 ft. above the road. The NW corner is on the same ridge as the NE corner, 244 meters to the west. The SW corner is on the same ridge as the SE corner, 466 meters to the west. All marks are standard aluminum disks stamped with the corner designation and "Yucca Ridge 1983" and cemented in bedrock.

TRENCH 14 QUADRILATERAL Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 mi. north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 mi. to the intersection of roads "F" and "H" (1.3 mi NW of a guard station; turn west onto road "H" and proceed 7.5 miles to Fortymile Wash. Cross the wash and continue on hard surface road north and west for another 3.55 miles to a cross roads. Turn right 0.35 miles to the center of the quadrilateral. Corners are on local high points to the east and west. The NE and SE corners are on the same low ridge immediately east of the road, about 432 meters from each other. The NW and SW corners are on the low ridge immediately west of the road, about 292 meters from each other. Rock cairns stand near each corner. All marks are standard aluminum disks stamped with the corner designation and "Trench 14 1983" and cemented in bedrock.

SOLITARIO QUADRILATERAL Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE

along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence East 3.2 miles to a bend in the road; proceed northeasterly 4.8 miles to a track road SE. Turn right onto track road 0.1 mile. The NW corner of the quadrilateral is about 800 ft. east of the track road, on the high point of a low hill. The SW corner is on another low hill, 460 meters south of a 4 meters higher than the NW corner. The NE and SE corners are part way up the high ridge to the east. The NE corner is 558 meters east of and 83 meters above the NW corner. The SE corner is 840 meters east of and 66 meters higher than the SW corner. All marks are standard aluminum caps set in bedrock and stamped with "Solitario 1983" plus the corner designation. All marks are monumented with rock cairns.

1 JD 1952 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. Highway 95 for 14.0 miles, 51 ft. N. of centerline of Highway, in concrete post projecting 8 inches higher than the ground; standard tablet stamped "1 JD 1952 2692"

S 16 Reset 1978 Beatty, Nevada, form the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. Highway 95 for 14.72 miles, 100 ft. SW of centerline of Highway and set in the top of a 12" diameter concrete post, a standard tablet stamped "S 16 Reset 1978".

1 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along US. 95 for 14.0 miles. Turn northerly onto a graded road, thence 0.4 miles; 140 ft. W. of the centerline of road, 5 ft. S. of a rock cairn, anfd aluminum disk stamped "1 TJS 1983"

2 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 1.05 miles; 106 ft. E. o f the centerline of road, across a small wash, 5 ft. S of a rock cairn, an aluminum disk cemented into bedrock, stamped "2 TJS 1983"

3 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn norhterly onto a graded road, thence 1.65 miles; 150 ft. N of a T-road intersection at the top of a saddle (Steves Pass), 3 ft. S of a rock cairn, cemented into bedrock, an aluminum disk stamped "3 TJS 1983".

2 JD 1952 2921 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 2.2 miles; 32 ft. E of the centerline of the road, in concrete post; standard tablet stamped "2 JD 1952 2921"

4 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along US. 95 for 14.0 miles. Turn northerly onto a graded road, thence 2.85 miles; 140 ft. E. of the centerline of the road, 50 ft. N. of a track road E., 4 ft. S. of a rock cairn, an aluminum disk stamped "4 TJS 1983"

5 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 3.55 miles; 127 ft. E. of the centerline of the road, 6 ft S., of a rock cairn, and aluminum disk stamped "5 TJS 1983".

3 JD 1952 3079 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 4.3 miles; 40 ft. E of the centerline of the road, in concrete post projecting 8 inches higher than the ground; standard tablet stamped "3 JD 1952 3079".

6 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.0 miles; 208 ft. W. of the centerline of the road, 5 ft. S. of a rock cairn, and aluminum disk stamped "6 TJS 1983".

7 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. Highway 95 for 14.0 miles. Turn Northerly onto a graded road, thence 3.6 miles to a track road. Turn NW onto a track road proceeding 0.55 miles across drain to road forks. Continue Westerly on left road fork 0.5 miles to end of road near several prospects. 325 ft. NW from the end of road, 400 ft. N. of a large prospect, 4 ft. S. of a cairn, cemented in a bedrock outcrop, an aluminum disk stamped "7 TJS 1983".

Crater Flat Az. Mark Beatty, Nevada, from the

intersection of U.S. Highway 95 and State highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles; 85 ft. N and 20 ft. E (parallel and perpendicular to road) of the center of a T-road east intersection. In a concrete post; USC&GS azimuth mark stamped "Crater Flat 1949".

8 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 0.65 miles; 217 ft. N of the centerline of the road. 5 ft. S of a rock cairn, an aluminum disk stamped "8 TJS 1983".

9 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 1.55 miles to a T-road N; 160 ft. S of intersection, 6 ft S of rock cairn, an aluminum disk stamped "9 TJS 1983"

10 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. Highway 95 for 14.0 miles. Turn Northerly onto graded road, thence 5.6 miles to a T-intersection, thence E. 1.55 miles

to a T-road N; Turn North proceeding about 0.3 miles to end of road at drill site. Continue North 0.35 miles to the Eastern one of two rock outcrops near the base of a volcanic cone. Cemented at the base of the outcrop, an aluminum disk stamped "10 TJS 1983".

11 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 2.35 miles; 410 ft. S of the centerline of road, 6 ft S of rock cairn, an aluminum disk stamped "11 TJS 1983".

12 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 2.95 miles; 380 ft. S of the centerline of road, 8 ft. S of a rock cairn, and aluminum disk stamped "12 TJS 1983".

13 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 Miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 3.2 miles to bend in road; proceed northeasterly 0.4 miles; 375 ft. NW. of centerline of road, 6 ft. S of rock cairn, an aluminum disk stamped "13 TJS 1983".

14 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE, along U.S. Highway 95 for 14.0 miles. Turn Northerly onto graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to a bend in road; proceed Northeasterly 0.75 miles, 244 ft. SE. of centerline of the road, 6 ft. S. of a rock cairn, an aluminum disk stamped "14 TJS 1983".

15 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto graded road, thence 5.6 miles to a T-intersection thence E. 3.2 miles to bend in road; proceed Northeasterly 1.1 miles, 345 ft. SE. of the centerline of road, 7 ft. S of a rock cairn, an aluminum disk stamped "15 TJS 1983".

16 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto graded road, thence 5.6 miles to a T-intersection, thence 3.2 miles to a bend in road; proceed Northeasterly 1.35 miles,255 ft. SE. of the centerline of road 6 ft. S. of a rock cairn, an aluminum disk stamped "16 TJS 1983"

17 TJS 1983 Beatty, Nevada, from the intersecton of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to a bend in road; proceed Northeasterly 1.7 miles, 168ft. SE. of the centerline of road, 5 ft. S. of a rock cairn, cemented into a slab of rock, an aluminum disk stamped "17 TJS 1983".

FRAN RIDGE QUADRILATERAL Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 mi. north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 mi. to the intersection of roads "F" and "H" (1.3 mi. NW of a guard station); turn west onto road "H" and proceed 7.5 miles to Fortymile Wash. Cross the wash and continue on hard surface road generally northwest for another 2.3 miles to a T-road south. Turn left (south) and proceed 1.15 miles to a track road. Turn left onto track road and proceed 0.3 miles. The northwest corner of the quadrilateral is west of this point, up a small hill, 270 ft. from the track road

FRAN RIDGE QUADRILATERAL From the NW corner: The SW corner is 465 meters south along the same ridge and 18 meters higher. The SE corner is 750 meters to the SE, on the next ridge to the east,and 41 meters higher. The NE corner is 498 meters east, on the next ridge to the east, and 49 meters higher. All marks are standard aluminum disks stamped with the corner designation and "Fran Ridge 1983" and cemented in bedrock.

18 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE, along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence 3.2 miles to a bend in road; proceed Northeasterly 2.0 miles, 390 ft. SE. of the centerline of road, 6 ft. S. of a rock cairn, an aluminum disk stamped "18 TJS 1983"

19 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to a bend in road; proceed Northeasterly 2.3 miles, 425 ft. SE. of the centerline of road, 6 ft. S of a rock cairn, an aluminum disk stamped "19 TJS 1983".

20 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highwayy 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to a bend in road; proceed Northeasterly 2.65 miles, 183 ft. NW. of the centerline of road, on E. bank of wash, cemented in the top of a buried boulder, an aluminum disk stamped "20 TJS 1983".

21 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed S.E. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles

to bend in road; proceed Northeasterly 3.0 miles, 200 ft. SE. of the centerline of road, 6 ft. S of a rock cairn, an aluminum disk stamped "21 TJS 1983".

22 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 3.4 miles, 125 ft. SE. to the centerline of road, 6 ft. S of a rock cairn, cemented in the top of a slab of rock, an aluminum disk stamped "22 TJS 1983".

24 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed 4.1 miles, 690 ft NW of the centerline of road, on the W. bank of a wash, cemented in bed rock, 5 ft. S. of a rock cairn, and aluminum disk stamped "24 TJS 1983".

25 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 4.35 miles, 78 ft. NW of the centerline of road, 7 ft. S. of rock cairn, cemented in the top of a large rock, an aluminum disk stamped "25 TJS 1983".

26 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence East 3.2 miles to a bend in the road; proceed northeasterly 4.6 miles. 75 ft east of the centerline of the road, an aluminum disk set in concrete and stamped "26 TJS 1983".

27 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence east 3.2 miles to a bend in the road; proceed northeasterly 4.9 miles. 395 ft east of the centerline of the road, cemented in the top of a buried boulder on the east side of a wash, an aluminum disk stamped "27 TJS 1983."

28 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 5.25 miles, 275 ft. E. of the centerline of road junction with old track road, on E. side of drain, 6 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "28 TJS 1983".

