

Table 2: Calpine File Summary for Glass Mountain GSY-USA MT-TDEM Project

There are four categories of Calpine files listed.

1. RELEASE: Proprietary data that Calpine will release as its match-share contribution and for which a match-share valuation is claimed.
2. REVIEW: Proprietary reports that Calpine will allow the project investigators to review but will not commit to release. No value is claimed for these.
3. BACKUP: Proprietary data that are probably redundant but may be requested from Calpine if released data is incomplete. No value is claimed for these.
4. PUBLIC: Published data that Calpine will make available to the investigators to assist the project. No value is claimed for these.

Heading Explanations

"File Number, Title, Author, Data, Initial Owner, and Subject," refer to Calpine's GeoLibrary database.

"Description and Number of Data" are from the authors of this study.

Basic production entry locations and rate information will be available from the REVIEW documents and included in the CEC report.

Temperatures will be released in maps and cross-sections but not as well temperature logs.

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of data
0								
1	RELEASE: Proprietary data to be released by Calpine as part of its match-share contribution.							
1.1								
GM 18.02	Petrographic & Mineralogy Reports and Data for Glass Mtn. Wells	UURI	1984-1990	Unocal	Petrography/Petrology	Collected XRD and petrography	see below	
GM 18.02a	Letter to A. Schriener: Mineralogy and XRD of 34 pulp samples	UURI, Hulen, J.	4-Apr-84	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02b	Letter to A. Schriener: Mineralogy and XRD of 51 pulp samples	UURI, Hulen, J.	13-Jun-84	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02c	Analysis of 70 Felsic to Mafic Composition Volcanic Rock Cuttings by XRD	UURI, Hulen, J.	29-Aug-85	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02d	Letter to R. Gunderson: XRD Mineralogy of 31 samples from GMF17A-6	UURI, Hulen, J.	23-Jan-85	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02e	Letter to D. Carrier: XRD Mineralogy and Petrology of "6-Series"(GMF17A-6)	UURI, Lutz, S.	16-Mar-88	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02f	Letter to D. Carrier: XRD Mineralogy and Petrology of "8-series" (GMF68-8)	UURI, Lutz, S.	18-Oct-88	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02g	Letter to D. Carrier: XRD Mineralogy and Petrology of "8-series" (GMF68-8)	UURI, Lutz, S.	21-Nov-88	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02h	Letter to D. Carrier: XRD Mineralogy and Petrology of "17-series" (GMF31-17)	UURI, Lutz, S.	28-Dec-88	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02i	Letter to R. Gunderson: XRD Mineralogy and Petrology of well 15 (GMF01-15)	UURI, Lutz, S.	9-Apr-90	Unocal	Petrography/Petrology	XRD and petrography	see below	
GM 18.02j	XRD Compilation: 28-32; 29-1;17A-6; 65-26; 84-17;17-6; 87-13; 57-11;75-6;44-33;36-28; 56-3;51-2;52-30; 54-19;14-23;18-34; 27-27; 62-21;68-16; 86-23;54-19;56-3	Unocal, Gunderson, R., UURI, Hulen, J.	1984-1985	Unocal	Petrography/Petrology	XRD and petrography	samples	>250
GM 19.01	Hydrothermal Alteration and Well Lithologies for GM Wells (see GM18.02)	Carrier, Daniel L., Unocal	8-Sep-89	Unocal	Mineralogy	Edited collection and interpretation of mineralogy and XRD	samples	>90

