OREGON GEOLOGIC DATA COMPILATION (OGDC)

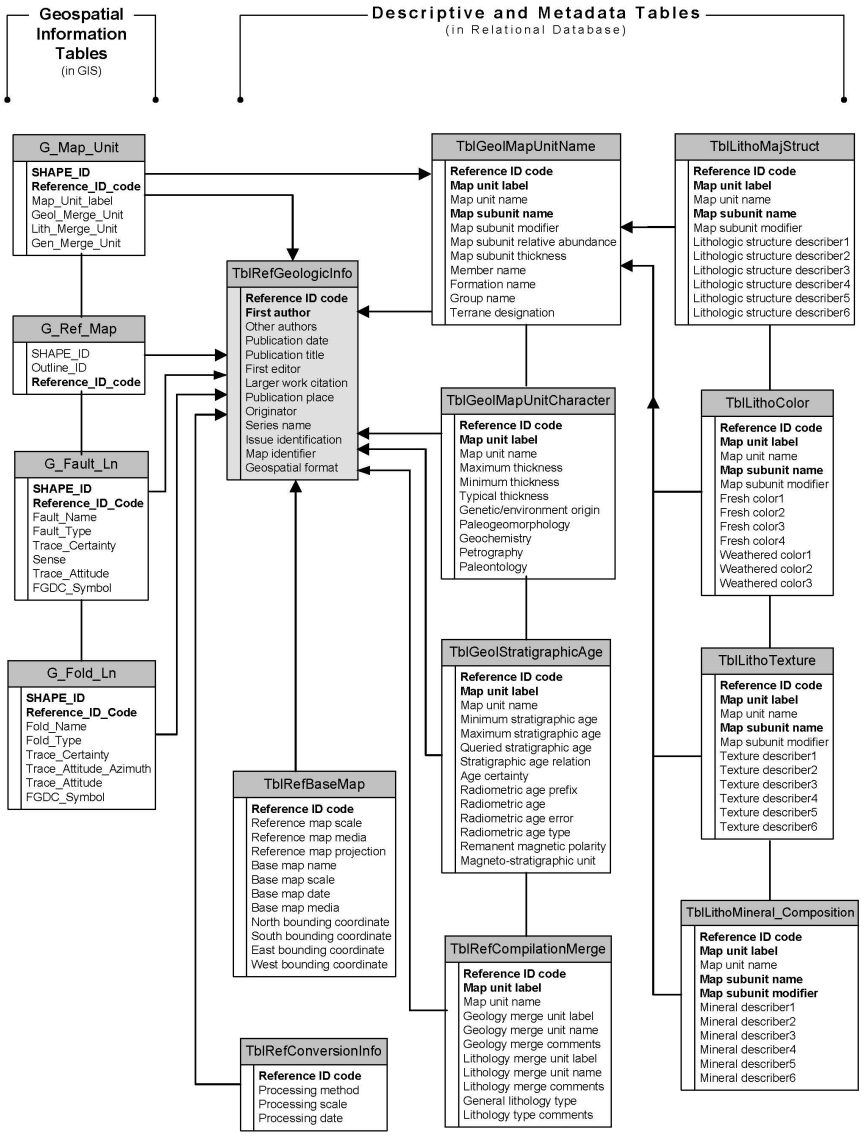
Standard for the Geoscience Framework Theme

Lina Ma

OGDC

- A digital compilation of the best available geologic mapping
- An unconventional compilation which preserves the detail and scale of the original mapping
- An interpretation based on the current understanding of Oregon's geology and its geologic history

OREGON GEOLOGIC DATA MODEL



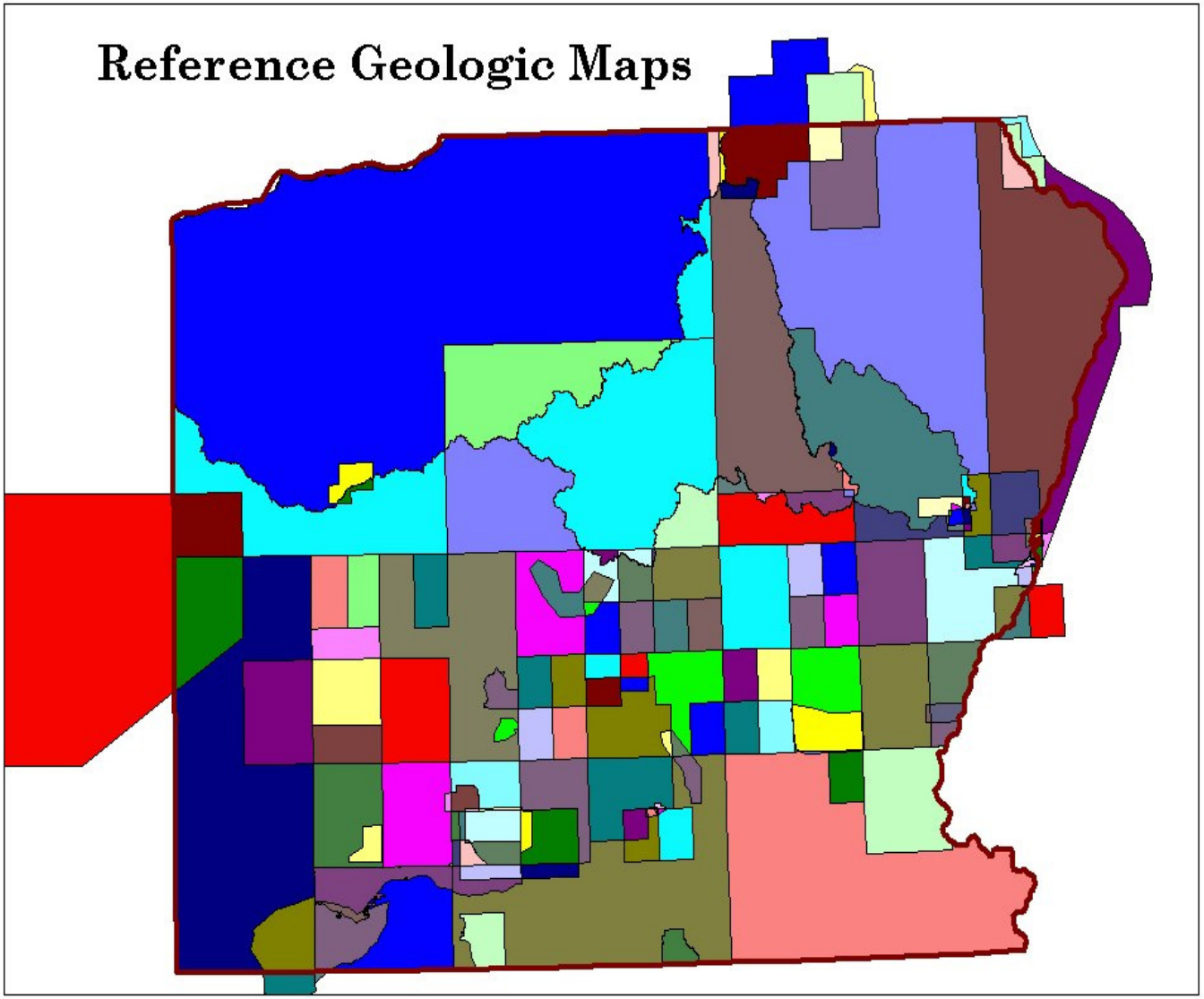
October 2004

Geologic Map Data Model

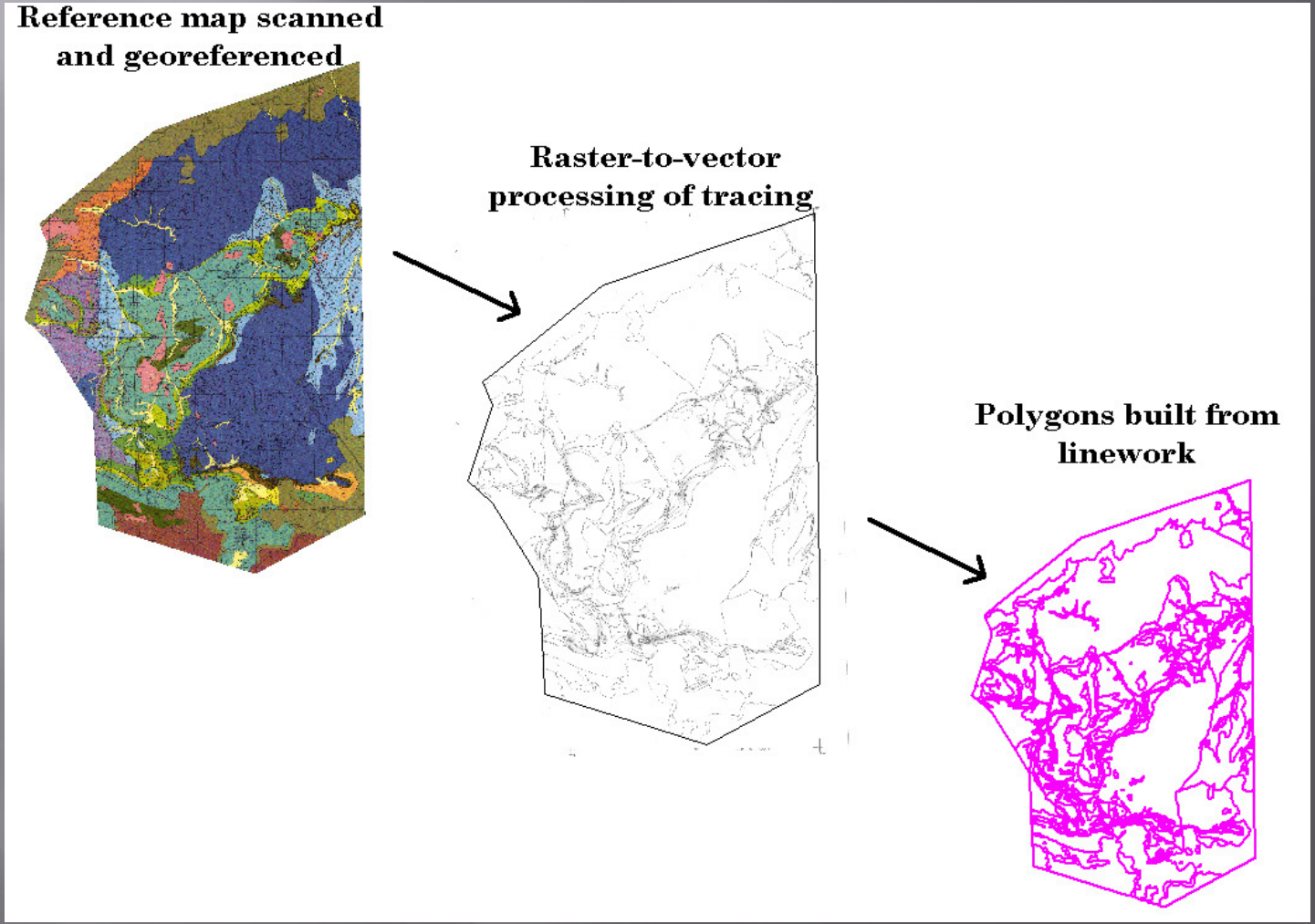
Four overarching principles:

1. True compilation – honest to original spatial and database info
2. Easily updatable forming a dynamic product
3. Product accessible and easily useable
4. Begin with a Pilot Project that is foundation for final data model

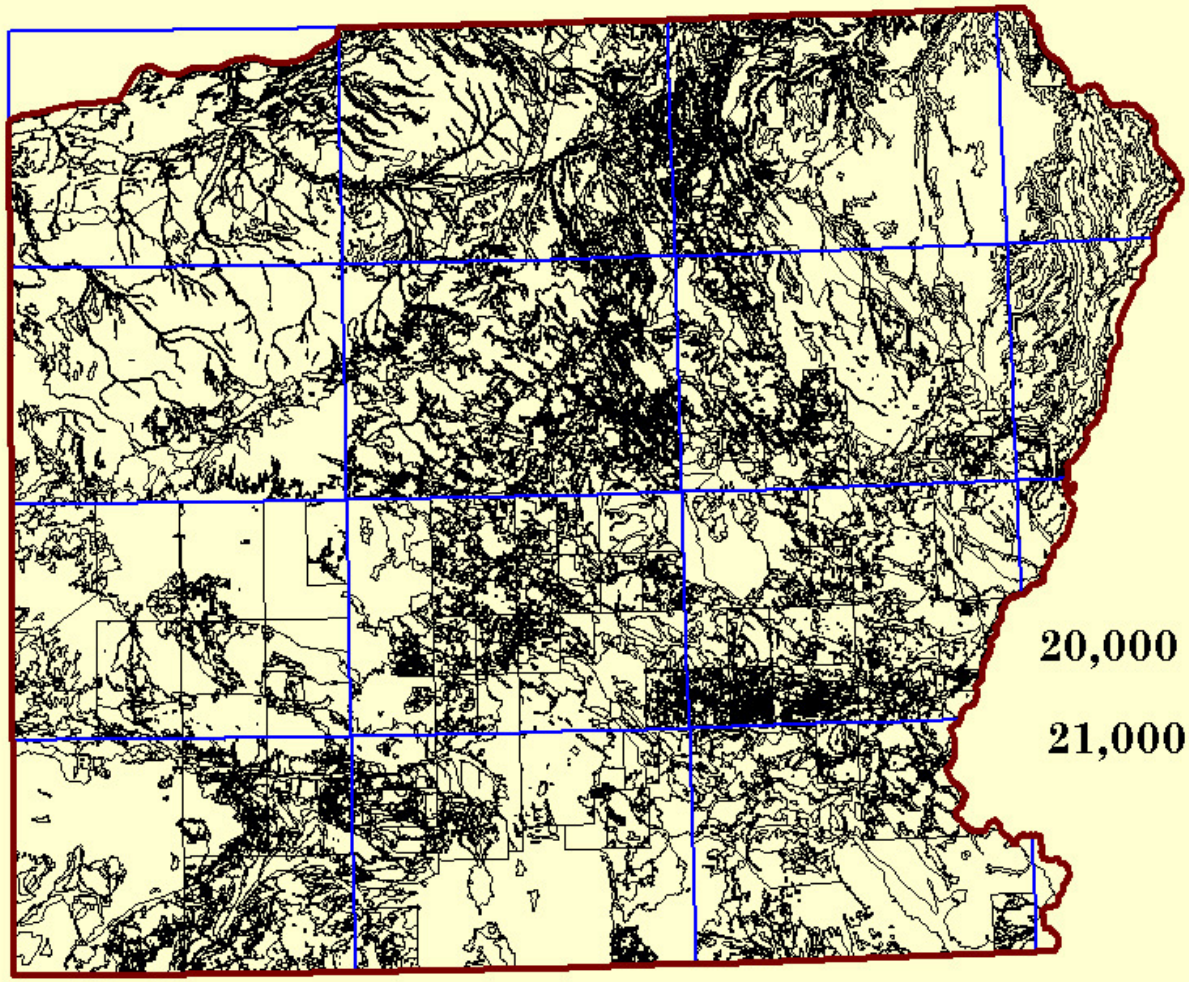
Reference Geologic Maps



Convert original paper geologic map to digital

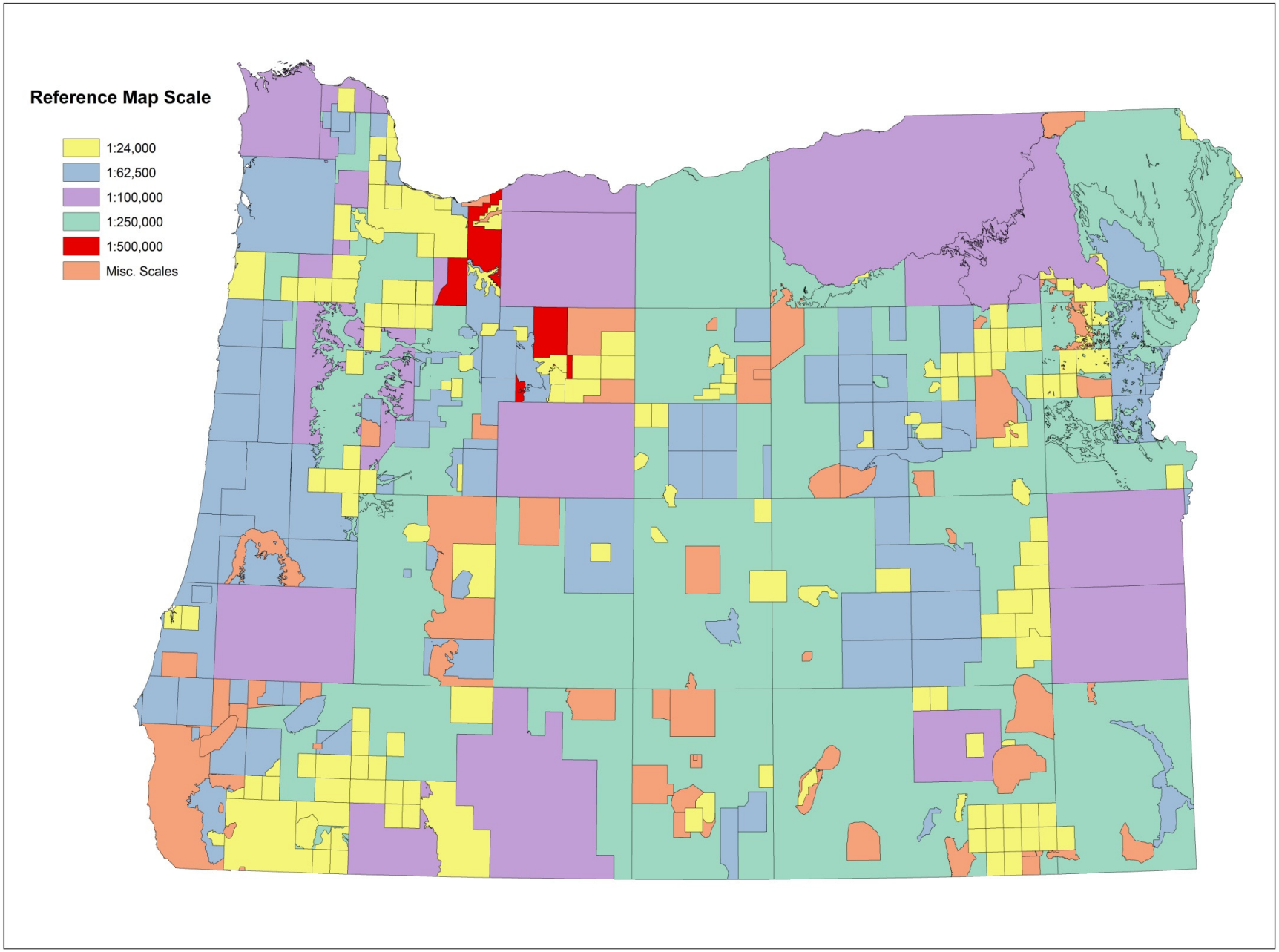


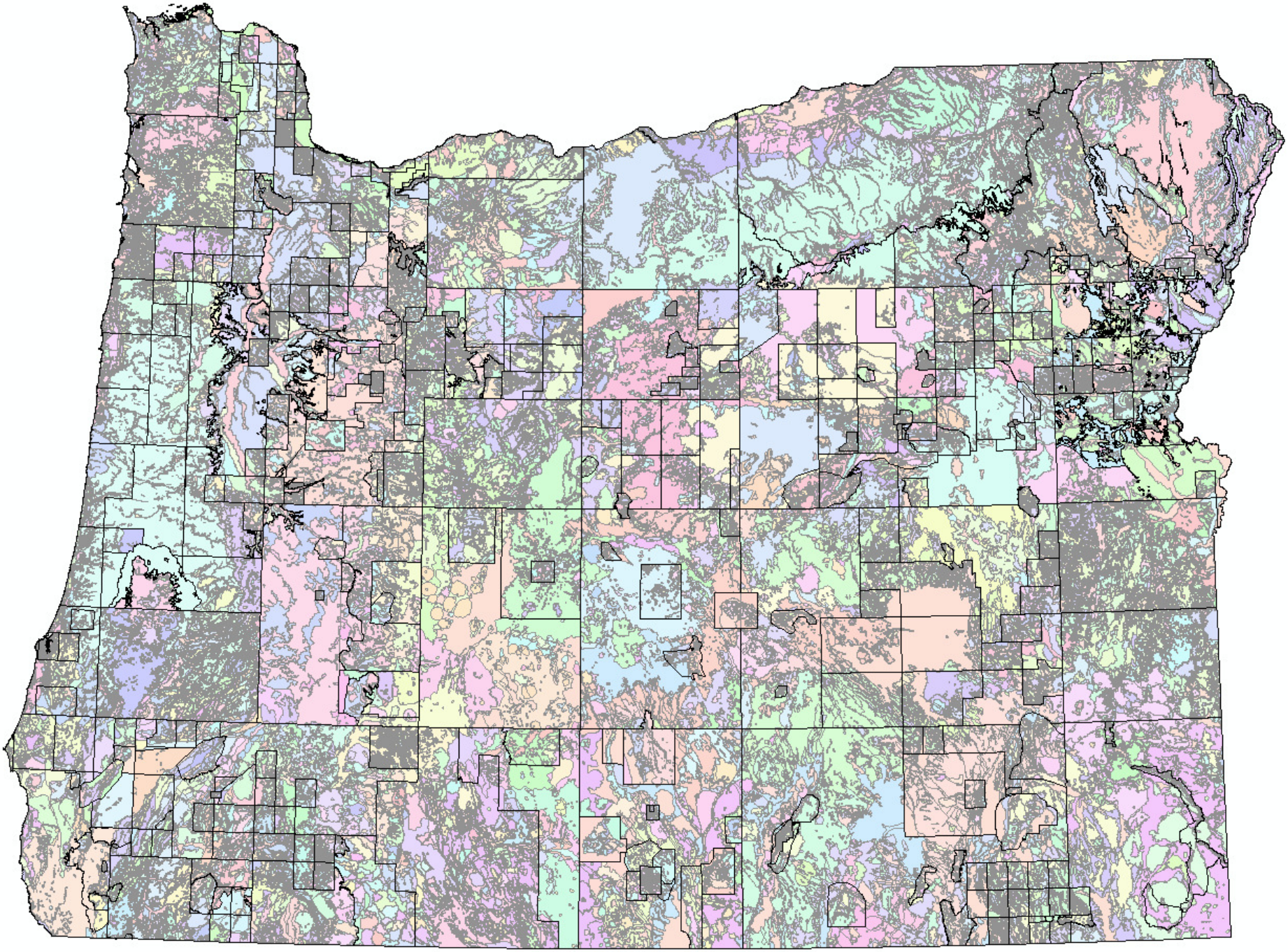
Northeast Oregon Pilot Project

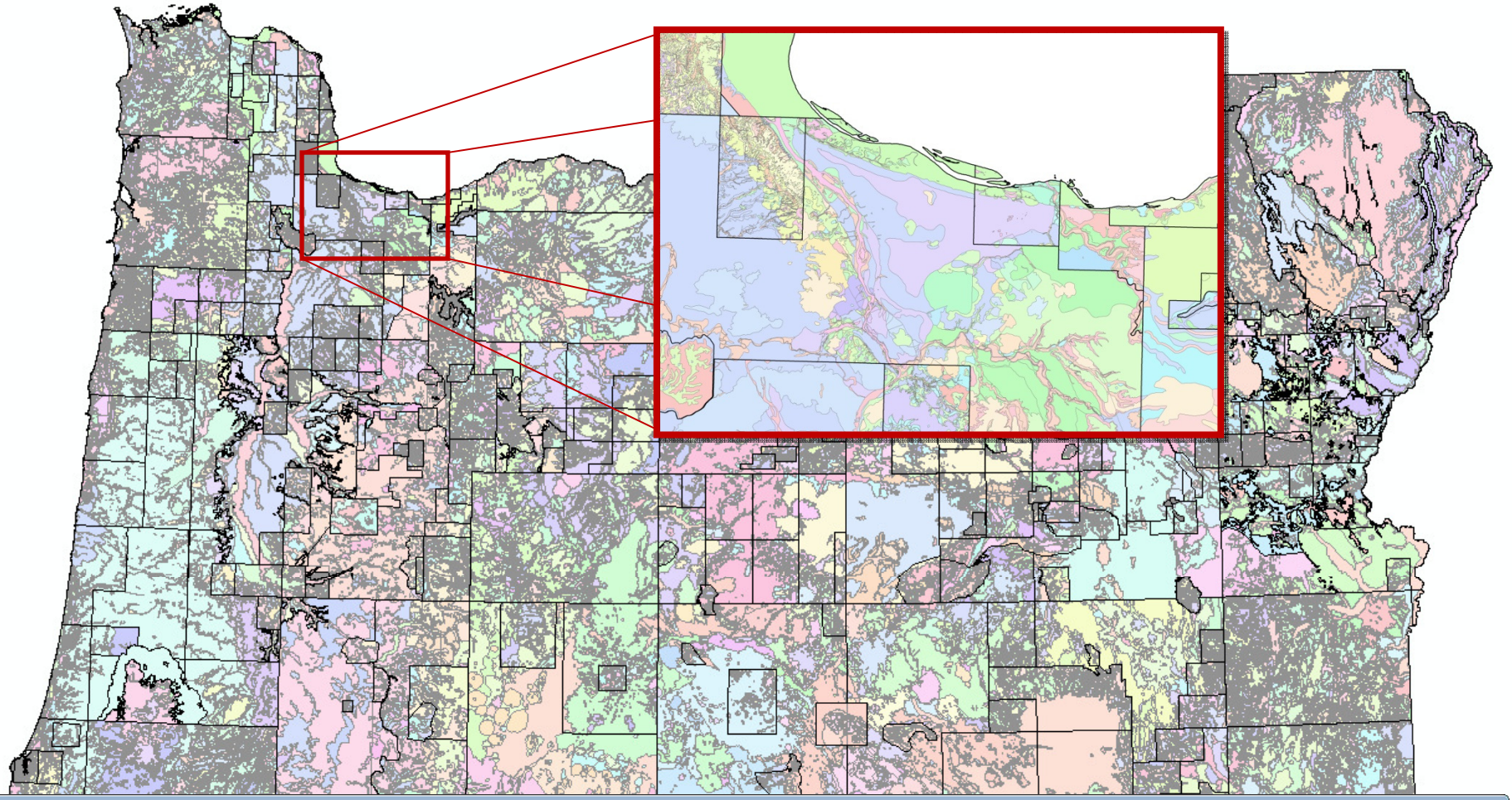


20,000 + polygons

21,000 sq. mi.


Reference Map Scale
1:24,000
1:62,500
1:100,000
1:250,000
1:500,000
Misc. Scales





Selected Attributes of G_MAP_UNIT

REF_ID_COD	MAP_UNIT_L	MAP_UNIT_N	G_MRG_U_L	GEO_GENL_U	AGE_NAME	TERRANE_GR	FORMATION	MEMBER	UNIT	G_ROCK_TYP
AleiAM1981	Qal	Alluvium	sed.Q.qsd.mf.nd.nd.fine	sediments	Quaternary	Quaternary surficial deposits	Missoula Flood deposits	No data	No data	fine grained sediments
AleiAM1981	Tgl	Grande Ronde Basalt, Low MgO Ge	vol.M.cr.gr.nd.nd.bas	volcanic rocks	Miocene	Columbia River Basalt Group	Grande Ronde Basalt	No data	No data	basalt
AleiAM1981	Tgh	Grande Ronde Basalt, High MgO Geo	vol.M.cr.gr.sbf.nd.bas	volcanic rocks	Miocene	Columbia River Basalt Group	Grande Ronde Basalt	Member of Sentinel Bluffs	No data	basalt
AleiAM1981	Twfs	Columbia River Basalt Group, French	vol.M.cr.wp.fs.nd.bas	volcanic rocks	Miocene	Columbia River Basalt Group	Wanapum Basalt	Frenchman Springs Member	No data	basalt