29 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 3.2 miles to a bend in road; proceed Northeasterly 5.5 miles, 105 ft. W. of centerline of road, 5 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "29 TJS 1983".

30 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 5.8 miles, 107 ft. W. of the centerline of road on W. bank of wash, 4 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "30 TJS 1983".

31 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 6.2 miles, 100 ft. E. of centerline of road and 260 ft. W. of an old track road, 6 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "31 TJS 1983".

32 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, Proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 6.05 miles to old track road, thence on old track road NE. 0.3 miles, 360 ft. W. of centerline of road, 5 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "32 TJS 1983".

33 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road thence 5.6 miles to a T-intersection, thence E 3.2 miles to bend in road; proceed Northeasterly 6.05 miles to old track road, thence on old track road NE. 0.5 miles, 506 ft. W. of the centerline of road, 10 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "33 TJS 1983".

34 TJS 1983 Beatty, Nevada, form the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 6.05 miles to old track road, thence on old track road NE. 0.85 miles 230 ft. E. of the centerline of road, across wash, cemented into a 5 ftx 2 ft. boulder, an aluminum disk stamped "34 TJS 1983".

35 TJS 1983 Beatty, Nevada, from the intersecton of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 moiles to a T-intersection, thence E. 3.2 miles to

bend in road; proceed Northeasterly 6.05 miles to old track road. thence on old track road NE. 1.25 miles, 78 ft. W. of the centerline of road, 18 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "35 TJS 1983".

36 TJS 1983 Beatty, Nevada, form the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 6.05 to old track road, thence on old track road NE. 1.5 miles, 60 ft. W. of the centerline of road, 6 ft. S of a rock cairn, cemented into rock, an aluminum disk stamped "36 TJS 1983".

37 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE. along U.S. 95 for 14.0 miles. Turn Northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E. 3.2 miles to bend in road; proceed Northeasterly 6.05 miles to old track road, thence on old track road NE. 1.85 miles, 43 ft. W. of centerline of road, 6 ft. S. of a rock cairn, cemented into rock, an aluminum disk stamped "37 TJS 1983".

38 TJS 1983 Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed SE along U.S. 95 for 14.0 miles. Turn northerly onto a graded road, thence 5.6 miles to a T-intersection, thence E 3.2 miles to a bend in the road. Proceed northeasterly 6.05 miles to an old track road, thence on old track road NE 2.1 miles to end of road; 92 ft. E and 30 ft. above road. OR: from Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9

miles north of guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H" and proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road and proceed 1.9 miles to a bend at the bottom of a wash. Continue northwesterly 4.85 miles to an intersection at the top of Yucca Mountain.

38 TJS 1983 Turn north along top of ridge 2.3 mi. to end of road; BM 39 TJS is 145 feet west of this point; proceed on foot down the west side of the ridge, approximately 500 feet along bearing N45 degrees W from 39 TJS; an aluminum disk cemented in bedrock stamped "38 TJS 1983".

39 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersecton of roads "F" and "H" (1.3 miles NW of a guard station), turn west onto road "H" and proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road and proceed 1.95 miles to bend at the bottom of a wash. Continue northwesterly 4.85 miles to an intersection at the top of Yucca Mountain. Turn north along top of ridge 2.3 miles to end of road; 145 feet W of the centerline of road.

39 TJS 1983 OR: Beatty, Nevada, from the intersection of U.S. Highway 95 and State Highway 374, proceed southeast along U.S. 95 for 14.0 miles. Turn north onto a graded road, thence 5.6 miles to a T-intersection, thence East 3.2 miles to bend in road. Proceed northeasterly 6.05 miles to an old track road, thence on track road NE 2.1 miles to end of road; BM 38 TJS is 92 feet E and 30 feet above road at this point; proceed on foot southeast up the ridge, approximately 500 feet along bearing S45 degrees E from 38 TJS; BM is on top of ridge, an aluminum disk cemented in rock stamped "39 TJS 1983".

40 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H" 7.9 miles west to the west edge of Fortymile Wash. Turn south onto gravel road proceeding 1.95 miels to bend at the bottom of wash. Continue northwesterly 4.85 miles to an intersectoin at the top of Yucca Mountain. Turn north along top of ridge 1.95 miles; 207 feet W. of the centerline of road, 5 feet S of a rock cairn, an aluminum disk cemented in bedrock stamped "140 TJS 1983".

1 BIS HN 1982 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station; turn west onto road "H" 7.9 miles west to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to bend at the bottom of a wash. Continue northwesterly 4.85 miles to an intersection at the top of Yucca Mountain. Turn north along top of ridge 1.55 miles; 90 feet W. of the centerline of the road, a brass tablet cemented into rock stamped "1 BIS HN 1982".

41 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H" 7.9 miles west to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to bend at the bottom of a wash. Continue northwesterly 4.85 miles to an intersection at the top of Yucca Mountain. Turn north along top of ridge 1.25 miles; 113 ft. W. of the centerline of the road, 3 feet S of a rock cairn, an aluminum disk cemented into bedrock stamped "41 TJS 1983".

42 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of a guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H" 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to bend at the bottom of a wash. Continue northwesterly 4.85 miles to an intersection at the top of Yucca Mountian. Turn north along top of the ridge 0.9 miles; 67 feet W of the centerline of the road, 3 feet S of a rock cairn, an aluminum disk cemented into bedrock stamped "42 TJS 1983".

43 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of Guard Station in Mercury), proceed Northwesterly on Jackass Flat road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 4.85 miles to an intersecton at the top of Yucca Mountain. Turn North proceeding along the top of ridge 0.57 miles; 51 feet W. of the centerline of the road, 3 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "43 TJS 1983".

44 TJS 1983 Mercury, Nevada, form the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of Guard Station in Mercury),proceed Northwesterly on Jackass Flat road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash; Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 4.85 miles to an intersection at the top of Yucca Mountain. Turn North proceeding along the top of ridge 0.27 miles; 41 feet W. of the centerline of the road, 3 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "44 TJS 1983".

MILE 1959 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of Guard Station in Mercury), proceed Northwesterly on Jackass Flat road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of wash. Continue Northwesterly 4.85 miles to an intersection at the top of Yucca Mountain. 275 feet W of the intersection, a standard brass tablet cemented into bedrock stamped "MILE 1959".

45 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of the guard station in Mercury), proceed Northwesterly on Jackass Flat road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 4.62 miles; 31 feet S. of the centerline of the road, 4 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "45 TJS 1983".

46 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Forty-mile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 4.12 miles; 49 feet N. of the centerline of the road, 3 feet S. of a rock cairn, and aluminum disk cemented into bedrock stamped "46 TJS 1983"

47 TJS 1983 Mercury, Nevada, from the

intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station): Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of the wash. Continue Northwesterly 3.87 miles; 33 feet N. of the centerline of the road, 3 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "47 TJS 1983".

48 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station), Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 3.67 miles; 115 feet E. of the centerline of the road, an aluminum disk cemented into bedrock stamped "48 TJS 1983".

49 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of the guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 3.4 miles; 220 feet W. of the centerline of the road, 6 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "49 TJS 1983".

50 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of the guard station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard Station); Turn West onto road "H"

proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to bend at the bottom of a wash. Continue Northwesterly 3.0 miles; 190 feet E. of the centerline of the road, 8 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "50 TJS 1983".

51 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of Guard Station in Mercury), proceed Northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); Turn West onto road "H" proceeding 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road proceeding 1.95 miles to a bend at the bottom of a wash. Continue Northwesterly 2.7 miles; 325 feet E. of the centerline of the road, 6 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "51 TJS 1983".

52 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and AJackass Flat Road (0.9 miles North of Guard Station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersecton of roads "F" and "H" (1.3 miles NW of a guard station; turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue Northwesterly 2.4 miles; 155 feet W of the centerline of the road, 7 feet S. of a rock cairn, an aluminum disk stamped "52 TJS 1983".

53 TJS Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles North of Guard Station in Mercury), proceeed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue northwesterly 2.1 miles 85 feet S. of the centerline of the road, 6 ft. S. of a rock cairn, an aluminum disk stamped "53

TJS 1983."

54 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and AJackass Flat Road (0.9 miles North of Guard Station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F: and "H" (1.3 miles NW of a guard station; turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue Northwesterly 1.8 miles; 39 feet N. of the centerline of the road, 6 feet S. of a rock cairn, an aluminum disk cemented in rock stamped "54 TJS 1983".

55 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of Guard Station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue northwesterly 1.5 miles; 300 feet S. of the centerline of the road, 8 feet S. of a rock cairn, an aluminum disk stamped "55 TJS 1983."

56 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue norhtwesterly 1.2 miles; 276 feet NE of the centerline of the road (166 feet W of the centerline of an old road), 7 feet E. of a rock cairn, an aluminum disk cemented into rock stamped "56 TJS 1983."

57 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury),proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue northwesterly 0.9 miles; 176 feet N. of the centerline of the road, 50 feet SE of a large rock outcrop, 6 feet S. of a rock cairn, an aluminum disk cemented into bedrock stamped "57 TJS 1983."

58 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue northwesterly 0.6 miles; 80 feet N of the centerline of the road, 8 feet S of a rock cairn, an aluminum disk cemented nto a large buried boulder stamped "1k58 TJS 1983"

59 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Trun south onto gravel road 1.95 miles to a bend at the bottom of a wash. Continue northwesterly 0.3 miles; 166 feet N of the centerline of the road, 25 feet E of the centerline of a spur road to a drill site, 6 feet S. of a rock c airn, an aluminum disk cemented into bedrock stamped "59 TJS 1983."

60 TJS 1983 Mercury, Nevada, from the

intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles tothe intersection of roads "F" and "H"; (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.9 miles near the north embankment of a wash, 161 feet E. of the centerline of the road, 6 feet S. of a rock cairn, an aluminum disk stamped "60 TJS 1983."