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of data
GM 19.03	Analysis of Mineralogy & Fluid Inclusion Data/GM Temp. Boreholes	Carrier, Daniel L., Unocal	30-Nov-87	Unocal	Mineralogy	Edited collection and interpretation of mineralogy and XRD	samples	>150
GM 19.04	Fluid Inclusion Studies of Two Samples for a Geothermal System (45-36)	Smith, B.	4/16/1987	Unocal	Mineralogy	Fluid inclusion data	inclusions	2
GM 30.03	Physical Property Lab Determinations: magnetic susceptibility and bulk density	Elliot, C.L.	14-Oct-82	Elliot Geophysical	General Geophysics	Magnetic susceptibility and bulk density	samples	14
GM 32.02	Medicine Lake California Gravity Surveys	BRW, Watterson, B. and Brown, P.L.	1983, 1984	Occidental	Gravity	Complete Bouguer gravity and total station x,y,z	Gravity station	386
GM 34.02	Magnetotelluric Survey, Glass Mountain, California	Geonomics, Lattanner, A.V. & Meidav, Tsvi, Geonomics	1975	Union Oil	Magnetotellurics		MT station	38
GM 34.04	Glass Mountain, California Magnetotelluric Data: Report (missing original map, digital data in Master File format available)	Wodward-Clyde	Sep-81	Unocal	Magnetotellurics	WC 01-22	MT station	22
GM 34.05a	Magnetotelluric Survey Shasta (vol 1, 2, 3, 4)	Waff, H.-CalEnergy	Aug-83	CalEnergy	Magnetotellurics	SHAST1 to 46, 48-51, 53, 54, 56	MT station	53
GM 34.05b	Magnetotelluric Survey - Glass Mountain	Waff, H.-CalEnergy	Sep-83	CalEnergy	Magnetotellurics	27 named stations, one no data	MT station	26
GM 34.06	Glass Mountain MT Data	CGG, Andrieux, Pierre	Dec-82	Union Oil	Magnetotellurics		MT station	17
GM 34.07a	Medicine Lake Prospect Siskiyou County, California (Report and map in pocket, digital data in Master File format available)	Phoenix	Nov-89	Unocal	Magnetotellurics	P 26-49	MT station	24
GM 34.07b	Medicine Lake Prospect Siskiyou County, California (digital data in Master File format available)	Phoenix	Nov-89	Unocal	Magnetotellurics	P 01-25	MT station	25
GM 34.07c	Medicine Lake Prospect Siskiyou County, California (digital data in Master File format available)	Phoenix	Nov-86	Unocal	Magnetotellurics	P 01-17	MT station	17
GM 35.06	Medicine Lake Area, California Schlumberger Electrical Sounding Survey plus 7 maps	Electro Magnetic Surveys, Inc.	Sep-83	Occidental	Resistivity	GMT1 to GMT17	DC station	15
GM 38.01	Transient Electromagnetic Depth Sounding Test Survey at GM (out-of-loop test with 3 Tx sites 500x500m, 51 Rx)	Electro Magnetic Surveys, Inc.	Aug-82	Occidental	Time-domain EM	Rx 1 to 51, Tx 1 to 3	TDEM station	51
GM 38.01a	TEM Central Induction Sounding, Mt. Shasta, Siskiyou County	Electro Magnetic Surveys, Inc.	Nov-83	Union Oil	Time-domain EM	2-5, 7-12, 17-27, 29, 31-39, 57-59, 61-62, 74, 77-87, 89-91, 92-113, 121-139, 141-142, 144-146	TDEM station	102
GM 38.05	TEM Central Induction Sounding Medicine Lake, California	Electro Magnetic Surveys, Inc.	30-Jan-85	Occidental	Time-domain EM	ML01 to ML76	TDEM station	76
GM 38.06	TEM Central Induction Sounding Medicine Lake, California	Electro Magnetic Surveys, Inc.	25-Sep-85	Santa Fe	Time-domain EM	R1-R17, R19-R24, DR1-DR14	TDEM station	37
GM 38.06	TEM Survey Medicine Lake Highland, California: Report, Attachment A and Map in sleeve	The Earth Technology Corporation	Sep-85	Unocal	Time-domain EM	Lines 1-1 to 1-17, 2-1 to 2-16, 3-1 to 3-14, 4-1 to 4-18, 5-1 to 5-24, 6-1 to 6-19	TDEM station	61
GM 38.07	TEM Survey Medicine Lake Highland, California: Report, Attachment 1 and Map in sleeve	The Earth Technology Corporation	Sep-86	Unocal	Time-domain EM	Stations 1 to 61	TDEM station	78
GM 38.10	Geophysical Report: Transient EM (TEM) Surveys at Fourmile Hill	Quantech, Jon Powell	Jul-02	Calpine	Transient EM	1 to 38	TDEM station	38
GM 38-04	TEM Central Induction Sounding Glass Mountain Prospect	Electro Magnetic Surveys, Inc.	15-Jan-85	Unocal	Time-domain EM	GM01-GM11, GM14-GM41	TDEM station	39
GM 45.03	Thermal conductivity determinations for TGH cores	Southern Methodist Univ	11-Apr-83	Union	Thermal Conductivity			
GM 53.02	Core Reports - Permeability and Porosity	TerraTek, Inc.	Feb-92	Unocal	Reservoir Engineering			
Well files	Core analyses from 11 wells - Permeability, Porosity, Density, Susceptibility		1983-2000		Well Files	Analyses from 11 wells	Samples	132
Well files	17A-6 induction resistivity log		filed 1985	Union	Well Files	Induction log	log	1
Well Files	XRD and MeB for Wells 88-28 and 88-A28	Calpine, Walters, M.	Jan-02	Calpine	Well Files		Samples	40

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2 REVIEW: Proprietary data that Calpine will allow the project investigators to review