EvarRC2008	Qac	Alluvium of Columbia River floodplain	sed.Q.qsd.al.clm.nd.mix	sediments	Quaternary	Quaternary surficial deposits	Alluvial deposits	Columbia River alluvium	No data	mixed grained sediments
EvarRC2008	Qac	Alluvium of Columbia River floodplain	sed.Q.qsd.al.clm.nd.mix	sediments	Quaternary	Quaternary surficial deposits	Alluvial deposits	Columbia River alluvium	No data	mixed grained sediments
EvarRC2008	Qac	Alluvium of Columbia River floodplain	sed.Q.qsd.al.clm.nd.mix	sediments	Quaternary	Quaternary surficial deposits	Alluvial deposits	Columbia River alluvium	No data	mixed grained sediments
EvarRC2008	Qac	Alluvium of Columbia River floodplain	sed.Q.qsd.al.clm.nd.mix	sediments	Quaternary	Quaternary surficial deposits	Alluvial deposits	Columbia River alluvium	No data	mixed grained sediments
EvarRC2008	Qac	Alluvium of Columbia River floodplain	sed.Q.qsd.al.clm.nd.mix	sediments	Quaternary	Quaternary surficial deposits	Alluvial deposits	Columbia River alluvium	No data	mixed grained sediments
EvarRC2008	Qac	Alluvium of Columbia River floodplain	sed.Q.qsd.al.clm.nd.mix	sediments	Quaternary	Quaternary surficial deposits	Alluvial deposits	Columbia River alluvium	No data	mixed grained sediments
EvarRC2008	Qh	Deposits derived from Mount Hood v	sed.R.qsd.nd.nd.nd.mfb	sediments	Recent	Quaternary surficial deposits	No data	No data	No data	mudflow breccia
EvarRC2008	Qh	Deposits derived from Mount Hood v	sed.R.qsd.nd.nd.nd.mfb	sediments	Recent	Quaternary surficial deposits	No data	No data	No data	mudflow breccia