61 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road 1.6 miles; 145 feet E. of the centerline of the road, 5 feet S. of a rock cairn, an aluminum disk stamped "61 TJS 1983".

62 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road and proceed 1.3 miles; 183 feet E. of the centerline of the road, 5 feet S. of a rock cairn, an aluminum disk stamped "62 TJS 1983."

63 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard stations); turn west onto road "H";

proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road and proceed 1.0 miles; 214 feet W. of the centerline of the road, 6 feet S. of a rock cairn, an aluminum disk stamped "63 TJS 1983."

64 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road and proceed 0.7 miles; 205 feet W. of the center line of the road, 4 feet S. of a rock cairn, an aluminum disk stamped "64 TJS 1983."

65 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury),proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn south onto gravel road and proceed 0.4 miles; 330 feet W of the centerline of the road, 8 feet S. of a rock cairn, an aluminum disk stamped "65 TJS 1983."

66 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H"; proceed 7.9 miles to the west edge of Fortymile Wash. Turn South onto gravel road and proceed 0.1 miles to the top of the embankment of wash; 265 feet W. of the centerline of the road, 7 feet S. of a rock cairn, an aluminum disk stamped "66 TJS 1983."

67 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H" and proceed 7.2 miles to a track road S. on the eastern embankment of Fortymile Wash; 350 feet S. of the paved road, 147 feet W. of the N/S track road, 90 feet E of the embankment of Fortymile Wash, 8 feet S. of a rock cairn, an aluminum disk stamped "67 TJS 1983."

H&N D11 1956 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury),proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 miles NW of a guard station); turn west onto road "H" and proceed 7.0 miles to a track road south, about 300 feet S. of the centerline of the paved road, 2 feet north of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D11 1956 3335.39."

68 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 22.6 miles to the intersection of roads "F" and "H" (1.3 mi. NW of a guard station); turn west onto road "H" and proceed 6.65 miles to a track road east. Turn east on track road 0.1 miles. OR: from same starting point, proceed northwesterly on Jackass Flat Road 21.3 miles to intersection of roads "C" and "B". Turn left SW. on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 5 miles to a dirt road. Turn left and follow dirt road west 5.85 miles 148 feet S. of the road, 9 feet S. of a rock cairn, an aluminum disk stamped "68 TJS 1983."

H&N D10 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury),proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 5.30 miles 200 feet N of road, 2 feet S of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D10 1956 3335.00"

69 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 5.0 miles west. 165 feet north of road, 6 feet S. of a rock cairn, an aluminum disk stamped "69 TJS 1983."

D9 H&N Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersecton of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 4.6 miles west. 200 feet N. of the road and 2 feet S. of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D9 1956 3345.45."

70 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left(SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 4.2 miles west. 172 feet N. of road, 4 feet S. of a rock cairn, an aluminum disk stamped "70 TJS 1983."

H&N D8 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd street. Turn right (NE) on 2nd Street. 0.5 miles to a dirt road. Turn left on dirt road and proceed 3.9 miles west. 165 feet N. of road and 2 feet S. of a 4 x 4 post. A concrete post with a brass disk stamped "H&N BM D8 1956 3361.36."

H&N D7 Mercury, Nevada, from the intersecton of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) and 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 3.45 miles west. 200 feet north of road, 2 feet S of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D7 1956 3364.180."

H&N D6 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 2.9 miles west. 200 feet N. of the road, 2 feet S. of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D6 1956 3365.328."

71 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 2.5 miles west. 130 feet N of the road, 4 feet S. of a rock cairn, an aluminum disk stamped "71 TJS 1983."

H&N D5 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 2.0 miles west. 190 feet N. of the road, 2 feet S. of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D5 1956 3409.80."

72 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 1.6 miles west to a Y-road on the west side of a drain. BM is on a hillside south of the road, about 3400 feet due west of and 65 feet higher than this Y-Ed intersection. 680 feet N. of track road going up the hill to a radio tower, 4 feet S. of a rock cairn. An aluminum disk cemented in bedrock, stamped "72 TJS 1983."

73 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street. 0.5 miles to a dirt road. Turn left on dirt road and proceed 1.6 miles west to a Y-rd on the west bank of a wash. Proceed along right fork of road for 100 feet. BM is 100 feet N. of center of road, 4 feet S. of a rock cairn, an aluminum disk stamped "73 TJS 1983."

R 333 (C&GS) Mercury, Nevada, from the

intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a gurad station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 1.5 miles to the bottom of a dry wash. Proceed north along the bottom of the wash about 1200 feet. 51 feet E. of the center of the wash, in the to of a concrete post projecting 0.6 feet above the ground. A brass disk stamped R333 1952.

P 333 (C&GS) Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left(SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 1.5 miles to the bottom of a dry wash. Proceed south along the bottom of the wash 0.8 miles. 36 feet E. of the center of the wash, set in the top of a concrete post projecting 0.5 feet above the ground. A brass disk, stamped P333 1952."

H&N D4 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 1.1 miles west. 300 feet N of the road, 3 feet S of a 4 x 4 post. A concrete post with a brass disk stamped "H&N BM D4 1956 3392.91."

74 TJS Mercury, Nevada, fromt he intersection of Mercury Highway and Jackass Flat Road (0.9 miles

north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed 0.8 miles west. 274 feet north of the road, 4 feet south of a rock cairn, an aluminum disk stamped "74 TJS 1983."

H&N D3 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd Street 0.5 miles to a dirt road. Turn left on dirt road and proceed .45 miles 225 feet east of road, 2 feet south of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D3 1956 3396.14."

75 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 21.3 miles to a guard station at the intersection of roads "C" and "B". Turn left (SW) on Road "B" 1.55 miles to 2nd Street. Turn right (NE) on 2nd street 0.1 miles, then left 0.2 miles, then right 0.05 miles to building 4919. BM is at the southwest corner of the building, cemented in the northwest corner of a concrete apron. An aluminum disk stamped "75 TJS 1983."

H&N D2 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury),proceed northwesterly on

Jackass Flat Road 19.2 miles to a curve in the road and a track road NW. Turn left onto the track road and proceed NW 2.0 miles. 0.2 miles east of another paved road (Road "B", 300 feet N. of the track road, 2 feet S. of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM D2 1956 3398.18.18."

76 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 19.2 miles, to a track road NW at a curve in the highway. Turn left onto the track road, and proceed NW 1.65 miles. 166 feet north of the road, 6 feet south of a rock cairn, an aluminum disk stamped "76 TJS 1983."

H&N D1 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of a guard station in Mercury), proceed northwesterly on Jackass Flat Road 19.2 miles to a track road NW at a curve in the highway. Turn left onto the track road, and proceed NW 1.3 miles. 265 feet north of the road, 2 feet south of a 4 x 4 post, a concrete post with a brass diskstamped "H&N BM D1 1956 3426.96."

77 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 19.2 miles to a track road NW at a curve in the highway. Turn left onto the track road, and proceed NW 0.95 miles. 257 feet north of the road, 8 feet south of a rock cairn, an aluminum disk stamped "77 TJS 1983."

H&N DA Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 19.2 miles to a track road NW at a curve in the highway. Turn left onto the track road, and proceed NW 0.60 miles. 180 feet north of the road, 2 feet south of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM DA 1956 3456.29."

78 TJS 1983 Mercury, Nevada from thellntersection of Mercury Highway and Jackass Flat Road (0.9 mi. north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 19.2 miles to a curve in the road. BM is 224 feet south of the SE end of the curve, and is in-line with at track road NE. 7 feet south of a rock cairn, an aluminum disk stamped "78" TJS 1983."

79 TJS 1983 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 18.55 miles. 155 feet south of the road, 6 feet south of a rock cairn, an aluminum disk stamped "79 TJS 1983."

H&N 24A Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 17.85 miles. 90 feet south of the road, 2 feet north of a 4 x 4 post, an concrete post with a brass disk stamped 'H&N BM 24A 1956 3750.04."

80 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 17.4 miles. 138 feet south ofthe road, 6 feet south of a rock cairn, an aluminum disk stamped "80 TJS 1983."

H&N 23 A Mercury, Nevada, from the intersection of Mercury Highway and Jackas Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 16.95 miles. Near the south end of a curve in the road, 200 feet west of the road, 2 feet east of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 23A 1956 3871.55."

81 TJS 1983 Mercury, Nevada, form the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 16.65 miles. 200 feet west of the road, 5 feet south of a rock cairn, an aluminum disk stamped "81 TJS 1983."

H&N 22A Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on

Jackass Flat Road 16.3 miles. 200 feet west of the road, 2 feet east of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 22 A 3731.61."

82 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 15.9 miles. 185 feet west of the road, 9 feet south of a rock cairn, an aluminum disk stamped "82 TJS 1983."

H&N 21A Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 15.4 miles. 200 feet west of road, near the north end of a curve, 2 feet east of a 4 x 4 post, a concrete post with a brass disk stamped 'H&N BM 1956 3543.34."

83 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 14.9 miles. Near the southeast end of a curve, 138 feet south of the road, 230 feet west of a drain, 7 feet south of a rock cairn, an aluminum disk stamped "83 TJS 1983."

20A H&N Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 14.2 miles. 200 feet south of the road, one feet north of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 20A 1956 3452.96."

84 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 13.8 miles. 127 feet south of the road, 6 feet south of a rock cairn, an aluminum disk stamped "84 TJS 1983."

19A H&N Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 13.6 miles. 215 feet south of the road, 2 feet north of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 19A 1956 3430.01".

85 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 13.1 miles. 158 feet south of the road, 6 feet south of a rock cairn, an aluminum disk stamped "85 TJS 1983".

18 A H&N Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 12.7 miles. 200 feet south of the road, 2 feet north of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 18A 1956 3434.97."