2.1

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of Data
GM 00.00	Geolib Index	Walters, M.	19-May-02	Calpine	Index			
GM 00.001	Excel Well File List: Geological and geochemical data inventory for well and ten	Walters, M.	Mar-02	Calpine	Inventory			
GM 00.002	Excel File GMmaps.xls Resource Map Index	Walters, M.	Feb-02	Calpine	Index			
GM 00.02	Unocal Bibliography List - Medicine Lake/Glass Mountain	Schreiner, A.	Jan-93	Unocal	Bibliographies			
GM 00.03	List of Calpine proprietary reports and data on file at EGL, Salt Lake City, Utah	Hulen, J.	Jan-02	EGL	Index			
GM 00.04	Bibliography of Publications: Geology, Geochemistry and Geophysics	Unocal	1984	Unocal	Bibliographies			
GM 00.05	EGL Geothermal Sample Laboratory: Glass Mt. Cores and Cuttings Location In	Hulen, J.B. and Langton, D.R.	Mar-02	EGL	Inventory & Index			
GM 10.08	Glass Mountain Field Trip - Unocal Geothermal Division		1990	Union	General Geology			
GM 11.00M	ML Conceptual Model - Geologic, Geoelectric & Thermal Cross Section - A-A'			Union	Geol. Maps/Sections			
GM 11.00M	ML Conceptual Model - Geologic, Geoelectric & Thermal Cross Section - B-B'			Union	Geol. Maps/Sections			
GM 11.00M	ML Conceptual Model - Geologic, Geoelectric & Thermal Cross Section - C-C'			Union	Geol. Maps/Sections			
GM 11.00M	ML Conceptual Model - Geologic, Geoelectric & Thermal Cross Section - D-D'			Union	Geol. Maps/Sections			
GM 11.00M	ML Conceptual Model - Geologic, Geoelectric & Thermal Cross Section - E-E'			Union	Geol. Maps/Sections			
GM 11.00M	GMF 29-1, 28-32, 68-8, 87-13, 52-30: Temp. Sec.			Union	Geol. Maps/Sections			
GM 11.00M	GMF 86-23, 54-19, 54-19, 62-21, 87-13, 44-13:Temp. Sec.			Union	Geol. Maps/Sections			
GM 11.03	Evidence Against Inflation Causing Most Medicine Lake Ground Cracks	Vantine, J.	8-Aug-91	Unocal	Geol. Maps/Sections			
GM 12.15M	Recent Thermal Activity	Smith, Kent	30-Apr-84	Phillips	Volcanism			
GM 13.06	Medicine Lake Stratigraphy- Modoc Plateau Rocks	Smith, Kent	Mar-83	Phillips	Stratigraphy-Structural Geology			
GM 14.01	Baseline Hydrogeology Evaluation Report for Telephone Flat	Iovenitti, J.L. & Hill, Dr. D.G.	8-Aug-97	CalEnergy	Ground Water Geology			
GM 14.04	What Poorly Permeable Unit Explains the Origin of Medicine Lake, et al	Vantine, J.	15-Aug-91	Unocal	Ground Water Geology			
GM 14.05	Fourmile Hill Figures		Aug-98	Calpine	Ground Water Geology			
GM 14.11	Preliminary Hydrologic Evaluation of Medicine Lake Prospect, CA	Gaddis, R.L.	1985	Phillips	Ground Water Geology			
GM 14.12	Medicine Lake Basin Comprehensive Hydrology Monitoring Plan for Telephone f	CE General and Calpine	Nov-98	Calpine	Ground Water Geology			
GM 18.05	Summary Report of the Geology and Geochemistry of Glass Mt. Geotehraml Re	Carrier, D.L.	Jan-89	Unocal	Petrography/Petrology/Geochemistry			
GM 19.02	Fluid Inclusion Studies on Samples from Glass Mountain	Carrier, Daniel L., Unocal	20-Dec-89	Unocal	Mineralogy	Fluid inclusion analysis		
GM 20.01	Glass Mountain Geochemical - Well 31-17		7-Dec-88	Unocal	General Geochemistry			
GM 20.02	Glass Mountain Geochemical - Well 68-8		1989	Unocal	General Geochemistry			
GM 20.03	Glass Mountain Geochemical - Well 87-13		1989-1991	Unocal	General Geochemistry			
GM 20.04	Geological and Geochemical Results from the 87-13 Deepening	DeWitt, D.	12-Jun-92	Unocal	General Geochemistry			
GM 22.02	Radon Analysis - Well 68-8	Kharkar, Dinkar P.	28-Nov-89	Thermo Analytical, Inc	Isotopic Geochemistry			
GM 23.05	K/Ar Ages for Samples form Medicine Lake, CA	Smith, B.	1/26/82	Union	Age Dating			
GM 24.17	Whole-Rock Geochemistry for TCH 14-23, 17A-6, 18-34, 27-27, 28-32, 29-1, 45	Bondar-Clegg	28-Jan-86	Bondar-Clegg	Solid Geochemistry			
GM 24.41M	Soil Gas Mercury Distribution		4/30/1984	Phillips	Solid Geochemistry			
GM 24.42M	Mercury and Geophysical Anomalies		6/12/1984	Phillips	Solid Geochemistry/Geophysics			
GM 25.01	Glass Mountain Chemistry Data	Buck, Cliff	17-Jan-97	CalEnergy	Liquid Geochemistry			
GM 25.02	Glass Mountain Geochemical Summary Graphs/Tables	Gallup, Darrell L.	11-Oct-89	Unocal	Liquid Geochemistry			
GM 25.03	Telephone Flat Flow Test Gas and Brine Chemistry	Wright, Melinda	24-Mar-99	CalEnergy	Liquid Geochemistry			
GM 25.04	Analysis of Chemical Data From 1988 Flowtests of 68-8 and 31-17	Carrier, Daniel L.	28-Apr-89	Unocal	Liquid Geochemistry			
GM 25.05	Interpretation of Analytical Results, Thermal and Non-Thermal Waters	Klein, C.W. & Koenig, J.B.	1977-78	GeothermEX	Liquid Geochemistry			
GM 25.06	Medicine Lake Highland 1983 Spring Geochemical Survey + 1991 Breije Race C	Gallinatti, Barbara C.	17-Feb-84	Union	Liquid Geochemistry			
GM 25.06M	Mt. Shasta - Medicine Lake Spring Sampling - 8/83		5/1/1984	Union	Liquid Geochemistry			
GM 25.07	Preliminary Geochemical Evaluation of first 68-8 test	Crecraft, Harrison	10-Jun-05	Unocal	Liquid Geochemistry			
GM 25.08	GMF 68-8 Fluid Analyses	Gallup, D.L. and Obando, M.E	12-Jun-05	Unocal	Liquid Geochemistry			
GM 30.01	Geophysical Interpretation of the Mt. Shasta-Medicine Lake	Nordquist, G.A.	16-Apr-84	Union	General Geophysics			
GM 30.02	Updated Geophysical Interpretation of the Medicine Lake Volcano	Nordquist, G.A.	19-Dec-85	Union	General Geophysics			
GM 30.05	Integrated Geophysical and Geological Interpretation of the Glass Mt. Prospect	Nordquist, G. and Thompson,	20-Jun-90	Union	General Geophysics			
GM 31.01	Medicine Lake Highlands, CA Magnetic Interpretation, Brief and Report	Tronrud, Julie S.	Dec-83	Occidental	Magnetics			
GM 32.01M	GMU Area Bouguer Gravity Summary Map-Lease Sale		3/1/1983	Union	Gravity			
GM 34.03	1-D Interpretation of Magnetotelluric Data For Glass Mtn. KGRA	Dickerson, Robert B.	8-Mar-83	Unocal	Magnetotellurics			
GM 36.01	Crustal Subsidence, Seismicity, and Structure Near Medicine Lake	Dzurisin, Daniel, et al	1991	Geophysical Research	Passive Seismics			
GM 36.05	Active Faults North of Lassen Volcanic National Park, N. CA	Wills, C.J.	1-Mar-91	CDMG	Passive Seismics			
GM 38.02	Shasta - Glass Mountain TDEM, Preliminary Report	Nordquist, G.A.	Oct-83	Union	Time-domain EM			
GM 38.08	Interpretation of the 1985 Detailed TDEM Survey in the GM Unit Area	Nordquist, G.A.	12-Sep-86	Unocal	Time-domain EM			

