

I. CONTENTS

FILES IN DIRECTORY:

AIRBORNE ELECTROMAGNETIC (AEM) AND MAGNETIC DATA:

SanLuisAEM_EMRawData.XYZ	Uncorrected, unculled AEM line data
SanLuisAEM_EMCCulledData.XYZ	Fully processed, 30-HZ noise culled AEM line data
SanLuisAEM_EMCCorrData.XYZ	Fully processed, 30-Hz noise corrected AEM line data
SanLuisAEM_MagData.XYZ	Raw and processed airborne magnetic line data

COORDINATE SYSTEM:

HORIZONTAL:

Universal Transverse Mercator (UTM) projection
 Zone 13 North (13N)
 World Geodetic System of 1984 (WGS84)

VERTICAL:

North American Vertical Datum of 1988 (NAVD88)

II. DATABASE FORMAT

AIRBORNE ELECTROMAGNETIC DATA: SanLuisAEM_RawData.XYZ and SanLuisAEM_CorrData.XYZ

Fid	Unique fiducial number	-
Line	Line number	-
Date	Date of flight	yyyymmdd
Time	Time	hhmmss.sss
AngleX	transmitter frame pitch	Degrees
AngleY	transmitter frame roll	Degrees
Height	Filtered height of sensor above ground	Meters
DEM	Digital Elevation Model	Meters
E	X coordinate, UTM Zone 13N	Meters
N	Y coordinate, UTM Zone 13N	Meters
Alt	DGPS Altitude	Meters
Curr_1	Current, high moment	Amps
Curr_2	Current, low moment	Amps
LM_Z_G05[i]	Normalized LM Z-coil value at array index [i] ¹	pV/(m4*A)
HM_Z_G18[i]	Normalized HM Z-coil value at array index [i] ¹	pV/(m4*A)
LM_X_G05[i]	Normalized LM X-coil value at array index [i] ¹	pV/(m4*A)
HM_X_G18[i]	Normalized HM X-coil value at array index [i] ¹	pV/(m4*A)

¹ Time gate array assignments are given in section III of this document.

AIRBORNE ELECTROMAGNETIC DATA: SanLuisAEM_CulledData.XYZ

FID	Unique fiducial number	-
Line	Line number	LLLLLL
E	Filtered height of sensor above ground	Meters
N	Digital Elevation Model	Meters
DEM	X coordinate, UTM Zone 13N	Meters
ALT	Y coordinate, UTM Zone 13N	Meters
Cull_Z_LM[i]	Low-moment Z-coil apparent resistivity at array index [i] ¹	Ohm-meters
Cull_Z_HM[i]	High-moment Z-coil apparent resistivity at array index [i] ¹	Ohm-meters
Cull_Z_LM_STD[i]	Low-moment Z-coil assigned error at array index [i] ¹	-
Cull_Z_HM_STD[i]	High-moment Z-coil assigned error at array index [i] ¹	-

¹ Time gate array assignments are given in section III of this document.

AIRBORNE MAGNETIC DATA: SanLuisAEM_MagData.XYZ

Line	Line number	LLLLLS
Flight	Flight number	YYYYMMDD.FF
Date	UTC date	YYYY/MM/DD
Time	UTC time	HH:MM:SS.S
Lon	Longitude, WGS84	Decimal-deg.
Lat	Latitude, WGS84	Decimal-deg.
E	Easting in UTM Zone 13N	Meter
N	Northing in UTM Zone 13N	Meter
Alt	Mag sensor GPS altitude, EGM96	Meter
Height	Processed sensor height above ground level	Meter
DEM	Calculated digital elevation model	Meter
IGRF_TMI	Calculated IGRF-11 - total magnetic intensity	Nanotesla
IGRF_Inc	Calculated IGRF-11 - magnetic inclination	Degrees
IGRF_Dec	Calculated IGRF-11 - magnetic declination	Degrees
Bmag_TMI	Total magnetic intensity – raw base station	Nanotesla
Bmag_diur	Diurnal variation– base station	Nanotesla
mag_raw	Total magnetic intensity - despiked	Nanotesla
Mag_cor	Residual magnetic field - corrected for diurnal, lag, heading and IGRF-11	Nanotesla
RMF	Residual magnetic field – IGRF-11 removed - final corrected and leveled magnetic data	Nanotesla
TMI	Total magnetic intensity – final corrected and leveled magnetic data; IGRF recalculated	Nanotesla

III. TIME GATE ASSIGNMENTS TO DATABASE ARRAY INDEXES

¹Time relative to transmitter turn off time
 [LM, low moment; HM, high moment]

Gate	Gate open (μ s) ¹	Gate width (μ s)	Gate close (μ s) ¹	Gate Center (μ s) ¹	Time shift calibration (us)	Description	Database array index [i]		
							LM (raw & corr)	HM (raw & corr)	LM & HM (culled)
1	0.39	5.61	6.00	3.195	2.095	Not used			
2	6.39	1.61	8.00	7.195	6.095	Not used			
3	8.39	1.61	10.00	9.195	8.095	Not used			
4	10.39	1.61	12.00	11.195	10.095	Not used			
5	12.39	1.61	14.00	13.195	12.095	LM only	0		
6	14.39	1.61	16.00	15.195	14.095	LM only	1		0
7	16.39	1.61	18.00	17.195	16.095	LM only	2		1
8	18.39	3.61	22.00	20.195	19.095	LM only	3		2
9	22.39	4.61	27.00	24.695	23.595	LM only	4		3
10	27.39	6.61	34.00	30.695	29.595	LM only	5		4
11	34.39	7.61	42.00	38.195	37.095	LM only	6		5
12	42.39	9.61	52.00	47.195	46.095	LM only	7		6
13	52.39	12.61	65.00	58.695	57.595	LM only	8		7
14	65.39	15.61	81.00	73.195	72.095	LM only	9		8
15	81.39	20.61	102.00	91.695	90.595	LM only	10		9
16	102.39	25.61	128.00	115.195	114.095	LM only	11		10
17	128.39	31.61	160.00	144.195	143.095	LM only	12		11
18	160.39	41.61	202.00	181.195	180.095	LM & HM	13	0	12
19	202.39	50.61	253.00	227.695	226.595	LM & HM	14	1	13
20	253.39	64.61	318.00	285.695	284.595	LM & HM	15	2	14
21	318.39	81.61	400.00	359.195	358.095	LM & HM	16	3	15
22	400.39	102.61	503.00	451.695	450.595	LM & HM	17	4	16
23	503.39	129.61	633.00	568.195	567.095	LM & HM	18	5	17
24	633.39	162.61	796.00	714.695	713.595	LM & HM	19	6	18
25	796.39	205.61	1002.00	899.195	898.095	LM & HM	20	7	19
26	1002.39	258.61	1261.00	1131.695	1130.595	LM & HM	21	8	20
27	1261.39	325.61	1587.00	1424.195	1423.095	HM only		9	21
28	1587.39	409.61	1997.00	1792.195	1791.095	HM only		10	22
29	1997.39	516.61	2514.00	2255.695	2254.595	HM only		11	23
30	2514.39	649.61	3164.00	2839.195	2838.095	HM only		12	24
31	3164.39	818.61	3983.00	3573.695	3572.595	HM only		13	25
32	3983.39	1030.61	5014.00	4498.695	4497.595	HM only		14	26
33	5014.39	1297.61	6312.00	5663.195	5662.095	HM only		15	27
34	6312.39	1632.61	7945.00	7128.695	7127.595	HM only		16	

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