86 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 12.45 miles. 170 feet south of the road, 6 feet south of a rock cairn, an aluminum disk stamped "86 TJS 1983."

17 A H&N Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 12.2 miles. 280 feet south of the road, 3 feet north of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 17A 1956 3427.99."

87 TJS 1983 Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 11.75 miles. At a track road south; 273 feet south of the center of the track road intersection, an aluminum disk cemented in bedrock and stamped "87 TJS 1983."

16A H&N Mercury, Nevada, from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury). proceed northwesterly on Jackass Flat Road 11.55 miles. 110 feet south of the road, 2 feet north of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 16A 1956 3476.13."

5 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on

Jackass Flat Road 4.4 miles to a road junction, thence turn westerly (left) on road for 0.05 miles to road junction, thence 0.01 miles south along road, 123 feet west of road, 16 feet west of rock cairn, 0.1 miles north of locked gates, an aluminum disk stamped "5 PDI 1986".

6 PDI 1986 Mercury, Nevada form the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed north westerly on Jackass Flat Road 4.4 miles to road junction, thence turn westerly (left) on road for 0.05 miles to road junction, thence 0.35 miles south to locked gates, thence 0.5 miles south along road, 88 feet east of road, an aluminum disk stamped "6 PDI 1986".

7 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 4.4 miles to road junction, thence turn westerly (left) on road for 0.05 miles to road junction, thence 0.35 miles south of locked gates, thence 1.1 miles south along road, 104 feet west of road, 4 feet west of rock cairn, an aluminum disk stamped "7 PDI 1986".

8 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 4.4 miles to road junction, thence turn westerly (left) on road 0.05 miles to road junction, thence 0.35

miles south to locked gates, thence 1.7 miles south along road, 83 feet west of road, 8 feet north of rock cairn, 26 feet SE of old road, an aluminum disk stamped "8 PDI 1986".

9 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 4.4 miles to road junction, thence turn westerly (left) on road 0.05 miles to road junction, thence 0.35 miles south to locked gates, thence 2.45 miles south along road to locked gates, 84 feet west of road, 18 feet norht of trench barrier, 0.45 miles north of road junction with S.H. 95, an aluminum disk stamped "9 PDI 1986".

7 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 4.4 miles, 181 feet east of the highway, 2 feet west of a 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 7A 1956 3292.08".

8 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 5.0 miles, 214 feet east of highway on small rise, 2 feet west of 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 8A 1956 3354.43".

9 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 5.5 miles, 213 feet west of highway 2 feet east of 4 x 4 post, a concrete post with a b rass disk stamped 'H&N BM 9A 1956 3361.11".

10 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 6.0 miles, at a cut bank in highway, 148 feet south of the highway, 2 feet west of 4 x 4 wood post, a concrete post with a brass disk stamped "H&N BM 10A 1956 3407.52".

4 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 6.35 miles, 107 feet south of the highway, 4 feet east of rock cairn, an aluminum disk stamped "4 PDI 1986".

11 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 6.8 miles, 325 feet south of the highway 3 feet north of 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 11A 1956 3467.13".

12 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 7.55 miles, 276 feet south of the highway, 3 feet north of 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 12A 1956 3505.66".

13 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 8.25 miles, 209 feet South of the highway, 3 feet north of 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 13A 1956 3567.41".

3 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 9.6 miles, at a curve on the top of a small rise, 130 feet north of the highway, 2 feet west of a rock cairn an aluminum disk stamped "3 PDI 1986".

2 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 10.2 miles, 0.15 miles east of T-road, north, 100 feet south of the highway, 4 feet west of rock cairn, an aluminum disk stamped "2 PDI 1986".

1 PDI 1986 Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 10.75 miles, 0.4 miles west of T-road north, 100 feet south of highway, 6 feet east of rock cairn, an aluminum disk stamped "1 PDI 1986".

14 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 8.75 miles, 199 feet north of the highway, 2

feet south of 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 14A 1956 3608.64".

15 A H&N Mercury, Nevada from the intersection of Mercury Highway and Jackass Flat Road (0.9 miles north of guard station in Mercury), proceed northwesterly on Jackass Flat Road 9.25 miles, 284 feet south of the highway, 4 feet east of 4 x 4 post, a concrete post with a brass disk stamped "H&N BM 15A 1956 3669.14".

File Name: table_geo.dat

Description: Geodetic Leveling and Trilateration Surveys (1988). This file contains information on quadrilateral geodetic distances in meters. Information includes the trench name, the orientation of the trench, the distance in meters from 1983 through 1988.

Column # in file:	Description:	Domain:	Parameter
1 (id)	Name or ID of the leveling point. Example: Fran Ridge.	Character(30)	
2 (orien)	Orientation of the line. Example: NW-NE, (Northwest to Northeast). This information is provided for each record.	Character(10)	
3 (geo_1983)	Geodetic Distances for 1983 in meters. Instrument used is the Hewlett-Packard 3805A.	Floating Point	
4 (geo_83_84)	Geodetic Distance for 1983 and 1984 in meters. The instrument used was the Hewlett-Packard 3805A. Values for Fran Ridge and Trench 14 had "apparent setup problems" and were reobserved.	Floating Point	
5 (geo_84)	Geodetic distances for 1984 in meters. Instrument used was the Hewlett-Packard 3805A.	Floating Point	
6 (hp3805)	Geodetic distances for 1985 through 1986 in meters. Instrument used was the HP-3805A.	Floating Point	
7 (nikon_85_86)	Geodetic distances for 1985-1986 in meters. Instrument used was the Nikon ND-21.	Floating Point	
8 (geo_1988)	Geodetic Distances for 1988 in meters. Instrument used was the Nikon ND-21.	Floating Point	

Fran Ridge	NW-NE	495.609	495.629	495.627	495.621	495.622	495.623
Fran Ridge	NE-NW	495.617	495.639	495.630	596.628	495.624	
Fran Ridge			495.624				
Fran Ridge	NW-SE	793.546	793.555	793.552	793.551	793.544	793.539
Fran Ridge	SE-NW				793.555	793.542	793.540
Fran Ridge	NW-SW	465.516	465.523	465.518	465.517	465.519	465.516
Fran Ridge	SW-NW	465.514	465.526	465.517			465.518
Fran Ridge	SE-NE				698.317	698.316	698.313
Fran Ridge	NE-SE	698.325	698.323	698.326	698.316	698.317	
Fran Ridge	SE-SW				545.091	545.087	545.086
Fran Ridge	SW-SE	545.089	545.092	545.095			545.087
Fran Ridge	SW-NE	749.504	749.516	749.515			749.501
Fran Ridge	NE-SW	749.508	749.518	749.516	749.507	749.504	
Fran Ridge			749.511				
Solitario	NW-NE	551.515	551.515	551.521	551.518	551.513	551.508
Solitario	NE-NW	551.513	551.518		551.507	551.510	
Solitario	NW-SE	895.314	895.318	895.325	895.315	895.310	895.311
Solitario	SE-NW				895.319	895.311	895.311
Solitario	NW-SW	460.074	460.075	460.076	460.072	460.070	460.072
Solitario	SW-NW	460.070	460.072	460.079			460.072
Solitario	SE-NE				814.175	814.171	814.170
Solitario	NE-SE	814.170	814.183	814.190	814.177	814.173	
Solitario	SE-SW				837.147	837.139	837.140
Solitario	SW-SE	837.144	837.149	837.154			837.140
Solitario	SW-NE	921.534	921.547	921.549			921.524
Solitario	NE-SW	921.538	921.546	921.539	921.531	921.524	
Trench 1	NW-NE	92.983		92.995	92.999	92.999	
Trench 1	NE-NW		92.992	92.997	92.999	92.998	92.999
Trench 1	NW-SE	242.375	242.378	242.377	242.377	242.375	
Trench 1	SE-NW		242.379		242.378	242.375	242.371
Trench 1	NW-SW	236.115	236.119	236.119	236.114	236.114	
Trench 1	SW-NW	236.118	236.117	236.119			236.111
Trench 1	SE-NE	208.688	208.688		206.682	208.687	208.683
Trench 1	NE-SE			208.690	208.687	208.689	208.683
Trench 1	SE-SW	128.543	128.543		128.551	128.547	128.546
Trench 1	SW-SE	128.545	128.546	128.545			128.546
Trench 1	SW-NE	252.554	252.560	252.563			252.558
Trench 1	NE-SW			252.561	252.561	252.558	252.556
Trench 14	NW-NE				645.647	645.649	645.648
Trench 14	NE-NW	645.649	645.656	645.661	645.648	645.648	
Trench 14					743.807	743.805	743.798
Trench 14	SE-NW	743.805	743.821	743.814			743.802
Trench 14			743.810				
Trench 14	NW-SW				291.213	291.214	291.212
Trench 14	SW-NW	291.208	291.213	291.218	291.211	291.214	291.213
Trench 14	SE-NE	432.646	432.648	432.641			432.640
Trench 14	NE-SE	432.646	432.651	432.651	432.651	432.644	
Trench 14	SE-SW	570.671	570.681	570.682			570.663
Trench 14			570.674				
Trench 14	SW-SE	570.670	570.679	570.682	570.670	570.666	570.664
Trench 14	SW-NE	656.928	656.930	656.935	656.920	656.922	656.917
	NE-SW	656.924	656.931	656.934	656.920	656.920	
Yucca Ridge	NW-NE	243.782	243.795	243.794			243.789
Yucca Ridge	NE-NW	243.785	243.793		243.790	243.789	243.791
Yucca Ridge	NW-SE	605.014	605.018	605.023			605.010
Yucca Ridge	SE-NW		605.018	605.023	605.016	605.012	

Yucca Ridge	NW-SW	615.999	616.006	616.006			615.999
Yucca Ridge	SW-NW	615.998		616.005	616.001	615.998	615.999
Yucca Ridge	SE-NE		464.440	464.447	464.435	464.436	
Yucca Ridge	NE-SE	464.438	464.441		464.437	464.435	464.432
	SE-SW		466.242	466.241	466.236	466.236	
Yucca Ridge	SW-SE	466.229		466.242	466.233	466.238	466.235
Yucca Ridge	SW-NE	660.741		660.747	660.736	660.737	660.733
Yucca Ridge	NE-SW	660.740	660.749		660.736	660.737	660.735

File Name: table_lv.dat

Description: Geodetic Leveling and Trilateration Surveys (1988). This file contains information on the 94-km level line and five spur lines to bedrock ties. Ties were reobserved to first-order, class 1 standards. 1983,1983-1984, 1985-1986, and 1988 elevation differences are provided for each section for comparison purposes.