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of data
GM 39.01	Crustal Subsidence, Seismicity, and Structure Near Medicine Lake (see GM 36.1)	Dzurisin, Daniel, et al	1991	Geophysical Research	Passive Seismics			
GM 42.02	Reconnaissance Heat Flow and Geothermal Gradient Survey/Medicine Lake	Blackwell, Dr. David		OXY Geothermal, Inc.	Temp. Grad. - Heat Holes			
GM 42.03	Glass Mountain Borehole and Well Data	Carrier, Daniel L.	26-Apr-89	Unocal	Temp. Grad. - Heat Holes			
GM 42.03b	Glass Mountain Borehole and Well Data	Carrier, Daniel L.	26-Apr-89	Unocal	Temp. Grad. - Heat Holes			
GM 42.04	Occidental Temperature Gradient Data	Arestad, J.	1982 - 1984	Occidental Geotherms	Temp. Grad. - Heat Holes			
GM 42.05	Telephone Flat Temperature Depth Data		1983 - 1992	Unocal	Temp. Grad. - Heat Holes			
GM 45.01	Thermal Evaluation of Medicine Lake Highland - A Status Report	Bodell, John M.	20-Feb-86	Union	Thermal Modeling			
GM 45.02	Interpretation of 1990 Glass Mountain Production Well Temperature Surveys and	Thompson, Randy	2-Nov. 1990	Union	Temp. Grad. - Heat Holes			
GM 45.04	Elevation of 150 degF Isotherm vs. Distance from Caldera Rim	Beall, Joe		Phillips	Temp. Isotherms			
GM 45.04M	Isothermal X-Sections at Medicine Lake	Beall, Joe	1988	Phillips	Temp. Isotherms			
GM 53.01	Miscellaneous Unocal Reservoir Documents for Glass Mountain		1990 - 1996	Unocal	Reservoir Engineering			
GM 53.04	Glass Mountain Well Evaluation - Report to the BLM (68-8 and 31-17)		Dec-88	Union	Reservoir Engineering			
GM 53.07	1989 Test Results : GFM 31-17, 68-8, 83-17): Submittal to BLM	Camille, D.	5-Dec-89	Unocal	Reservoir Engineering			
GM 53.08	Glass Mt. Unit: Geologic and Reservoir Evaluation		15-Aug-96	CalEnergy	Reservoir Engineering			
GM 53.10	Final Report: Medicine Lake Deep Test 17A-6	Smith, K.W.	30-Apr-85	Phillips	Reservoir Engineering			
GM 54.00M	GMFU Area Environmental Resource Map		5/17/1991	Union	Environmental Engineering			
GM 54.00M	GMFU Environmental Resources Map			Calpine	Environmental Engineering			
GM 90.00M	BLM Management Areas in ML region: Tule Lake, CA - OR		5/28/2005	BLM	Planning			
GM 90.08	Telephone Flat Well Pad Planning Documents for FEIR/FEIS and POO	EMA, CE, and D. McClain	Dec-97	CE/EMA	General Planning			
GM 91.01	Glass Mountain Wells & TCH Status	Stark, Mitch & Walters, Mark	1996-2001	Calpine	Expl./Dev. Plans			

3 BACKUP: data that are probably redundant but may be requested if needed

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of data
GM 11.00M	Geologic Map of Medicine Lake Highlands		2/1/1984	Cal Energy	Geol. Maps/Sections			
GM 11.00M	Medicine Lake Well Locations - Structure/Tectonics		2/1/1983	Cal Energy	Geol. Maps/Sections			
GM 11.00M	GMF 17A-6: Geologic Section		11/24/1987	Union	Geol. Maps/Sections			
GM 11.00M	GMF 17A-6, 31-17, 68-8: Geologic Section			Union	Geol. Maps/Sections			
GM 11.00M	GMF 17A-6, 31-17, 68-8: Geologic Section			Union	Geol. Maps/Sections			
GM 11.00M	GMF 17A-6, 28-32, 44-33: Geologic Section			Union	Geol. Maps/Sections			
GM 11.00M	GMF 68-8: Geologic Section w/ alteration mineralogy			Union	Geol. Maps/Sections			
GM 11.00M	GMF 31-17: Geologic Section w/ alteration and mineralogy			Union	Geol. Maps/Sections			
GM 11.00M	GMF 68-8: Geologic Section w/ alteration mineralogy			Union	Geol. Maps/Sections			
GM 11.00M	GMF 29-1, 28-32, 68-8, 87-13, 52-30: Geol. Sec. w/alt.min.			Union	Geol. Maps/Sections			
GM 11.01M	Geologic Map of the Medicine Lake Highland		4/1/1984	Brian Hausback - Unocal	Geol. Maps/Sections			
GM 11.01M	Geologic Map of Medicine Lake		3/1/1984	Union	Geol. Maps/Sections			
GM 11.04	Geologic Mapping: Medicine Lake Highlands, California	Koestel, M.	1-Feb-84	Union	Geol. Maps/Sections			
GM 11.05M	Generalized Geology of the Glass Mtn. Unit Area		Rev. 3/12/83	Union	Geol. Maps/Sections			
GM 11.05M	Glass Mt. Geologic Map		12/1/1983	Union	Geol. Maps/Sections			
GM 11.05M	Glass Mountain Surface Geology Map			Unocal	Geol. Maps/Sections			
GM 13.02	Structural Assessment of Medicine Lake Highland	McDannel, A. and Bodell, J.	11-Oct-85	Union	Structural Geology			
GM 13.04	Glass Mountain Borehole and Well Data, 1981 - 1988	Carrier, D.L.	Apr-89	Unocal	Structural Geology			
GM 16.11	Color Infrared Prints for Salton Sea and Medicine Lake		16-Nov-87	NASA	Remote Sensing			
GM 16.12	Regional Color Infrared, Medicine Lake				Remote Sensing			
GM 16.13	Glass Mountain Aerial Photographs	Schriener, Alexander, Jr.	9-Feb-93	Unocal	Remote Sensing			
GM 16.15	Glass Mountain Color Photos		1984	USDA	Remote Sensing			
GM 16.16	Glass Mountain Color Photos		1990	USDA	Remote Sensing			
GM 16.17M	Medicine Lake, Glass Mtn., Mt Shasta: Satellite		7/4/1973	NASA	Remote Sensing			
GM 16.17M	Orthophoto: Medicine Lake NG - 7.5 Minute Series		5/28/2005	USGS	Remote Sensing			
GM 16.19	Uncontrolled Photo Mosaic (1:24,000) of Medicine Lake Highlands	Chevron Resources/Ch2MHill	9/30/1980		Remote Sensing			
GM 18.01	Origin of Andesite and Dacite: The Petrographic and Chemical Evidence	Eichelberger, John C.	1983	Unocal	Petrography/Petrology			
GM 22.01	Isotope Geochemistry Lab Data & Whole-Rock O-18 plots in wells and TGH's		1989 - 1992		Isotopic Geochemistry			
GM 31.00M	Aeromagnetics Contour Map			Union	Magnetics			