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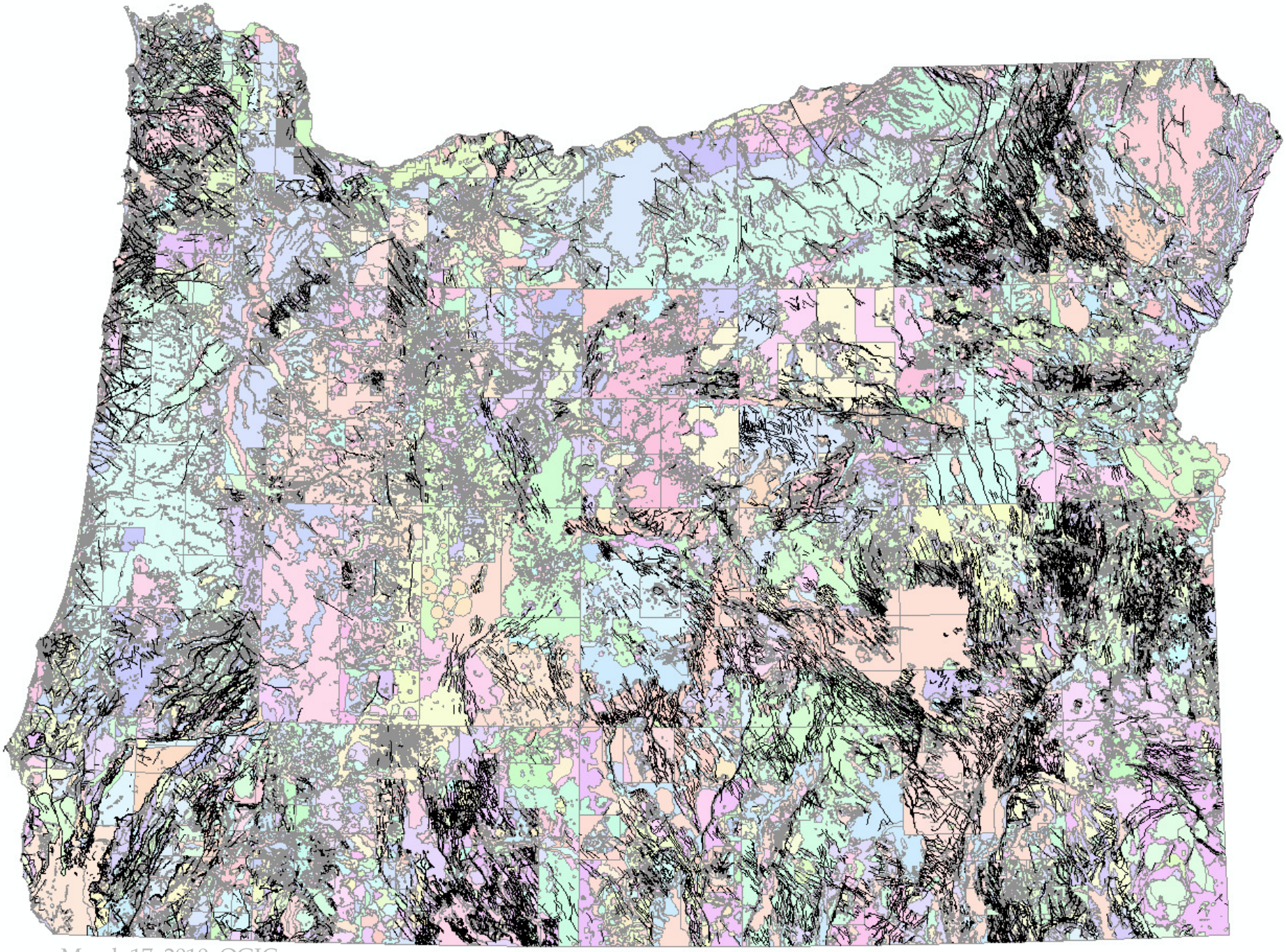
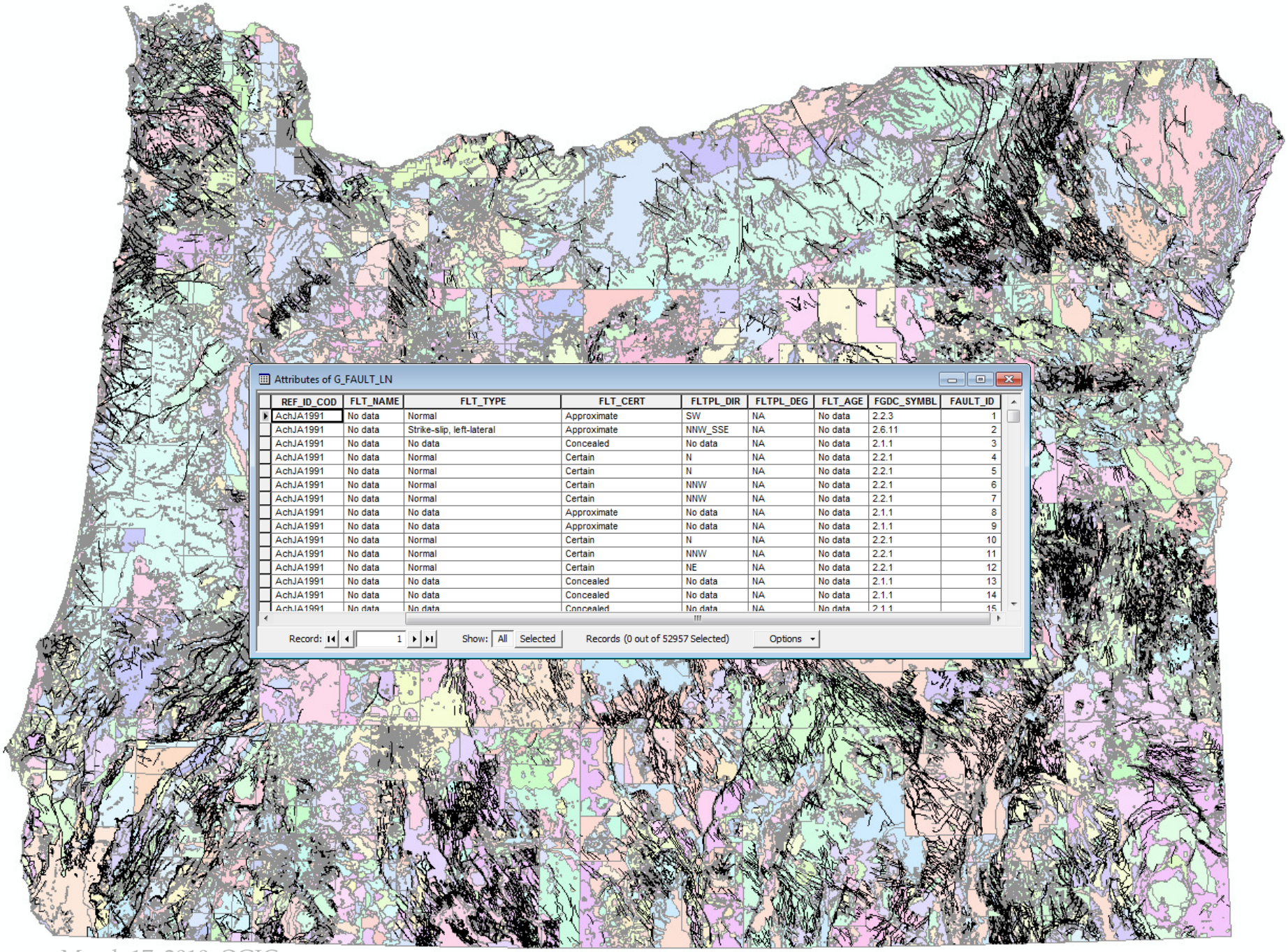


March 17, 2010, OGIC



Attributes of G_FAULT_LN

REF_ID_COD	FLT_NAME	FLT_TYPE	FLT_CERT	FLTPL_DIR	FLTPL_DEG	FLT_AGE	FGDC_SYMBL	FAULT_ID
AchJA1991	No data	Normal	Approximate	SW	NA	No data	2.2.3	1
AchJA1991	No data	Strike-slip, left-lateral	Approximate	NNW_SSE	NA	No data	2.6.11	2
AchJA1991	No data	No data	Concealed	No data	NA	No data	2.1.1	3
AchJA1991	No data	Normal	Certain	N	NA	No data	2.2.1	4
AchJA1991	No data	Normal	Certain	N	NA	No data	2.2.1	5
AchJA1991	No data	Normal	Certain	NNW	NA	No data	2.2.1	6
AchJA1991	No data	Normal	Certain	NNW	NA	No data	2.2.1	7
AchJA1991	No data	No data	Approximate	No data	NA	No data	2.1.1	8
AchJA1991	No data	No data	Approximate	No data	NA	No data	2.1.1	9
AchJA1991	No data	Normal	Certain	N	NA	No data	2.2.1	10
AchJA1991	No data	Normal	Certain	NNW	NA	No data	2.2.1	11
AchJA1991	No data	Normal	Certain	NE	NA	No data	2.2.1	12
AchJA1991	No data	No data	Concealed	No data	NA	No data	2.1.1	13
AchJA1991	No data	No data	Concealed	No data	NA	No data	2.1.1	14
AchJA1991	No data	No data	Concealed	No data	NA	No data	2.1.1	15