Column # in file:	Description:	Domain:	Parameter
1 (mark)	Level line mark designation. This is the reference discriptor for the mark location. Example: BM 1 JD 1952.	Character(20)	
2 (dist_km)	Section distance in kilometers.	Floating Point	
3 (accum)	Accumulated distance in kilometers.	Floating Point	
4 (elev_85_86)	Unadjusted elevation in meters for 1985 and 1986.	Floating Point	
5 (elev_83)	Difference in meters for 1983 elevation.	Floating Point	
6 (elev_83_84)	Difference in meters for 1985-1996 elevation.	Floating Point	
7 (elev_85_86_dif)	Difference in meters for 1985-86 elevation.	Floating Point	
8 (elev_88)	Difference in meters for 1988 elevation.	Floating Point	

BM S 16 Reset	0.000	0.000	810.762	0.000	0.000	0.000	0.000
BM 1 JD 1952	1.340	1.340	820.441	9.682	9.679	9.679	9.680
BM 1 TJS	0.640	1.980	835.798	15.356	15.358	15.357	15.356
BM 2 TJS	1.010	2.990	870.454	34.657	34.657	34.656	34.656
BM 3 TJS	0.980	3.970	904.046	33.592	33.594	33.592	33.593
BM 2 JD 1952	0.840	4.810	890.308	-13.738	-13.735	-13.738	-13.739
BM 4 TJS	1.040	5.850	902.736	12.427	12.430	12.428	12.428
BM 5 TJS	1.180	7.030	918.740	16.002	16.003	16.004	16.004
BM 7 TJS	1.690	1.690	976.127	57.386	57.387	57.388	57.386
BM 3 JD 1952	1.180	8.210	938.503	19.763	19.759	19.763	19.764
BM 6 TJS	1.070	9.280	957.003	18.499	18.499	18.500	18.501
Crater Flat Az.Mk.	1.010	10.300	973.653	16.649	16.652	16.650	16.649
BM 8 TJS	1.040	11.340	971.427	-2.226	-2.226	-2.226	-2.228
BM 9 TJS	1.510	12.850	964.899	-6.526	-6.525	-6.528	-6.530
BM 10 TJS	0.990	0.990	984.507	19.606	19.606	19.608	19.607
BM 11 TJS	1.330	14.170	957.776	-7.121	-7.123	-7.123	-7.122
BM 12 TJS	1.030	15.200	961.014	3.236	3.238	3.238	3.238
BM 13 TJS	1.150	16.350	978.687	17.672	17.674	17.673	17.672
BM 14 TJS	0.630	16.980	990.629	11.942	11.943	11.942	11.941
BM 15 TJS	0.590	17.580	1008.204	17.573	17.574	17.575	17.574
BM 16 TJS	0.520	18.100	1023.227	15.023	15.025	15.024	15.024
BM 17 TJS	0.520	18.620	1039.891	16.663	16.667	16.663	16.664
BM 18 TJS	0.550	19.170	1057.800	17.909	17.911	17.909	17.910
BM 19 TJS	0.560	19.730	1073.571	15.771	15.773	15.771	15.771
BM 20 TJS	0.510	20.240	1086.225	12.652	12.653	12.654	12.654
BM 21 TJS	0.630	20.870	1102.883	16.657	16.658	16.658	16.659
BM 22 TJS	0.630	21.490	1118.736	15.852	15.856	15.853	15.854
BM 23 TJS	0.660	22.160	1145.159	26.423	26.424	26.422	26.422
BM 24 TJS	0.560	22.720	1157.665	12.504	12.505	12.506	12.507
BM 25 TJS	0.450	23.170	1177.572	19.906	19.909	19.908	19.908
BM 26 TJS	0.540	23.710	1190.212	12.638	12.639	12.639	12.639
BM 27 TJS	0.380	24.090	1199.313	9.102	9.099	9.101	9.101
BM 28 TJS	0.510	24.600	1215.518	16.204	16.205	16.205	16.205
BM 29 TJS	0.570	25.170	1232.826	17.311	17.310	17.309	17.311
BM 30 TJS	0.530	21.690	1245.246	12.420	12.419	12.420	12.419
BM 31 TJS	0.580	26.280	1269.462	24.217	24.218	24.216	24.217
BM 32 TJS	0.330	26.610	1283.434	13.972	13.974	13.972	13.973
BM 33 TJS	0.340	26.950	1295.378	11.944	11.944	11.944	11.945
BM 34 TJS	0.580	27.530	1308.859	13.482	13.481	13.481	13.482
BM 35 TJS	0.710	28.240	1337.631	28.772	28.769	28.771	28.773
BM 36 TJS	0.400	28.630	1354.322	16.691	16.693	16.692	16.692
BM 37 TJS	0.590	29.220	1382.606	28.285	28.286	28.284	28.287
BM 38 TJS	0.450	29.670	1422.420	39.815	39.816	39.813	39.814
BM 39 TTS	0.430	30.100	1480.884	58.466	58.467	58.465	58.467
BM 40 TJS	0.630	30.730	1465.147	-15.738	-15.737	-15.737	-15.738
1 BIS H&N	0.610	31.350	1480.389	15.241	15.237	15.242	15.241
BM 41 TJS	0.520	31.870	1478.387	-2.002	-2.000	-2.002	-2.001
BM 42 TJS	0.580	32.450	1480.324	1.936	1.936	1.937	1.935
BM 43 TJS	0.580	33.020	1496.018	15.695	15.692	15.694	15.693
BM 44 TJS	0.460	33.490	1504.456	8.438	8.437	8.438	8.437
MILE	0.380	33.870	1509.194	4.738	4.738	4.739	4.738
BM 45. TJS	0.510	34.380	1440.930	-68.264	-68.265	-68.265	-68.266
BM 46 TJS	0.640	35.020	1354.979	-85.949	-85.952	-85.951	-85.952
BM 47 TJS	0.450	35.470	1300.111	-54.868	-54.870	-54.868	-54.869
BM 48 TJS	0.450	35.920	1258.876	-41.234	-41.235	-41.235	-41.234
BM 49 TJS	0.370	36.290	1240.097	-18.777	-18.776	-18.778	-18.778

BM 50 TJS	0.620	36.910	1200.355	39.742	-39.741	-39.744	-39.744
BM 51 TJS	0.570	37.480	1175.751	-24.603	-24.601	-24.604	-24.605
BM 52 TJS	0.430	37.900	1154.183	-21.567	-21.569	-21.568	-21.569
BM 53 TJS	0.530	38.430	1133.974	-20.208	-20.208	-20.209	-20.209
BM 54 TJS	0.560	38.990	1110.036	-23.937	-23.934	-23.938	-23.939
BM 55 TJS	0.480	39.470	1096.544	-13.491	-13.492	-13.491	-13.491
BM 56 TJS	0.490	39.960	1077.459	-19.084	-19.086	-19.086	-19.086
BM 57 TJS	0.460	40.420	1065.043	-12.415	-12.416	-12.416	-12.416
BM 58 TJS	0.510	40.930	1044.245	-20.799	-20.798	-20.799	-20.800
BM 59 TJS	0.530	41.460	1026.621	-17.624	-17.622	-17.624	-17.624
BM 60 TJS	0.630	42.090	1015.875	-10.744	10.746	-10.746	-10.746
BM 61 TJS	0.450	42.550	1009.619	-6.256	-6.254	-6.257	-6.256
BM 62 TJS	0.490	43.040	1004.526	-5.093	-5.095	-5.093	-5.093
BM 63 TJS	0.530	43.570	1011.532	7.006	7.004	7.006	7.007
BM 64 TJS	0.580	44.140	1018.524	6.991	6.990	6.992	6.991
BM 65 TJS	0.500	44.640	1024.599	6.076	6.076	6.075	6.076
BM 66 TJS	0.550	45.200	1030.135	5.534	5.537	5.535	5.535
BM 67 TJS	1.280	46.480	1019.276	-10.859	-10.857	-10.859	-10.859
BM D 11 H&N	0.460	46.940	1016.715	-2.561	-2.559	-2.561	-2.561
BM 68 TJS	0.800	47.740	1013.268	-3.447	-3.442	-3.447	-3.447
BM D 10 H&N	0.920	48.670	1016.585	3.316	3.319	3.316	3.316
BM 69 TJS	0.550	49.220	1017.268	0.682	0.684	0.683	0.682
BM D 9 H&N	0.670	49.880	1019.763	2.497	2.495	2.495	2.494
BM 70 TJS	0.630	50.520	1020.685	0.923	0.920	0.922	0.922
BM D 8 H&N	0.620	51.140	1024.606	3.920	3.919	3.921	3.919
BM D 7 H&N	0.730	51.870	1025.469	0.863	0.867	0.863	0.862
BM D 6 H&N	0.910	52.780	1025.817	0.350	0.350	0.348	0.348
BM 71 TJS	0.650	53.430	1030.912	5.097	5.095	5.095	5.095
BM D 5 H&N	0.830	54.260	1039.371	8.456	8.461	8.459	8.459
BM 73 TJS	0.730	54.990	1037.463	-1.910	-1.910	-1.908	-1.908
BM 72 TJS	1.190	1.190	1057.982	20.523	20.521	20.520	20.523
BM R 333	0.280	0.280	1040.457	2.993	2.993	2.994	2.994
BM P 333	1.470	1.470	1010.824	-26.636	-26.635	-26.639	-26.639
BM D 4 H&N	0.840	55.820	1034.212	-3.251	-3.251	-3.251	-3.252
BM 74 TJS	0.600	56.430	1033.953	-0.259	-0.258	-0.258	-0.257
BM D 3 H&N	0.600	57.020	1035.182	1.229	1.229	1.229	1.231
BM 75 TJS	0.510	57.540	1035.104	-0.079	-0.079	-0.078	-0.078
BM D 2 H&N	0.720	58.260	1035.795	0.689	0.686	0.691	0.691
BM 76 TJS	0.560	58.820	1037.769	1.974	1.974	1.974	1.975
BM D 1 H&N	0.650	59.470	1044.561	6.793	6.793	6.793	6.793
BM 77 TJS	0.620	60.090	1048.721	4.160	4.160	4.160	4.161
BM D A H&N	0.590	60.680	1053.566	4.844	4.844	4.845	4.843
BM 78 TJS	0.970	61.650	1066.813	13.244	13.246	13.247	13.244
BM 79 TJS	1.020	62.670	1099.037	32.223	32.227	32.225	32.224
BM 24 A H&N	1.170	63.840	1143.119	44.077	44.077	44.081	44.080
BM 80 TJS	0.720	64.570	1173.624	30.504	30.508	30.506	30.505
BM 23 A H&N	0.740	65.310	1180.132	6.506	6.507	6.507	6.509
BM 81 TJS	0.490	65.800	1161.316	-18.814	-18.814	-18.816	-18.815
BM 22 A H&N	0.510	66.310	1137.463	-23.854	-23.853	-23.853	-23.853
BM 82 TJS	0.770	67.080	1106.334	-31.129	-31.129	-31.129	-31.129
BM 21 A H&N	0.770	67.850	1080.050	-26.283	-26.283	-26.283	-26.284
BM 83 TJS	0.940	68.790	1063.540	-16.514	-16.510	-16.511	-16.510
BM 20 A H&N	1.130	69.920	1052.487	-11.058	-11.052	-11.053	-11.055
BM 84 TJS	0.660	70.580	1047.622	-4.863	-4.864	-4.865	-4.865
BM 19 A H&N	0.390	70.970	1045.477	-2.145	-2.144	-2.145	-2.145
BM 85 TJS	0.810	71.770	1044.706	-0.772	-0.771	-0.771	-0.772