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of data
GM 31.00M	Glass Mountain Flight Path Recovery			EG&G Geometrics	Magnetics			
GM 31.00M	Glass Mountain Residual Magnetic Intensity			EG&G Geometrics	Magnetics			
GM 32.00M	Medicine Lake Gravity - Topo		2/1/1983	Cal Energy	Gravity			
GM 32.01	Bouguer Gravity Map of California (Glass Mountain Area)		1967-1983	Union	Gravity			
GM 32.01M	Glass Mountain Bouguer Gravity		3/8/1983	Union	Gravity			
GM 32.01M	Glass Mountain Complete Bouguer Gravity		3/8/1983	Union	Gravity			
GM 32.01M	Glass Mountain Complete Bouguer Gravity		7/5/1983	Union	Gravity			
GM 32.03	Glass Mountain Gravity Survey		1985	Union Oil	Gravity			
GM 32.03M	Glass Mountain Complete Bouguer Gravity, (Microbarometric heighting files plus Wheeler, D.A., Union		6/8/2005	Union	Gravity			
GM 32.03M	Glass Mountain Complete Bouguer Gravity Map		2/13/1986	Unocal	Gravity			
GM 34.00M	Glass Mountain MT Sites-1983		9/83 Rev. 3/81	Cal Energy	Magnetotellurics			
GM 34.00M	Medicine Lake Mountain Magnetotelluric Sites - 1983		Rev. 3/88	Cal Energy	Magnetotellurics			
GM 34.00M	Glass Mountain MT Locations		11/1/1983	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Prospect - MT Stations		10/1/1989	Unocal	Magnetotellurics			
GM 34.00M	Glass Mountain Prospect MT Station Locations		10/1/1989	Unocal	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at .01 Hz		12/10/1982	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at .03 Hz		2/29/1984	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at .1 Hz		12/10/1982	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at .3 Hz		2/29/1984	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at 1 Hz		12/10/1982	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Prospect MT: 1 HZ contour		3/1/1983	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at 3 Hz		2/29/1984	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smoothed Apparent Resistivity at 3 Hz		2/29/1984	Union	Magnetotellurics			
GM 34.00M	GM Smoothed Apparent Resistivity at 10 Hz		12/10/1982	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at 30 Hz		12/9/1982	Union	Magnetotellurics			
GM 34.00M	Glass Mountain Smooth Apparent Resistivity at 30 Hz		12/10/1982	Union	Magnetotellurics			
GM 34.00M	Medicine Lake MT Sites - 1983		2/1/1983	Cal Energy	Magnetotellurics			
GM 34.00M	Medicine Lake Prospect Resistivity #1		7/1/1985	Cal Energy	Magnetotellurics			
GM 34.00M	Medicine Lake Prospect Resistivity #2		7/1/1985	Cal Energy	Magnetotellurics			
GM 34.00M	Glass Mountain Smoothed Apparent Resistivity @ 3 Hz		2/11/1983	Union	Time-domain EM			
GM 34.07	Glass Mountain Prospect Magnetotelluric Bostick Resistivities	Unocal	Oct-89	Unocal	Magnetotellurics		MT station	
GM 34.07M	GM Magnetotelluric Station Locations, Bostick Resistivity - Depth 6,000 Feet		10/1/1989	Unocal	Magnetotellurics			
GM 34.07M	GM Total Conductance to Depth of 5,000 Feet		10/1/1989	Unocal	Magnetotellurics			
GM 34.07M	GM MT Bostick Resistivity Depth of 5,000 Feet		10/1/1989	Unocal	Magnetotellurics			
GM 35.00M	GM - Location of Transient EM Soundings - 1984		6/6/2005	Union	Resistivity			
GM 35.00M	Mt. Shasta HEM Survey 1040 Hz Log10 Resistivity (OHM-Meter)			Union	Resistivity			
GM 35.01	Glass Mountain Prospect-Total Conductance to a Depth of 5000 ft.		Oct-89	Unocal	Resistivity			
GM 35.01M	Glass Mtn. Prospect, TDEM: Bostick Resistivity		10/1/1989	Unocal	Time-domain EM			
GM 35.01M	GM Prospect, Total Conductance to a Depth of 5,000 feet		6/1/1983	Unocal	Resistivity			
GM 35.02	Glass Mountain HEM/Magnetic Survey - Preliminary Rpt.	Nordquist, G.A.	Aug-83	Union	Resistivity			
GM 35.02M	Mt. Shasta - Glass Mtn. Area - Flight Path Map		7/1/1983	Geoterrex for Union	Magnetics			
GM 35.02M	Mt. Shasta - Glass Mtn. Area - Isomagnetic Contour Map		7/1/1983	Geoterrex for Union	Magnetics			
GM 35.02M	Mt. Shasta - GM Area - 1040 Hz Resistivity Contour Map		7/1/1983	Geoterrex for Union	Resistivity			
GM 35.02M	Mt. Shasta - Glass Mtn. Area - Isomagnetic Contour Map		7/1/1983	Geoterrex for Union	Magnetics			
GM 35.02M	Mt. Shasta - Glass Mtn. Area - Flight Path Map		7/1/1983	Geoterrex for Union	Magnetics			
GM 35.02M	Mt. Shasta - GM Area - 1040 Hz Resistivity Contour Map		7/1/1983	Geoterrex for Union	Resistivity			
GM 35.02M	Mt. Shasta - Glass Mtn. Area - Isomagnetic Contour Map		7/1/1983	Geoterrex for Union	Magnetics			
GM 35.02M	Mt. Shasta - Glass Mtn. Area - Flight Path Map		7/1/1983	Geoterrex for Union	Magnetics			
GM 35.02M	Mt. Shasta - GM Area - 1040 Hz Resistivity Contour Map		7/1/1983	Geoterrex for Union	Resistivity			
GM 35.02M	Mt Shasta-Glass Mtn. HEM Survey		8/1/1983	Union	Resistivity			
GM 35.02M	Mt. Shasta - GM HEM Survey		Rev. 8/84	Union	Resistivity			
GM 35.02M	GM Unit Area - 1983 HEM Survey 1040 Hz Resist. Contour Map		11/1/1983	Union	Resistivity			
GM 35.02M	GM Unit Area - 1983 HEM Survey Isomagnetic Contour Map		11/1/1983	Union	Resistivity			