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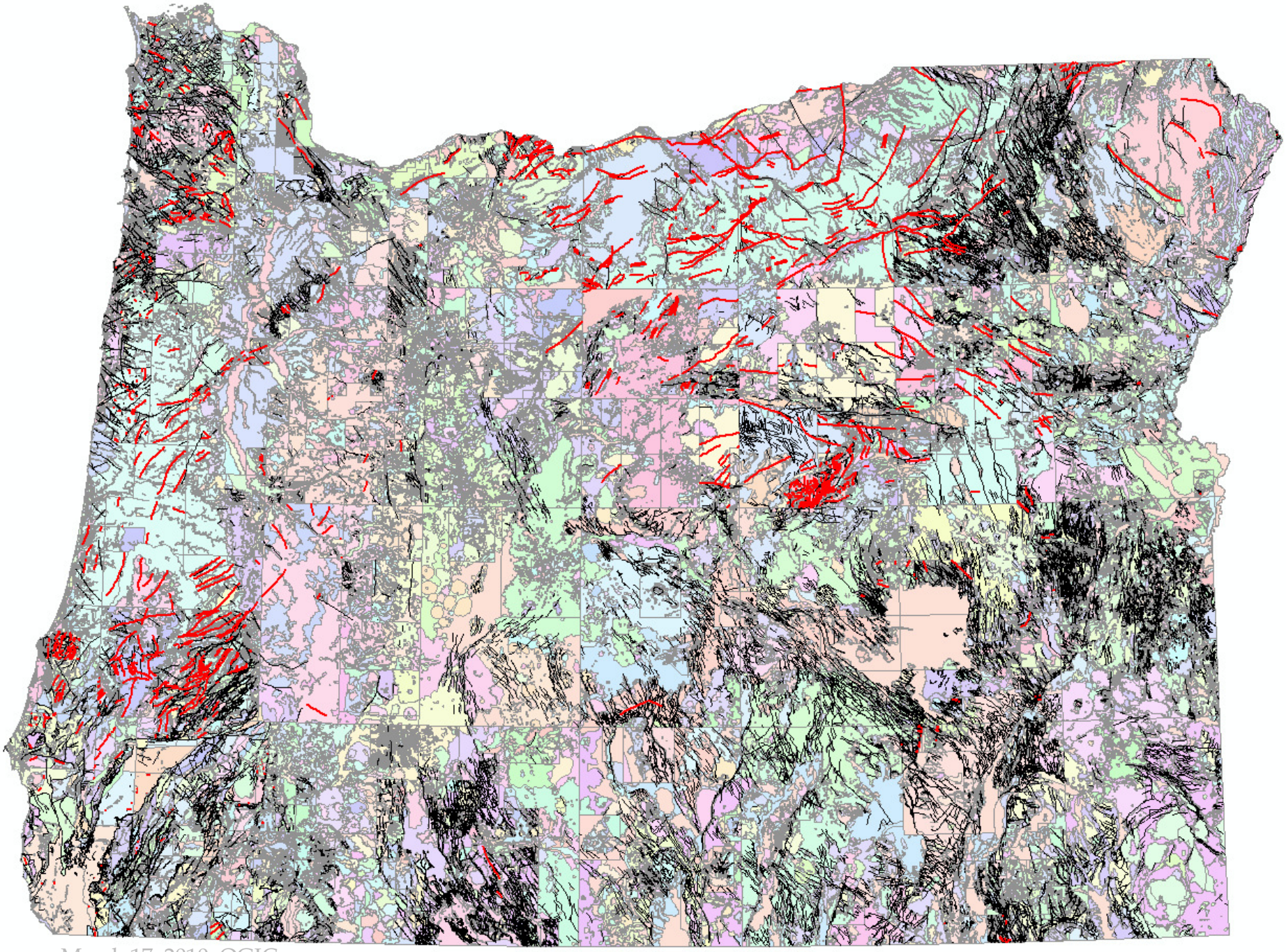
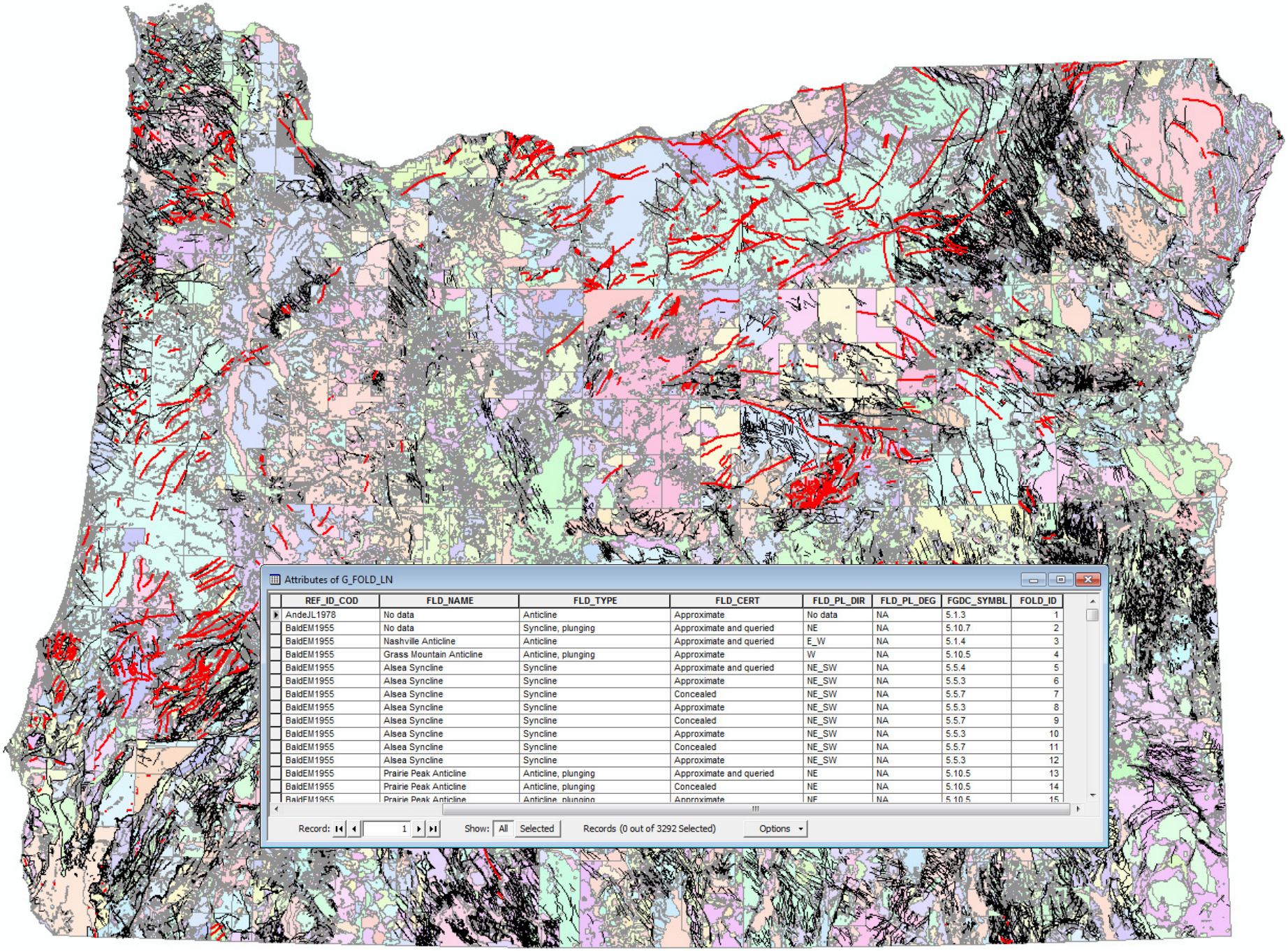