BM 18 A H&N	0.630	72.400	1046.993	2.286	2.285	2.287	2.286
BM 86 TJS	0.500	72.900	1042.601	-4.394	-4.391	-4.392	-4.393
BM 17 A H&N	0.480	73.380	1044.865	2.264	2.266	2.264	2.263
BM 87 TJS	0.730	74.120	1057.502	12.635	12.638	12.636	12.636
BM 16 A H&N	0.350	74.470	1059.552	2.049	2.049	2.050	2.050
BM 1 PDI	0.710	75.180	1076.015			16.463	16.463
BM 2 PDI	0.830	76.010	1094.270			18.255	18.256
BM 3 PDI	1.000	77.010	1113.413			19.143	19.142
BM 15 A H&N	0.580	77.600	1118.392			4.979	4.978
BM 14 A H&N	0.880	78.480	1099.942			-18.450	-18.452
BM 13 A H&N	0.880	79.350	1087.367			-12.575	-12.575
BM 12 A H&N	1.180	80.530	1068.537			-18.830	-18.829
BM 11 A H&N	1.300	81.830	1056.782			-11.755	-11.756
BM 4 PDI	0.740	82.570	1046.275			-10.507	-10.507
BM 10 A H&N	0.770	83.340	1038.609			-7.666	-7.665
BM 9 A H&N	0.710	84.050	1024.459			-14.151	-14.152
BM 8 A H&N	0.910	84.960	1022.421			-2.038	-2.036
BM 7 A H&N	1.020	85.980	1003.400			-19.021	-19.021
BM 5 PDI	0.850	86.830	998.011			-5.389	-5.388
BM 6 PDI	1.120	87.950	982.545			-15.466	-15.465
BM 7 PDI	0.970	88.920	963.590			-18.955	-18.957
BM 8 PDI	0.880	89.800	951.314			-12.276	-12.275
BM 9 PDI	1.220	91.020	939.635			-11.680	-11.680
BM G 408	1.420	92.440	971.333			31.699	31.702
BM H 408	1.600	94.040	944.471			-26.863	-26.861

File Name: table_t.dat

File Description: Geodetic Leveling and Trilateration Surveys (1988). This file contains information on the quadrilateral relative elevations in meters. Elevation differences are reported for each trench in the years 1983 through 1988.

Column # in file:	Description:	Domain:	Parameter
1 (id)	Identifier for relative elevations.	Character(30)	
2 (orien)	Orientation of elevation line. Example NW or Northwest.	Character(10)	
3 (elev_1983)	The 1983 relative elevation in meters for each corner of the trench. The lowest corner was designated 0.00 meters and the other three corners are relative to it.	Floating Point	
4 (elev_83_84)	The 1983,84 relative elevations in meters. The lowest corner was designated 0.00 meters and the other three corners are relative to it.	Floating Point	
5 (elev_84)	The 1984 relative elevations in meters. The lowest corner was designated 0.00 meters and the other three corners are relative to it.	Floating Point	
6 (elev_84_86)	The 1985,86 relative elevations in meters. The lowest corner was designated 0.00 meters and the oter three corners are relative to it.	Floating Point	
7 (elev_88)	The 1988 relative elevation in meters. First-order differential leveling was performed between two corners. Elevationss for the other corners were determined by vertical angle methods.	Floating Point	

Fran Ridge	NW	0.000	0.000	0.000	0.000	0.000
Fran Ridge	NE	49.895	49.894	49.893	49.896	49.895
Solitario	NW	0.000	0.000	0.000	0.000	0.000
Solitario	NE	83.637	83.633	83.634	83.635	83.634
Solitario	SW	4.380	4.398	4.383	4.379	4.368
Fran Ridge	SW	18.820	18.824	18.815	18.826	18.822
Fran Ridge	SE	41.040	41.031	41.030	41.035	41.026
Solitario	SE	70.273	70.289	70.275	70.270	70.263
Trench 1	SW	0.000	0.000	0.000	0.000	0.000
Trench 1	SE	3.551	3.551	3.551	3.551	3.551
Trench 1	NW	7.729	7.729	7.728	7.728	7.728
Trench 1	NE	10.594	10.594	10.594	10.594	10.594
Trench 14	SE	0.000	0.000	0.000	0.000	0.000
Trench 14	SW	18.499	18.502	18.498	18.501	18.500
Trench 14	NE	0.329	0.331	0.329	0.329	0.330
Trench 14	NW	44.625	44.628	44.625	44.625	44.628
Yucca Ridge	NW	0.000	0.000	0.000	0.000	0.000
Yucca Ridge	NE	12.029	12.031	12.030	12.030	12.030
Yucca Ridge	SW	45.545	45.541	45.545	45.545	45.554
Yucca Ridge	SE	30.200	30.198	30.204	30.206	30.210

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS920983117412.032 Qualified: N Wbs: 1.2.32.8.4.1

Report No:N/A

Title: Seismicity and focal mechanism for the southern great basin of nevada and california: 1987 through 1989 by S C Harmsen and C G Bufe

PI Shedlock, K M

Submittal Date 09-nov-1993

Activity Number 8.3.1.17.4.1.2

Governing Plan SCPB

Test No:N/A Sample No: N/A

Test Location USGS/BGRA

Start Date: 09-nov-1993 End Date:

GENISES PROCESSING INFORMATION

Date_received: 10-nov-1993

Tracking No: qr93111703 GENISES Document Tracking Number

Processing Equipment: SUN SPARCstation2

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES 10-jan-1994

Date All Processing was Completed

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS920783117412.022 Qualified: Y Wbs: 1.2.3.2.8.4.1

Report No:USGS-OFR-92-340

Title: Seismicity and Focal Mechanisms For The Southern Great Basin Of Nevada And California in 1991

PI shedl

Submittal Date 06-jul-1992

Activity Number 8.3.1.17.4.1.2

Governing Plan SCPB

Test No:N/A Sample No: N/A

Test Location USGS

Start Date: 01-feb-1992 End Date: 01-jun-1992

GENISES PROCESSING INFORMATION

Date_received: 06-jul-1992

Tracking No: qr93111704 GENISES Document Tracking Number

Processing Equipment: SUN SPARCstation2

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES 10-jan-1994

Date All Processing was Completed

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

WBS: 1.2.5.3.6
QA: N/A

GENISES
Quality Report

Dtn: GS920483117412.014 Qualified: N Wbs: 1.2.3.2.8.4

Report No:N/A

Title: Seismicity and focal mechanisms for the SGB of Nevada and California.

PI Harmsen S C

Submittal Date 09-nov-1993

Activity Number 8.3.1.17.4.1.2

Governing Plan SCPB

Test No:N/A Sample No: N/A

Test Location N/A

Start Date: 01-feb-1991 End Date: 23-jul-1991

GENISES PROCESSING INFORMATION

Date_received: 10-nov-1993

Tracking No: qr93111705 GENISES Document Tracking Number

Processing Equipment: SUN SPARCstation2

System Operating System: SUNOS 4.1.3

Software: Ingres (Version 6.4/02) ARC/INFO (Version 6.1.1)

Status: ACCEPTED Date Accepted Into GENISES 10-jan-1994

Date All Processing was Completed

The quality of the data identified above is the responsibility of the submitting participant organization. For more information please contact Elaine Ezra EG&G/EM RSL YMP Project Manager at (702) 794-7449 or Jim Beckett GENISES Database Administrator at (702) 794-7448.