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of Data
GM 35.02M	GM Unit Area - 1983 HEM Survey Flight Path Map		11/1/1983	Union	Resistivity			
GM 35.03	Schlumberger Soundings From Glass Mountain	Wheeler, D.A.	22-Feb-83	Union	Resistivity			
GM 35.03M	Glass Mountain - Smoothed Apparent Resistivity at .3 Hz		2/29/1984	Union	Magnetotellurics			
GM 35.03M	Glass Mountain - Smoothed Apparent Resistivity at 30 Hz		2/29/1984	Union	Magnetotellurics			
GM 35.03M	Glass Mountain - Smoothed Apparent Resistivity at 3 Hz		2/29/1984	Union	Magnetotellurics			
GM 35.03M	Glass Mountain - Smoothed Apparent Resistivity at .03 Hz		2/29/1984	Union	Magnetotellurics			
GM 35.03M	GM MT & TDEM Depth to Conductor (Meters)		3/13/1984	Union	Time-domain EM			
GM 35.03M	Shasta - GM TDEM Apparent Resistivity at 2.4 Millisecs.		3/1/1984	Union	Time-domain EM			
GM 35.03M	GM MT & TDEM - Depth to Conductor (Meters)		3/13/1984	Union	TDEM/MT			
GM 35.03M	Glass Mountain Schlumberger Soundings Apparent Resistivity		2/29/1984	Union	Resistivity			
GM 35.03M	GM Schlumberger Soundings Apparent Resistivity		2/29/1984	Union	Resistivity			
GM 35.03M	GM Schlumberger Soundings Log Apparent Resistivity		3/8/1983	Union	Resistivity			
GM 38.00M	Mt. Shasta/Medicine Lake TDEM & Mt Survey Base Map		2/1/1984	Union	TDEM/MT			
GM 38.00M	Medicine Lake TDEM Station Location App. Resist. At 2.22 Msec.		4/1/1983	Union	Time-domain EM			
GM 38.00M	Shasta - Glass Mtn. Apparent Resistivity @ 2.4 Millisec.		3/1/1984	Union	Time-domain EM			
GM 38.00M	Shasta - Glass Mtn. Apparent Resistivity @ .22 Millisec.		3/1/1984	Union	Time-domain EM			
GM 38.00M	Glass Mountain TDEM Station Locations Bostick Resistivity		10/1/1989	Unocal	Time-domain EM			
GM 38.00M	Glass Mountain TDEM Station Locations		10/1/1989	Unocal	TDEM/MT			
GM 38.02M	Mt. Shasta - Medicine Lake Area (TDEM) Survey		10/1/1983	Union	Time-domain EM			
GM 38.02M	Time-Domain EM Survey Station Locations		12/1/1983	Union	Time-domain EM			
GM 38.07M	Glass Mountain Unit Area - Location of TEM Loops			The Earth Technology	Time-domain EM			
GM 38.08M	GM Prospect TDEM & MT Station Locations-1985		11/1/1983	Union	TDEM/MT			
GM 38.08M	Medicine Lake Highlands Fence Diagram Construction from One Dimensional Interpretation of TDEM Soundin		9/1/1986	Union	Time-domain EM			
GM 45.01M	GM Bottom Hole & Temperature & Gradient Data Map		Rev 8/90	Union	Temp. Grad.			
GM 53.10a	17A-6 Well Test Report (see well file: Testing/Production)	Potter, R.W.	Jun-85	Oxy	Reservoir Engineering			
GM 55.06	Medicine Lake Geothermal Core flow Tests-Formation Damage Evaluation	Kalfayan, L.J.	Jan-92	Unocal	Drilling Engineering			
GM 55.07	GMF 68-8 Drilling and Completion: Factors affecting Flow Rate	Walters, M.	2-May	Calpine	Drilling Engineering			
GM 55.09	GMF 31-17 Drilling and Completion: Factors affecting Flow Rate	Walters, M.	2-Jul	Calpine	Drilling Engineering			
GM 55.10	GMF 87-13 Drilling and Completion: Factors affecting Flow Rate	Walters, M.	2-Aug	Calpine	Drilling Engineering			