March 17, 2010, OGIC

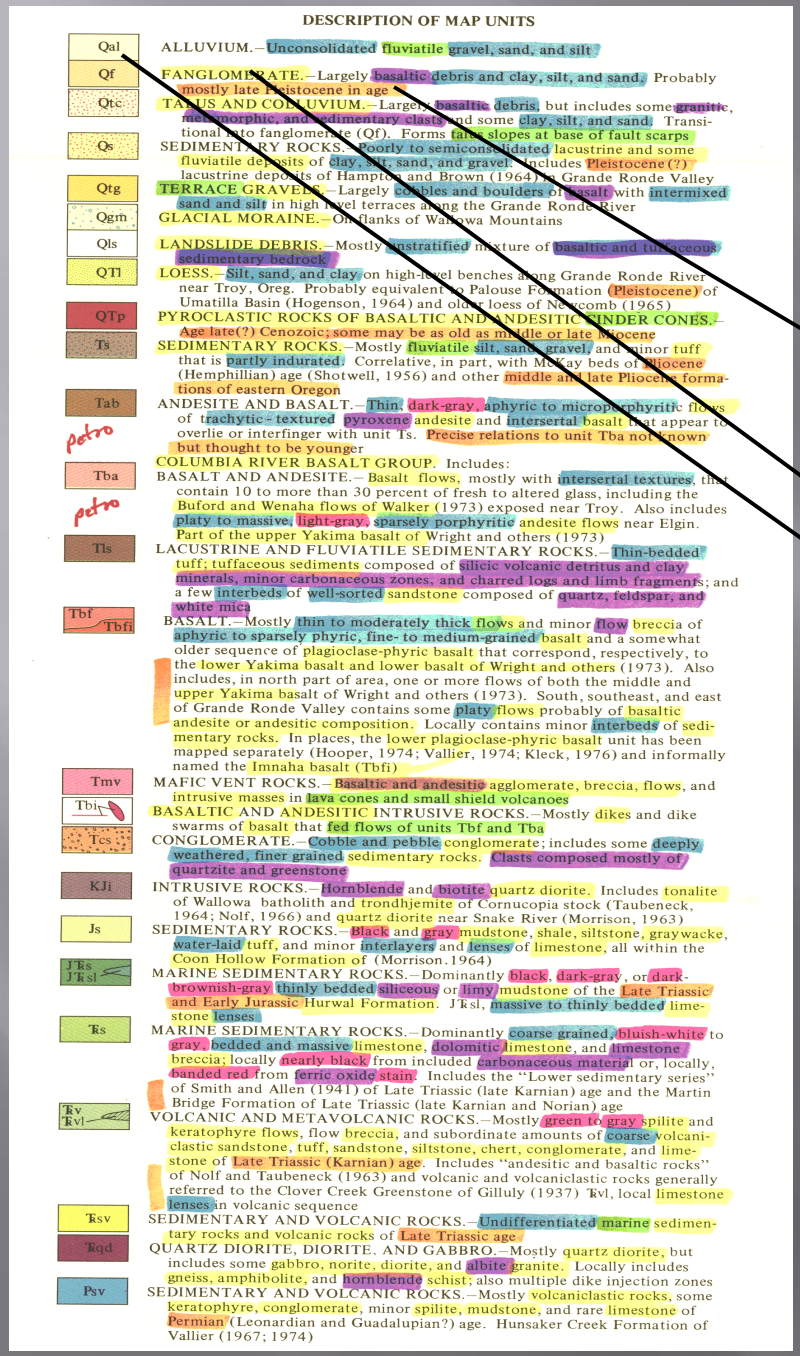


Attributes of G_FOLD_LN

REF_ID_COD	FLD_NAME	FLD_TYPE	FLD_CERT	FLD_PL_DIR	FLD_PL_DEG	FGDC_SYMBL	FOLD_ID
AndeJL1978	No data	Anticline	Approximate	No data	NA	5.1.3	1
BaldEM1955	No data	Syncline, plunging	Approximate and queried	NE	NA	5.10.7	2
BaldEM1955	Nashville Anticline	Anticline	Approximate and queried	E_W	NA	5.1.4	3
BaldEM1955	Grass Mountain Anticline	Anticline, plunging	Approximate	W	NA	5.10.5	4
BaldEM1955	Alsea Syncline	Syncline	Approximate and queried	NE_SW	NA	5.5.4	5
BaldEM1955	Alsea Syncline	Syncline	Approximate	NE_SW	NA	5.5.3	6
BaldEM1955	Alsea Syncline	Syncline	Concealed	NE_SW	NA	5.5.7	7
BaldEM1955	Alsea Syncline	Syncline	Approximate	NE_SW	NA	5.5.3	8
BaldEM1955	Alsea Syncline	Syncline	Concealed	NE_SW	NA	5.5.7	9
BaldEM1955	Alsea Syncline	Syncline	Approximate	NE_SW	NA	5.5.3	10
BaldEM1955	Alsea Syncline	Syncline	Concealed	NE_SW	NA	5.5.7	11
BaldEM1955	Alsea Syncline	Syncline	Approximate	NE_SW	NA	5.5.3	12
BaldEM1955	Prairie Peak Anticline	Anticline, plunging	Approximate and queried	NE	NA	5.10.5	13
BaldEM1955	Prairie Peak Anticline	Anticline, plunging	Concealed	NE	NA	5.10.5	14
BaldEM1955	Prairie Peak Anticline	Anticline, plunging	Approximate	NE	NA	5.10.5	15

Record: 1 Show: All Selected Records (0 out of 3292 Selected) Options

Geologic Distillation Process



DESCRIPTION OF MAP UNITS

Qal — ALLUVIUM.—Unconsolidated fluviatile gravel, sand, and silt

Qf — FANGLOMERATE.—Largely basaltic debris and clay, silt, and sand. Probably mostly late Pleistocene in age

Qtc — TALUS AND COLLUVIUM.—Largely basaltic debris, but includes some granitic, metamorphic, and sedimentary clasts and some clay, silt, and sand. Transitional into fanglomerate (Qf). Forms talus slopes at base of fault scarps

Qs — SEDIMENTARY ROCKS.—Poorly to semiconsolidated lacustrine and some fluviatile deposits of clay, silt, sand, and gravel. Includes Pleistocene(?) lacustrine deposits of Hampton and Brown (1964) in Grande Ronde Valley

Qtg — TERRACE GRAVELS.—Largely cobbles and boulders of basalt with intermixed sand and silt in high level terraces along the Grande Ronde River

Qgm — GLACIAL MORAINE.—On flanks of Wallowa Mountains

Qls — LANDSLIDE DEBRIS.—Mostly unstratified mixture of basaltic and tuffaceous sedimentary bedrock

QTl — LOESS.—Silt, sand, and clay on high-level benches along Grande Ronde River near Troy, Oreg. Probably equivalent to Palouse Formation (Pleistocene) of Umatilla Basin (Hogenson, 1964) and older loess of Newcomb (1965)

QTp — PYROCLASTIC ROCKS OF BASALTIC AND ANDESITIC CINDER CONES.—Age late(?) Cenozoic; some may be as old as middle or late Miocene

Ts — SEDIMENTARY ROCKS.—Mostly fluviatile silt, sand, gravel, and minor tuff that is partly indurated. Correlative, in part, with Mulkay beds of Pliocene (Hemphillian) age (Shotwell, 1956) and other middle and late Pliocene formations of eastern Oregon

Tab — ANDESITE AND BASALT.—Thin, dark-gray, aphyric to microporphyritic flows of trachytic-textured pyroxene andesite and intersertal basalt that appear to overlie or interfinger with unit Ts. Precise relations to unit Tba not known but thought to be younger

petro

COLUMBIA RIVER BASALT GROUP. Includes:

Tba — BASALT AND ANDESITE.—Basalt flows, mostly with intersertal textures, that contain 10 to more than 30 percent of fresh to altered glass, including the Buford and Wenaha flows of Walker (1973) exposed near Troy. Also includes platy to massive, light-gray, sparsely porphyritic andesite flows near Elgin. Part of the upper Yakima basalt of Wright and others (1973)

petro

Tls — LACUSTRINE AND FLUVIATILE SEDIMENTARY ROCKS.—Thin-bedded tuff; tuffaceous sediments composed of silicic volcanic detritus and clay minerals, minor carbonaceous zones, and charred logs and limb fragments; and a few interbeds of well-sorted sandstone composed of quartz, feldspar, and white mica

Tbf / Tbfi — BASALT.—Mostly thin to moderately thick flows and minor flow breccia of aphyric to sparsely phyric, fine- to medium-grained basalt and a somewhat older sequence of plagioclase-phyric basalt that correspond, respectively, to the lower Yakima basalt and lower basalt of Wright and others (1973). Also includes, in north part of area, one or more flows of both the middle and upper Yakima basalt of Wright and others (1973). South, southeast, and east of Grande Ronde Valley contains some platy flows probably of basaltic andesite or andesitic composition. Locally contains minor interbeds of sedimentary rocks. In places, the lower plagioclase-phyric basalt unit has been mapped separately (Hooper, 1974; Vallier, 1974; Kleck, 1976) and informally named the Imnaha basalt (Tbfi)

Tmv — MAFIC VENT ROCKS.—Basaltic and andesitic agglomerate, breccia, flows, and intrusive masses in lava cones and small shield volcanoes

Tbi — BASALTIC AND ANDESITIC INTRUSIVE ROCKS.—Mostly dikes and dike swarms of basalt that fed flows of units Tbf and Tba

Tcs — CONGLOMERATE.—Cobble and pebble conglomerate; includes some deeply weathered, finer grained sedimentary rocks. Clasts composed mostly of quartzite and greenstone

KJi — INTRUSIVE ROCKS.—Hornblende and biotite quartz diorite. Includes tonalite of Wallowa batholith and trondhjemite of Cornucopia stock (Taubeneck, 1964; Nolf, 1966) and quartz diorite near Snake River (Morrison, 1963)

Js — SEDIMENTARY ROCKS.—Black and gray mudstone, shale, siltstone, graywacke, water-laid tuff, and minor interlayers and lenses of limestone, all within the Coon Hollow Formation of (Morrison.1964)

JTRs / JTRsl — MARINE SEDIMENTARY ROCKS.—Dominantly black, dark-gray, or dark-brownish-gray thinly bedded siliceous or limy mudstone of the Late Triassic and Early Jurassic Hurwal Formation. JTRsl, massive to thinly bedded limestone lenses