GENISES Data Dictionary

File Name: table_sm.dat

File Description: Seismicity and Focal Mechanisms for the Southern Great Basin of Nevada and California in 1990

Column # in file	Description	Domain	Parameters	Attribute(s)
1 (hypo_type)	Type of hypocenter: FF = earthquake location (free depth) develocorder film; FD = earthquake location (fixed depth) develocorder film; AF = earth. loc. (free depth) computer recordings; AD = earth. loc. (fixed depth) comp. record.; CF = probable explosion (free depth); CD = prob. explos. (fixed depth); LF = low-frequency event; BB = known chemical explosion; PA = hypocenter from USGS-Pasadena	char(2)		C239
2 (yr)	year	Integer		C67
3 (mo)	month	Integer		C67
4 (day)	day	Integer		C67
5 (hr)	hour	Integer		C67
6 (minute)	minute	Integer		C67
7 (sec)	seconds	Integer		C67
8 (rms_resid)	rms residual of travel times	Real		
9 (num_phases)	# phases used in solution (P+S)	Integer		
10 (mca)	Mca (magnitude from coda amplitude)	Real		C278
11 (lat)	latitude (deg) (+ is north)	Real		L161
12 (lat_error)	Standard error in Lat. (Km)	Real	N/A	Metadata

Column # in file	Description	Domain	Parameters	Attribute(s)
13 (mlc)	Maximum of station magnitudes from overdriven (clipped) records	Real	N/A	C155
14 (long)	longitude (deg) (+ is east)	Real		L161
15 (long_error)	Standard error in Longitude (Km)	Real	N/A	Metadata
16 (large_azi_gap)	largest azimuthal gap (deg)	Integer		AZIMUTH
17 (md)	Md (coda decay magnitude)	Real		C278
18 (quality_1)	quality 1	char(1)		
19 (depth_event)	depth of event in km (positive down)	Real		C27
20 (std_err_depth)	standard error of depth (km)	Real		C27
21 (mlh)	MLh (horizontal ML magnitude)	Real		C155
22 (mlv)	MLv (vertical ML magnitude)	Real		C155
23 (dist_station)	distance of closest station (km)	Real		DISTANCE
24 (quality_2)	quality 2	char(1)		
25 (quad_epi)	USGS quadrangle of epicenter	varchar(23)		T231

AF	87	1	1	1	27	47.950	0.120	9	1.800		37.289		1.430	0.000	
-114.837	0.850			233	1.810	B	11.910	3.900		0.000		1.790	D	23.000	GREGERSON
BASIN															
SF	87	1	1	4	6	4.620	0.100	23	0.000		36.806		0.280	0.000	
-115.987	0.190			176	0.720	A	0.320	0.400		0.000		0.940	C	15.300	FRENCHMAN
FLAT															
SF	87	1	1	13	26	37.510	0.080	22	0.000		37.540		0.130	0.000	
-115.760	0.140			87	1.200	A	4.320	1.100		1.090		1.440	C	12.000	WHITE
BLOTCH SPRINGS															
ZF	87	1	1	14	58	9.530	0.060	15	0.000		37.856		0.100	0.000	
-116.137	0.120			106	1.570	A	0.230	0.200		1.090		1.550	C	20.400	REVEILLE
PEAK															
AF	87	1	2	13	7	55.510	0.110	13	0.000		36.906		0.330	0.000	
-115.976	0.250			156	0.940	A	-0.650	0.400		0.000		1.100	C	7.500	PLUTONIUM
VALLEY															
AF	87	1	2	14	13	28.500	0.110	20	1.600		36.900		0.200	0.000	
-115.971	0.170			128	1.300	A	-0.160	0.400		0.000		1.250	B	8.200	PLUTONIUM
VALLEY															
AF	87	1	3	5	7	28.680	0.040	9	0.000		37.854		0.130	0.000	
-116.140	0.210			105	1.680	C	3.920	8.800		0.000		1.530	C	20.500	REVEILLE
PEAK															
AF	87	1	3	7	40	2.470	0.070	32	1.720		36.462		0.110	0.000	
-116.163	0.110			64	1.160	A	10.640	0.200		0.000		1.350	A	5.800	AMARGOSA
FLAT															
AF	87	1	4	2	38	4.760	0.090	17	0.000		36.464		0.280	0.000	
-116.159	0.320			137	0.830	A	10.640	0.500		1.100		0.800	C	5.500	AMARGOSA
FLAT															
AF	87	1	5	19	48	18.440	0.100	14	2.070		35.671		0.400	0.000	
-116.478	0.800			283	1.740	B	11.690	3.000		1.830		2.140	D	47.900	AVAWATZ
PASS															
ZF	87	1	6	2	18	23.270	0.110	20	0.000		37.116		0.180	0.000	
-117.354	0.160			120	0.970	A	0.280	0.400		0.850		1.040	C	13.000	UBEHEBE
CRATER															
AF	87	1	6	3	49	32.440	0.090	16	0.000		36.651		0.300	0.000	
-116.345	0.450			178	0.400	A	2.430	0.400		0.000		0.500	C	0.800	STRIPED
HILLS															
AF	87	1	6	12	20	0.360	0.100	46	1.720		36.862		0.130	0.000	
-115.965	0.120			80	1.280	A	6.450	0.700		1.470		1.360	B	11.100	FRENCHMAN
FLAT															
AF	87	1	7	0	21	7.790	0.050	12	1.590		37.651		0.120	1.700	
-114.878	0.190			146	1.200	A	5.220	0.400		0.000		1.430	C	5.200	PAHROC
SPRING															
AF	87	1	7	2	59	15.520	0.100	36	1.560		36.613		0.160	0.000	
-115.896	0.170			100	1.090	A	9.570	0.500		0.000		1.060	B	7.900	MERCURY SW
SF	87	1	8	7	24	37.060	0.090	20	2.100		37.346		0.170	0.000	
-117.234	0.190			71	1.650	A	0.170	0.200		0.000		1.720	B	5.400	SCOTTYS
JUNCTION SW															
AF	87	1	8	11	48	2.500	0.090	26	0.000		37.140		0.150	0.000	
-116.289	0.150			85	0.950	A	6.880	0.500		0.000		0.670	B	8.700	AMMONIA
TANKS															
AF	87	1	8	17	24	8.430	0.060	16	1.270		36.624		0.180	0.000	
-116.345	1.370			293	0.760	B	0.900	1.000		0.000		0.510	D	14.600	LATHROP
WELLS SE															
AF	87	1	9	7	39	16.890	0.070	10	0.000		37.857		0.200	0.000	
-116.143	0.270			106	1.640	B	8.250	2.600		0.000		1.590	C	20.800	REVEILLE
PEAK															
AF	87	1	9	11	51	33.150	0.140	24	0.000		37.447		0.720	0.000	
-117.807	0.260			106	1.270	B	4.480	3.200		1.340		1.460	B	9.100	SOLDIER
PASS															
SF	87	1	9	22	47	36.020	0.080	12	0.000		37.833		0.930	0.000	
-114.737	0.830			258	0.000	B	3.070	2.600		0.000		0.000	D	25.200	THE BLUFFS
AF	87	1	10	6	10	17.130	0.100	17	1.640		37.874		0.230	0.000	
-116.130	0.320			110	1.630	C	7.490	5.500		0.000		1.830	C	48.100	REVEILLE
PEAK															
AF	87	1	10	11	40	13.510	0.130	33	1.820		36.800		0.200	0.000	
-115.826	0.240			104	1.390	A	2.320	1.000		2.090		1.730	C	11.900	FRENCHMAN
LAKE SE															
CF	87	1	10	23	30	18.650	0.060	13	0.000		36.806		0.670	0.000	
-116.909	0.560			324	1.330	A	1.160	1.400		0.000		0.920	D	25.200	BULLFROG
z0=12.															
AF	87	1	10	23	35	49.380	0.100	25	0.000		37.173		0.150	0.000	
-116.327	0.210			90	0.980	A	3.670	0.400		0.890		0.760	B	4.500	AMMONIA

File table_sm.dat; Representative data in file

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

MAR 07 1994

Mr. Dwight E. Shelor, Associate Director
for Systems and Compliance
Office of Civilian Radioactive Waste Management
U. S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Shelor:

SUBJECT: INFORMATION REQUEST

The purpose of this letter is to request the following information:

1. Information related to the United States Geological Survey Yucca Mountain Project Office geodetic program including GPS, leveling line, and trilateration network data.

2. Seismic hypocenter data from the Southern Great Basin Seismic Network (1978-current).

3. If available, a list of University of Nevada, Reno, and Yucca Mountain Project publications on seismicity and focal mechanisms from the Southern Great Basin Seismic Network for 1990-current.

4. A current GIS data catalog.

These data will be added to the CNWRA ARC/INFO GIS database for use in regional tectonic modeling. Please provide the data in a flat ASCII format or a spreadsheet format (e.g., Lotus or Excel) to the attention of Anne Garcia of my staff.

PINFO 1

I-35289 BWA

3-7-94

9403150090 2pp.

ENCLOSURE 1

If you have any questions regarding this request you may contact Ms. Garcia at (301) 504-2438.