4 PUBLIC: non-proprietary information that Calpine will make available to the investigators

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of Data
GM 00.01	Geophysical Studies	Bacon, C.R.	Jan-81	USGS	Bibliographies			
GM 01.03	Geochemistry of Three Cascade Volcanoes	Swenson, D.H.	Nov-93	N/A	Regional G.M. Reports			
GM 01.04	A Regional Magnetotelluric Survey of the Cascade Range Region	Stanley, W.D.	1981	USGS	Regional G.M. Reports			
GM 01.05	Resource Appraisal of the Mt. Shasta Wilderness Study Area	Christiansen, R.L. et al	29-Apr-77	USGS	Regional G.M. Reports			
GM 01.06	Reconn. Study of the Geothermal Resources of Modoc County, CA	Duffield, W.A. & Fournier, R.O	Feb-74	USGS	Regional G.M. Reports			
GM 01.07	Isotope Hydrology of cold springs in fractured rock-NE California	Rose, T.P., et al	Jun-95	Elservier	Regional G.M. Reports			
GM 01.09	Medicine Lake Volcano and Lava Beds National Monument, CA	Donnelly-Nolan, J.	9-Jun-05	USGS	Regional G.M. Reports			
GM 01.10	Geothermal Data from Deep Holes in the Oregon Cascade Range	Blackwell, D.D. and Steel, J.L	Oct-87	SMU	Regional G.M. Reports			
GM 04.10	Catastrophic Flooding and Eruption of Ash-Flow Tuff at Medicine Lake Volcano.	Donnelly-Nolan, J.M. and Noll	1986	USGS	Regional G.M. Reports			
GM 10.06	GRC 1984 Annual Meeting: Field Trip #6 - Medicine Lake, CA (29 -30 Aug 1984)	Ciancanelli, E.V.	Aug.84	GRC	General Geology			
GM 11.02	Volcanoes of the Medicine Lake Highland	Anderson, C.A.		UC	Geol. Maps/Sections			
GM 12.01	Quantifying Open System Magmatic Processes at Medicine Lake	Grove, T.	21-Apr-87	N/A	Volcanology			
GM 12.02	Volcanic Rock Analysis		1983	Dow	Volcanology			
GM 12.02b	Volcanic Rock Analysis		1983	Dow	Volcanology			
GM 12.03	Young bimodal volcanism at Medicine Lake Volcanic Center, N. CA	Condie, K. and Hayslip, D.	1975	N.M Inst. Of Mining	Volcanology			
GM 12.04	A Magmatic Model of Medicine Lake Volcano	Donnelly-Nolan, J.	1988	USGS	Volcanology			
GM 12.05	Implications of Post-11,000-Year Volcanism at Medicine Lake Volcano, N.CA	Donnelly-Nolan, J., Champion	1989	USGS	Volcanology			
GM 12.06	Assimilation of granite magma at Burnt Lava flow, Medicine Lake Volcano, N. CA	Grove, T., Kinzler, R., Baker, I	1988	MIT	Volcanology			
GM 12.07	Structure and Emplacement of a Rhyolitic Obsidian Flow: Little Glass Mountain, Fink, J.H.		1983	AZ State Univ	Volcanology			
GM 12.08	Primitive Magmas at Five Cascade Volcanic Fields: Melts from Hot, Heterogeneous	Bacon, C.R. and others	1997	USGS	Volcanology			
GM 12.09	Late Holocene Hydrated Mafic Magmatism at the Paint Pot Crater and Callahan f	Kinzler, R.J., Donnelly-Nolan,	2000	USGS	Volcanology			