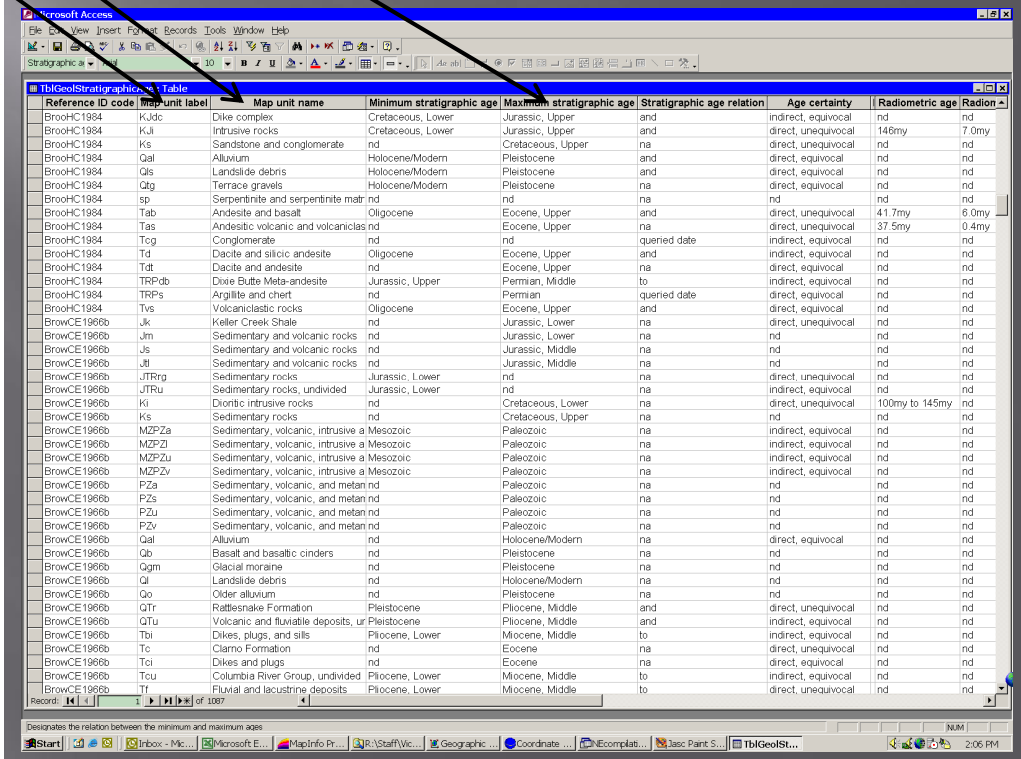
TRs — MARINE SEDIMENTARY ROCKS.—Dominantly coarse grained, bluish-white to gray, bedded and massive limestone, dolomitic limestone, and limestone breccia; locally nearly black from included carbonaceous material or, locally, banded red from ferric oxide stain. Includes the "Lower sedimentary series" of Smith and Allen (1941) of Late Triassic (late Karnian) age and the Martin Bridge Formation of Late Triassic (late Karnian and Norian) age

TRv / TRvl — VOLCANIC AND METAVOLCANIC ROCKS.—Mostly green to gray spilite and keratophyre flows, flow breccia, and subordinate amounts of coarse volcaniclastic sandstone, tuff, sandstone, siltstone, chert, conglomerate, and limestone of Late Triassic (Karnian) age. Includes "andesitic and basaltic rocks" of Nolf and Taubeneck (1963) and volcanic and volcaniclastic rocks generally referred to the Clover Creek Greenstone of Gilluly (1937) TRvl, local limestone lenses in volcanic sequence

TRsv — SEDIMENTARY AND VOLCANIC ROCKS.—Undifferentiated marine sedimentary rocks and volcanic rocks of Late Triassic age

TRqd — QUARTZ DIORITE, DIORITE, AND GABBRO.—Mostly quartz diorite, but includes some gabbro, norite, diorite, and albite granite. Locally includes gneiss, amphibolite, and hornblende schist; also multiple dike injection zones

Psv — SEDIMENTARY AND VOLCANIC ROCKS.—Mostly volcaniclastic rocks, some keratophyre, conglomerate, minor spilite, mudstone, and rare limestone of Permian (Leonardian and Guadalupian?) age. Hunsaker Creek Formation of Vallier (1967; 1974)



Microsoft Access

TblGeolStratigraphicAge : Table

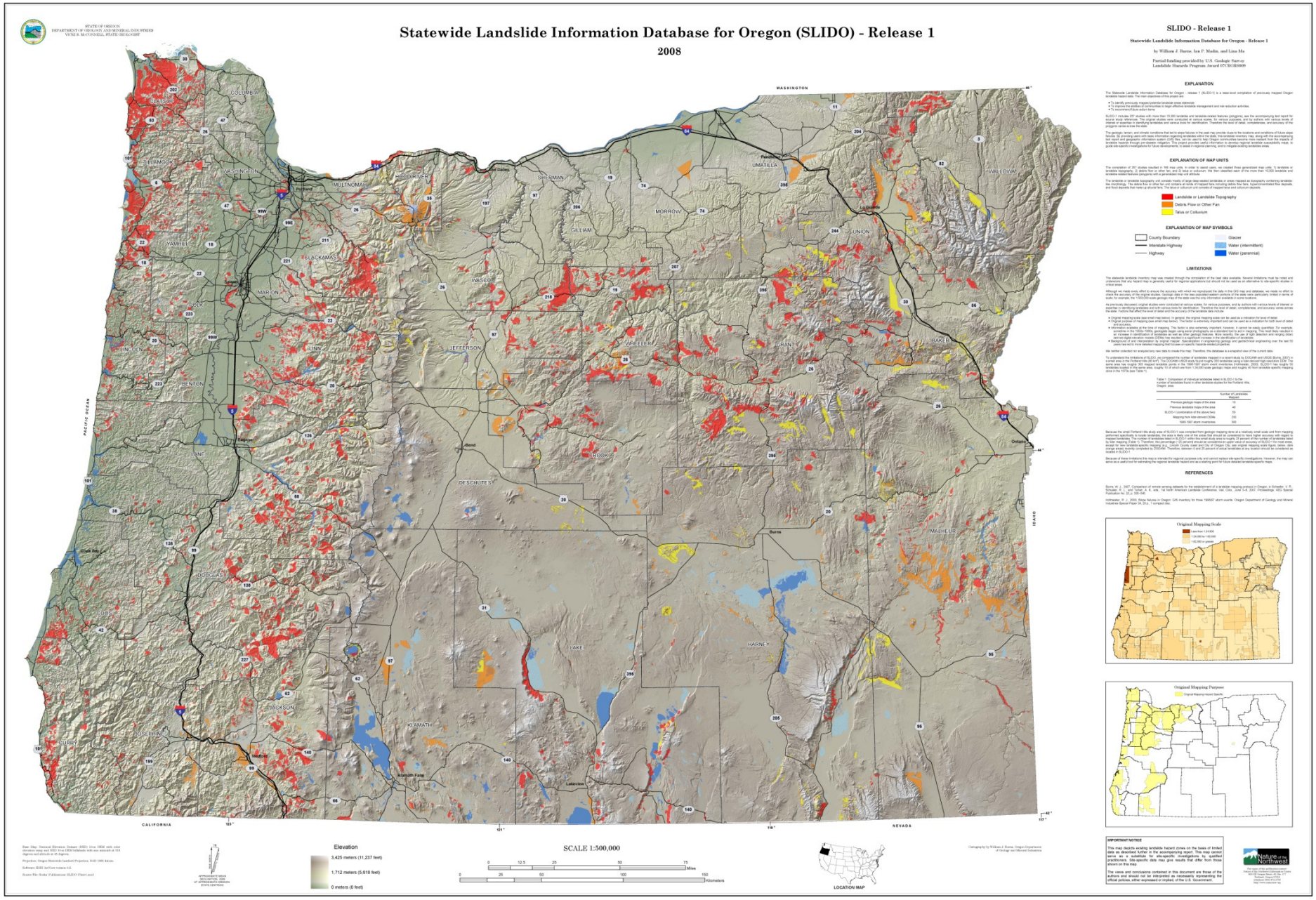
Reference ID code	Map unit label	Map unit name	Minimum stratigraphic age	Maximum stratigraphic age	Stratigraphic age relation	Age certainty	Radiometric age	Radion
BrooHC1984	KJdc	Dike complex	Cretaceous, Lower	Jurassic, Upper	and	indirect, equivocal	nd	nd
BrooHC1984	KJi	Intrusive rocks	Cretaceous, Lower	Jurassic, Upper	and	direct, unequivocal	146my	7.0my
BrooHC1984	Ks	Sandstone and conglomerate	nd	Cretaceous, Upper	na	direct, unequivocal	nd	nd
BrooHC1984	Qal	Alluvium	Holocene/Modern	Pleistocene	and	direct, equivocal	nd	nd
BrooHC1984	Qls	Landslide debris	Holocene/Modern	Pleistocene	and	direct, equivocal	nd	nd
BrooHC1984	Qtg	Terrace gravels	Holocene/Modern	Pleistocene	na	direct, equivocal	nd	nd
BrooHC1984	sp	Serpentinite and serpentinite matr	nd	nd	na	nd	nd	nd
BrooHC1984	Tab	Andesite and basalt	Oligocene	Eocene, Upper	and	direct, unequivocal	41.7my	6.0my
BrooHC1984	Tas	Andesitic volcanic and volcaniclas	nd	Eocene, Upper	na	direct, unequivocal	37.5my	0.4my
BrooHC1984	Tcg	Conglomerate	nd	nd	queried date	indirect, equivocal	nd	nd
BrooHC1984	Td	Dacite and silicic andesite	Oligocene	Eocene, Upper	and	indirect, equivocal	nd	nd
BrooHC1984	Tdt	Dacite and andesite	nd	Eocene, Upper	na	direct, equivocal	nd	nd
BrooHC1984	TRPdb	Dixe Butte Meta-andesite	Jurassic, Upper	Permian, Middle	to	indirect, equivocal	nd	nd
BrooHC1984	TRPs	Argillite and chert	nd	Permian	queried date	direct, equivocal	nd	nd
BrooHC1984	Tvs	Volcaniclastic rocks	Oligocene	Eocene, Upper	and	direct, equivocal	nd	nd
BrowCE1966b	Jk	Keller Creek Shale	nd	Jurassic, Lower	na	direct, unequivocal	nd	nd
BrowCE1966b	Jm	Sedimentary and volcanic rocks	nd	Jurassic, Lower	na	nd	nd	nd
BrowCE1966b	Js	Sedimentary and volcanic rocks	nd	Jurassic, Middle	na	nd	nd	nd
BrowCE1966b	Jtl	Sedimentary and volcanic rocks	nd	Jurassic, Middle	na	nd	nd	nd
BrowCE1966b	JTRrg	Sedimentary rocks	Jurassic, Lower	nd	na	direct, unequivocal	nd	nd
BrowCE1966b	JTRu	Sedimentary rocks, undivided	Jurassic, Lower	nd	na	indirect, equivocal	nd	nd
BrowCE1966b	Ki	Dioritic intrusive rocks	nd	Cretaceous, Lower	na	direct, unequivocal	100my to 145my	nd
BrowCE1966b	Ks	Sedimentary rocks	nd	Cretaceous, Upper	na	nd	nd	nd
BrowCE1966b	MZPZa	Sedimentary, volcanic, intrusive a	Mesozoic	Paleozoic	na	indirect, equivocal	nd	nd
BrowCE1966b	MZPZl	Sedimentary, volcanic, intrusive a	Mesozoic	Paleozoic	na	indirect, equivocal	nd	nd
BrowCE1966b	MZPZu	Sedimentary, volcanic, intrusive a	Mesozoic	Paleozoic	na	indirect, equivocal	nd	nd
BrowCE1966b	MZPZv	Sedimentary, volcanic, intrusive a	Mesozoic	Paleozoic	na	indirect, equivocal	nd	nd
BrowCE1966b	PZa	Sedimentary, volcanic, and metan	nd	Paleozoic	na	nd	nd	nd
BrowCE1966b	PZs	Sedimentary, volcanic, and metan	nd	Paleozoic	na	nd	nd	nd
BrowCE1966b	PZu	Sedimentary, volcanic, and metan	nd	Paleozoic	na	nd	nd	nd
BrowCE1966b	PZv	Sedimentary, volcanic, and metan	nd	Paleozoic	na	nd	nd	nd
BrowCE1966b	Qal	Alluvium	nd	Holocene/Modern	na	direct, equivocal	nd	nd
BrowCE1966b	Qb	Basalt and basaltic cinders	nd	Pleistocene	na	nd	nd	nd
BrowCE1966b	Qgm	Glacial moraine	nd	Pleistocene	na	nd	nd	nd
BrowCE1966b	Ql	Landslide debris	nd	Holocene/Modern	na	nd	nd	nd
BrowCE1966b	Qo	Older alluvium	nd	Pleistocene	na	nd	nd	nd
BrowCE1966b	QTr	Rattlesnake Formation	Pleistocene	Pliocene, Middle	and	direct, unequivocal	nd	nd
BrowCE1966b	QTu	Volcanic and fluviatile deposits, ur	Pleistocene	Pliocene, Middle	and	indirect, equivocal	nd	nd
BrowCE1966b	Tbi	Dikes, plugs, and sills	Pliocene, Lower	Miocene, Middle	to	indirect, equivocal	nd	nd
BrowCE1966b	Tc	Clarno Formation	nd	Eocene	na	direct, unequivocal	nd	nd
BrowCE1966b	Tci	Dikes and plugs	nd	Eocene	na	direct, equivocal	nd	nd
BrowCE1966b	Tcu	Columbia River Group, undivided	Pliocene, Lower	Miocene, Middle	to	indirect, equivocal	nd	nd
BrowCE1966b	Tf	Fluvial and lacustrine deposits	Pliocene, Lower	Miocene, Middle	to	direct, unequivocal	nd	nd