Sincerely,

Kenneth R Hooks

for Joseph J. Holonich, Director
Repository Licensing and Quality Assurance
Project Directorate
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

cc: R. Loux, State of Nevada
T. J. Hickey, Nevada Legislative Committee
J. Meder, Nevada Legislative Counsel Bureau
R. Nelson, YMPO
M. Murphy, Nye County, NV
M. Baughman, Lincoln County, NV
D. Bechtel, Clark County, NV
D. Weigel, GAO
P. Niedzielski-Eichner, Nye County, NV
B. Mettam, Inyo County, CA
V. Poe, Mineral County, NV
F. Mariani, White Pine County, NV
R. Williams, Lander County, NV
L. Fiorenzi, Eureka County, NV
J. Hoffman, Esmeralda County, NV
C. Schank, Churchill County, NV
L. Bradshaw, Nye County, NV

Department of Energy
Washington, DC 20585

APR 11 1994

PINFO 1

I-35833

4-11-94

Mr. Joseph J. Holonich, Director
Repository Licensing & Quality
Assurance Project Directorate
Division of High-Level
Waste Management
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Reference: Ltr, Holonich to Shelor, dtd 3/7/94

Dear Mr. Holonich:

Your letter of March 7, 1994, (reference), requested four items of information. Item 1 from the referenced letter is supplied in Enclosure 1. Only a hard copy of the data requested in Enclosure 1 is available from an original platform of 9 mm tape. The Yucca Mountain Site Characterization Office does not now possess the hardware to transpose a 9 mm tape onto a hard disc or floppy disc in any format.

Enclosure 2 provides the seismic hypocenter map in Item 2 of the referenced letter. Enclosure 3 is the publication list requested in Item 3 of the referenced letter. Enclosure 4 consists of extra copies of the Geographic Information System Catalog requested in Item 4 of the referenced letter.

Due to the size of Enclosure 1, copies are provided for the U.S. Nuclear Regulatory Commission, the State of Nevada, and Nye County, Nevada. If any affected units of local government desires a copy of Enclosure 1, please contact Thomas W. Bjerstedt at (702) 794-7590 of the Yucca Mountain Site Characterization Office.

If you have any questions, please contact Chris Einberg of my staff at (202) 586-8869.

Sincerely,

DE Shelor

Dwight E. Shelor
Associate Director for
Systems and Compliance
Office of Civilian Radioactive
Waste Management

9405030221

SPP

ENCLOSURE 2

Enclosures: (NOT RECORD MATERIAL)
1. Geodetic Data
2. Seismic Hypocenter Map
3. Seismicity Publication List
4. GIS Catalog

cc w/encls 1,2,3,4:

R. Loux, State of Nevada
W. Offutt, Nye County, NV
T. J. Hickey, Nevada Legislative Committee

cc w/encls 2,3,4:

R. Nelson, YMPO
D. Bechtel, Las Vegas, NV
Eureka County, NV
Lander County, Battle Mountain, NV
P. Niedzielski-Eichner, Nye County, NV
L. Bradshaw, Nye County, NV
C. Schank, Churchill County, NV
F. Mariani, White Pine County, NV
V. Poe, Mineral County, NV
J. Pitts, Lincoln County, NV
J. Hayes, Esmeralda County, NV
B. Mettam, Inyo County, CA

EG&G
ENERGY MEASUREMENTS

Request Coordinator
Remote Sensing Laboratory
P.O. Box 1912, M/S: 570/V-02
Las Vegas, Nevada 89125
Telephone: (702)794-5182
FAX: (702)794-7469

WBS: 1.2.5.3.6
QA: NA
TRACKING DESIGNATOR: NR94071802

TRANSMITTAL

Date Sent: 11/29/94

NAME: Claudia Newbury TELEPHONE: 4-7942

ORGANIZATION: DOE/YMPO

ADDRESS: 101 Convention Center Drive, Suite P-200, Las Vegas, NV 89109

SELECT ONE OF THE FOLLOWING:

FED-X ☐ CERTIFIED ☐ COMPANY MAIL ☐ HAND CARRY ☐ PICK UP BY CUSTOMER ☐

Product No. YMP-94-357.0, Document and 8mm data tape.

- Tabular and spatial data sets of seismic hypocenters.
- Tabular USGS Project GPS, leveling line, and trilateration network data.
- One Genises Geographic Information System Data Catalog.

APPROVED BY: John W Bickett DATE: 11/29/94

WHITE: Record BLUE: Customer YELLOW: Request Coordinator Copy PINK: RSL Copy

53-33C1-001-001-2 (Aug 94)

JUL 18 1994

EG&G ENERGY MEASUREMENTS

RSL YMP Support Office
EG&G Energy Measurements, Inc.
P.O. Box 1912, M/S: V-02
Las Vegas, Nevada 89125
Telephone: (702)794-7852
FAX: (702)794-7469

WBS: 1.2.5.3.6
QA: N/A
TRACKING DESIGNATOR: NR94071802

WORK REQUEST

Today's Date: 7-18-94

TO BE COMPLETED BY THE REQUESTOR:

YMP Participant (Y/N) N

NAME: Claudia Newbury SIGNATURE: [signature]

ORGANIZATION: Department of Energy, Yucca Mountain Project Office TELEPHONE:

ADDRESS: P.O.Box 98608 Las Vegas, NV 89193-8608

PURPOSE OF PRODUCT: NRC Data Request

WILL THE PRODUCT BE USED IN QUALITY-AFFECTING WORK? N DATE NEEDED: 7-22-94 RELEASABLE DATA (Y/N) Y

PRODUCT FORMAT				
	Hardcopy: N/A	Number of Copies: N/A	Map Size or Scale: N/A	Other: N/A
	Digital: N/A	OS: Sunos	File Format: Genises	Media: N/A

WORK DESCRIPTION:

NRC Data Request.
Data represented by the following four DTNs are in the ATDT and the CRF:
GS930731174101.001 YMP Level Data: 11/90 - 7/91 Section Observations
GS930731174101.002 GPS Data, Calibrations for GPS Receivers
GS930731174101.003 1983 - 1988 Leveling Results, Quadrilateral Results
GS930731174101.005 YMP Level Data Geodetic Leveling and Section Observations 1992-93
Data in the following DTNs will be in the CRF in 15 days. These data are from the Trilateration Network Centered on Yucca Mountain:
GS931031174102.002 Geodolite data 1983 - 1984
GS931031174102.003 Geodolite & GPS data 1993
The Following data are from the Southern Great Basin Seismic Network for 1980 - 1991:
GS900983117411.005 OFR-87-596 in the CRF and submitted to the TDB
GS900983117411.006 OFR-87-408 in the CRF and submitted to the TDB
GS900983117411.003 OFR-83-669 in the CRF and submitted to the TDB
GS900983117411.001 OFR-81-1086 in the CRF and submitted to the TDB
GS920983117412.032 OFR-91-572 in the CRF and submitted to the TDB
GS920783117412.022 OFR-92-340 in the CRF and submitted to the TDB
GS920483117412.014 OFR-91-367 in the CRF and submitted to the TDB

Chris

TO BE COMPLETED BY GENISES DATABASE PERSONNEL Job Number: N3P1T387

Cost Estimate (Y/N): N | Processing Plan (Y/N): Y | Scheduled Delivery Date: 7-22-94

Map	Data	Photo	Graphic	Image Process	GIS Analysis	DGI	Photo Acq.	Data Submit	Internal Request	Other
	X									

RECEIVED BY: Tommie W Beckett DATE: 7/18/94
(I have reviewed this form and all blanks are intentional)
APPROVED BY: Tommie W Beckett DATE: 7/19/94

WHITE: Record BLUE: Customer YELLOW: YMPSO Copy PINK: RSL Copy

(INSTRUCTIONS PROVIDED ON BACK)

Form Y3002 (Feb 93)

EG&G
ENERGY MEASUREMENTS

WBS: 1.2.5.3.6
Tracking Number: NR9407180Z

CUSTOMER EVALUATION

PRODUCT DELIVERED: DIGITAL DATA TRANSFER (DATA REPORT) OTHER
MAP PRODUCT PHOTO PRODUCT

RATING SCALE

5 = EXCELLENT 4 = GOOD 3 = SATISFACTORY 2 = MARGINAL 1 = UNSATISFACTORY

PLEASE CIRCLE THE NUMBER WHICH CORRESPONDS TO YOUR RATING OF EACH ITEM, USING THE ABOVE SCALE AS REFERENCE.

1. THE PROCESS FOR REQUESTING THE PRODUCT WAS:	5	4	3	2	1
2. INTERACTIONS WITH THE STAFF WERE:	5	4	3	2	1
3. INTEGRATION OF ALL REQUESTED INFORMATION INTO THE PRODUCT WAS:	5	4	3	2	1
4. TIMELINESS OF THE PRODUCT WAS:	5	4	3	2	1
5. THE OVERALL QUALITY OF THE PRODUCT WAS:	5	4	3	2	1
6. AN OVERALL RATING OF THE SUPPORT PROVIDED:	5	4	3	2	1

WE ARE ALSO INTERESTED IN THE USEFULNESS OF OUR PRODUCTS. THE SIGNIFICANCE OF THE PRODUCT FOR ITS INTENDED USE WAS: (Please circle the appropriate number)

5 = CRITICAL 4 = IMPORTANT 3 = USEFUL 2 = LIMITED 1 = INSIGNIFICANT

BRIEFLY EXPLAIN HOW THE PRODUCT WAS USED.

_____

_____

IF YOU RATED ANY OF THE ABOVE ITEMS 1 OR 2, PLEASE EXPLAIN HOW THE PRODUCTS OR SERVICES PROVIDED COULD BE IMPROVED.

COMMENTS: _____

_____

_____

_____

NAME: _____ DATE: _____ ORG: _____

(Optional -- for follow-up if necessary)

FOLD IN HALF AND STAPLE -- ADDRESS IS ON BACK OF THIS FORM
or FAX -- (702)794-7469

EG&G Energy Measurements, Inc.
YMP Spatial Analysis Section
ATTN: C. Elaine Ezra -- MS/V-02
PO Box 1912
Las Vegas, NV 89125