File No.	Title	Author	Date	Initial Owner of Data / Origin	Subject	Stations / Description	Data Unit	Number of data
GM 12.10	Magmatic Processes that Generated the Rhyolite of Glass Mt., Medicine Lake Volcano	Grove, T.L., Donnelly-Nolan, J.M.	1997	USGS	Volcanology			
GM 12.11	The Evolution of Young Silicic Lavas at Medicine Lake Volcano: Implications for the Cascade Volcanic Arc	Grove, T.L. and Donnelly-Nolan, J.M.	1986	USGS	Volcanology			
GM 12.12	The Giant Crater Lava Field: Geology and Geochemistry of a Compositionally Zoned Lava Flow	Donnelly-Nolan, J.M. and others	1991	USGS	Volcanology			
GM 12.13	Evidence of Hydrous Differentiation and Crystal Accumulation in the low-MgO, high-Al andesite	Wagner, T.P., Donnelly-Nolan, J.M.	1995	USGS	Volcanology			
GM 12.14	Hot, Shallow Mantle Melting under the Cascades Volcanic Arc	Tanton, L.T.E., Grove, T.L., Donnelly-Nolan, J.M.	2001	MIT	Volcanology			
GM 13.01	Tectonic Setting of the Modoc Region, Northeastern Calif.	Hannah, J.L.	1985	N/A	Structural Geology			
GM 13.03	Stratigraphy of the Medicine Lake Highland	Hausback B.	Sep-83	N/A	Structural Geology			
GM 13.07	Normal Faulting and Lateral Shear in Northeastern California	Pease, R.W.	Apr-69	UCR	Structural Geology			
GM 13.08	Tulelake, CA: The Last 3 Million Years	Adam, D.P. and others	1989	USGS	Structural Geology			
GM 14.02	3-Dimen. of the Medicine Lake Highland, Topo., Geo., Geoph. & Hydro.	Lowenstern, J.B. et al		USGS	Ground Water Geology			
GM 14.03	Hydrologic Data and Description of a Hydrologic Monitoring Plan/Medicine Lake Volcano	Schneider, T.R. & McFarland, J.	1996	USGS & BPA	Ground Water Geology			
GM 14.06	Radiocarbon in Hydrologic Systems Containing Dissolved Magmatic Carbon Dioxide	Rose, T.P., and Davission, M.L.	6-Sep-96	LLL	Ground Water Geology			
GM 14.07	Preliminary Chemical and isotopic Data for Waters from Springs and Wells on the Medicine Lake Highland	Mariner, R.H.	20-Jun-05	USGS	Ground Water Geology			
GM 14.08	Altered Volcanic Rocks as Hydrologic Seals on the Geothermal System of Medicine Lake Volcano	Hulen, J. and Lutz, S.J.	Sep-99	EGI	Ground Water Geology			
GM 14.09	The Geochemistry of Waters from Springs, Wells, and Snowpack on and Adjacent to the Medicine Lake Volcano	Mariner, R.H. and Lowenstern, J.B.	Oct-99	USGS	Ground Water Geology			
GM 14.10	Bathymetric, geophysical, and geologic sample data from Medicine Lake, N. CA	Childs, J.R. and others	2000	USGS	Ground Water Geology			
GM 14.10a	Bathymetric and Geophysical Program (at Medicine Lake)	Childs, J. and Hart, P.	2000	USGS	Ground Water Geology			
GM 16.01 M	Regional Geology, Tectonics, Volcanics and Thermal Springs (6 of 6)			Cypress	Geol. Maps/Sections			
GM 16.10	Glass Mountain Land Sat-Multi-Spectral Scan		26-May-83	USGS	Remote Sensing			
GM 16.17	Seasat Radar Images for Mapping in Geothermal Areas	Muskat, J., Ciancanelli, E. and others	1981	CalTech	Remote Sensing			
GM 18.03	Petrology and Geochemistry of the Medicine Lake Volcano	Mertzman, S.A.	30-May-05	Franklin & Marshall Co	Petrography/Petrology			
GM 18.04	Alteration, Geothermometry, and Granitoid Intrusions in Well GMF 31-17, Medicine Lake Volcano Geothermal System, CA	EGI, Lutz, S., Hulen, J., and Schriener, A.	Jan-00	publication	Petrography/Petrology			
GM 19.05	Estimated temperature for Geothermal Drill Holes at Medicine Lake Volcano based on fluid inclusion data	Barger, K.E. and Kieth, T.E.C.	1997	USGS	Mineralogy			
GM 22.03	Oxygen Isotope Analyses of 166 Rock Samples from Medicine Lake Volcano, CA	Adami, L.H., Hildreth, W., and others	1996	USGS	Isotopic Geochemistry			
GM 22.04	Abrupt shift in O-18 values at Medicine Lake Volcano, CA (w/map coordinates)	Donnelly-Nolan, J.M.	1998	USGS	Isotopic Geochemistry			
GM 22.05	Comparative Isotope Hydrology Study of Groundwater Sources and Transport in the Medicine Lake Volcano Geothermal System	Davission, M.L. and Rose, T.P.	Sep-97	LLNL	Isotopic Geochemistry			
GM 23.04d	Volcanism, Plutonism and Hydrothermal Alteration at Medicine Lake Volcano, CA	Lowenstern, J.B. and others	2002	USGS	Age Dating			
GM 30.04	Induced-Polarization Response of Selected Cascades Core Samples	Tripp, A., LeMieux, M., Wright, S.L.	Oct-88	UURI	General Geophysics			
GM 31.00M	Aeromagnetic Map of the Medicine Lake Highlands		3/29/1984	USGS	Magnetics			
GM 32.04	Gravity Evidence for a Shallow Intrusion under Medicine Lake Volcano	Finn, C. and Williams, D.L.	1982	USGS	Gravity			
GM 32.04M	Bouguer Gravity Map of M.L. Highlands (Alturas Sheet)		5/21/2005	CDMG	Gravity			
GM 32.05	Gravity Anomalies, Quaternary Vents, Quaternary Faults in the Southern Cascade Range	Blakey, R.J. and others	1997	USGS	Gravity and Structural Geology			
GM 34.01	E-Field Ratio Telluric Survey Near Medicine Lake in the ML Highlands	Broker, Michael M., et al.	1982	USGS	Magnetotellurics			
GM 35.04	Airborne Electromagnetic Surveys of the Cascade Range	Fraser, D.C.	1983	USGS	Resistivity			
GM 35.05	Schlumberger Soundings in the Medicine Lake Area, CA	Zohdy, A.A.R. & Bisdorf, R.J.	1982	USGS	Resistivity			
GM 37.01	Crustal Structure from Seismic Refraction in the Medicine Lake Area	Catchings, Rufus	1983	Univ. of Wisc.-Madison	Active Seismics			
GM 37.02	High-Resolution Seismic Investigation Medicine Lake	Berge, P.A. et al	1986	USGS	Active Seismics			
GM 37.03	High-Resolution Seismic Attenuation Tomography at Medicine Lake Volcano, CA	Zucca, J. and Kasameyer, P.	1987	LLL	Active Seismics			
GM 37.04	Results of a Seismic Scattering Study Using Data from Long Valley and Medicine Lake	Doll, W.E. and Zucca, J.J.	20-Jul-88	LLL	Active Seismics			
GM 38.03	Inversion results of Time-Domain Electromagnetic Soundings near Medicine Lake	Anderson, W.L. et al	1983	USGS	Time-domain EM			
GM 38.09	Interpretation of Transient Electromagnetic Sounding at Medicine Lake	Anderson, Walter L.	1988	USGS	Time-domain EM			
GM 39.02	Modeling Deformation at Medicine Lake Volcano in Northern CA using Regional Gravity Data	Poland, M.P. and others	2000	Eos Trans. AGU Abstracts	Subsidence			
GM 39.03	Determining the Stress Regime within a Volcanic Edifice from Igneous Intrusion: Medicine Lake Volcano	Poland, M.P.	Dec-00	U. of Ariz.	Subsidence			
GM 40.01	Thermal Constraints on the Sealing Efficiency of the Caprock Overlying the Medicine Lake Volcano	Williams, C.F. and Grubb, F.V.	Jan-00	USGS	Geothermics			
GM 42.01	Preliminary Heat-Flow Investigations of the Calif. Cascades	Mase, C.W., et al	1982	USGS	Temp. Grad. - Heat Holes			