Record: 1 of 1087

Designates the relation between the minimum and maximum ages

Limitations and Challenges

- Geologic information given on a map
  - Limited query results
- Edge Faults
- Data sets in separate software platforms


STATE OF OREGON
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
VERLE S. MCCONNELL, STATE GEOLOGIST
Statewide Landslide Information Database for Oregon (SLIDO) - Release 1
2008
SLIDO - Release 1
Statewide Landslide Information Database for Oregon - Release 1
by William J. Burns, Ian P. Madin, and Lina Ma
Partial funding provided by: U.S. Geologic Survey
Landslide Hazards Program Award 07HQGR0009
EXPLANATION
The Statewide Landslide Information Database for Oregon - Release 1 (SLIDO-1) is a base-level compilation of previously mapped Oregon landslide hazard data. The main objectives of this project are:
• To identify previously mapped potential landslide areas statewide
• To improve the abilities of communities to begin effective landslide management and risk-reduction activities
• To recommend future action items
SLIDO-1 includes 207 studies with more than 19,000 landslide and landslide-related features (polygons); see the accompanying text report for source study references. The original studies were conducted at various scales, for various purposes, and by authors with various levels of interest in and knowledge of landslides and various tools for identification. Therefore the level of detail, completeness, and accuracy of the polygons varies across the state.
The geologic, terrain, and climatic conditions that led to slope failures in the past may provide clues to the locations and conditions of future slope failures. By providing users with basic information regarding landslides within the state, this landslide inventory map, along with the accompanying text report and geographic information system (GIS) files, can be used to help Oregon communities become more resilient from the impacts of landslide hazards through pre-disaster mitigation. This project provides useful information to develop regional landslide susceptibility maps, to guide site-specific investigations for future developments, to assist in regional planning, and to mitigate existing landslide areas.
EXPLANATION OF MAP UNITS
The compilation of 207 studies resulted in 160 map units. In order to assist users, we created three generalized map units: 1) landslide or landslide topography, 2) debris flow or other fan, and 3) talus or colluvium. We then classified each of the more than 19,000 landslide and landslide-related features (polygons) with a generalized map unit attribute.
The landslide or landslide topography unit consists mostly of large deep-seated landslides or areas mapped as topography containing landslide-like morphology. The debris flow or other fan unit contains all kinds of mapped fans including debris flow fans, hyperconcentrated flow deposits, and flood deposits that make up alluvial fans. The talus or colluvium unit consists of mapped talus and colluvium deposits.
Landslide or Landslide Topography
Debris Flow or Other Fan
Talus or Colluvium
EXPLANATION OF MAP SYMBOLS
County Boundary
Interstate Highway
Highway
Glacier
Water (intermittent)
Water (perennial)
LIMITATIONS
The statewide landslide inventory map was created through the compilation of the best data available. Several limitations must be noted and understood that any hazard map is generally useful for regional applications but should not be used as an alternative to site-specific studies in critical areas.
Although we made every effort to ensure the accuracy with which we reproduced the data in this GIS map and database, we made no effort to check the accuracy of the original studies. Geologic data in the less populated eastern portions of the state were particularly limited in terms of scale. For example, the 1:500,000 scale geologic map of the state was the only information available in some locations.
As previously discussed, original studies were conducted at various scales, for various purposes, and by authors with various levels of interest in and knowledge of landslides and various tools for identification. Therefore the level of detail, completeness, and accuracy varies across the state. Factors that affect the level of detail and the accuracy of the landslide data include:
• Original mapping scale (see small map below). In general, the original mapping scale can be used as a indication for level of detail.
• Original purpose of mapping (see small map below). This factor is extremely important and can be used as a indication for both level of detail and accuracy.
• Resources available at the time of mapping. This factor is also extremely important. However, it cannot be easily quantified. For example, sometime in the 1950s–1960s, geologists began using aerial photography as a standard tool to aid in mapping. This most likely resulted in an increase in identification of landslides as well as other geologic features. More recently, the use of light detection and ranging (lidar) technology has resulted in a leap in our ability to identify landslides and other geomorphic features in forested terrain.
• Background of and interpretation by original mapper. Specialization in engineering geology and geotechnical engineering over the last 50 years has led to more detailed mapping that focuses on specific hazards-related properties.
We neither collected nor analyzed any new data to create this map. Therefore, this database is a snapshot view of the current data.
To understand the limitations of SLIDO, we compared the number of landslides mapped in a recent study by DOGAMI and USGS (Burns, 2007) in a small area in the Portland Hills (55 km²). The DOGAMI–USGS study found roughly 300 landslides using a lidar-derived high-resolution DEM. The same area has roughly 303 mapped landslide points in the 1996-1997 storm event inventories (Hofmeister, 2000). SLIDO-1 has roughly 16 landslides in this same area, roughly 10 of which are from 1:24,000 scale geologic maps and roughly 40 from landslide specific mapping done in the 1970s (see Table 1).
Table 1. Comparison of individual landslides listed in SLIDO-1 to the number of landslides found in other landslide studies for the Portland Hills, Oregon area.
Number of Landslides Mapped
Previous geologic maps of the area 10
Previous landslide maps of the area 40
SLIDO-1 (combination of the above two) 50
Mapping from lidar-derived DEMs 300
1996-1997 storm inventories 300
Because the small Portland Hills study area of SLIDO-1 was compiled from geologic mapping done at a relatively small scale and from mapping performed specifically to locate landslides, we can use the Portland Hills study area to compare the number of landslides found with mapped landslides. The number of landslides listed in SLIDO-1 within this small area is roughly 25 percent of the number of landslides listed by lidar mapping (Table 1). Therefore, this percentage (~25 percent) should be considered an upper value of accuracy of SLIDO-1 for most areas, since the Portland Hills study area is composed of Tertiary and Quaternary sediments, which are more prone to landslides than most other Oregon areas, recently compiled by DOGAMI. Therefore, between 0 and 25 percent of actual landslides at any location should be considered as located in SLIDO-1.
Because of these limitations this map is intended for regional purposes only and cannot replace site-specific investigations. However, the map can serve as a useful tool for estimating the regional landslide hazard and as a starting point for future detailed landslide-specific maps.
REFERENCES
Burns, W. J., 2007, Comparison of remote sensing datasets for the establishment of a landslide mapping protocol in Oregon, in Schaefer, V. R., Schuster, R. L., and Turner, A. K., eds., 1st North American Landslide Conference, Vail, Colo., June 3-8, 2007, Proceedings: AEG Special Publication No. 23, p. 335-346.
Hofmeister, R. J., 2000, Slope failures in Oregon: GIS inventory for three 1996/97 storm events: Oregon Department of Geology and Mineral Industries Special Paper 34, 20 p., 1 compact disc.
Original Mapping Scale
Less than 1:24,000
1:24,000 to 1:62,500
1:62,500 or greater
Original Mapping Purpose
Original Mapping Hazard Specific
IMPORTANT NOTICE
This map depicts existing landslide hazard zones on the basis of limited data as described further in the accompanying report. This map cannot serve as a substitute for site-specific investigations by qualified practitioners. Site-specific data may give results that differ from those shown on this map.
The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government.
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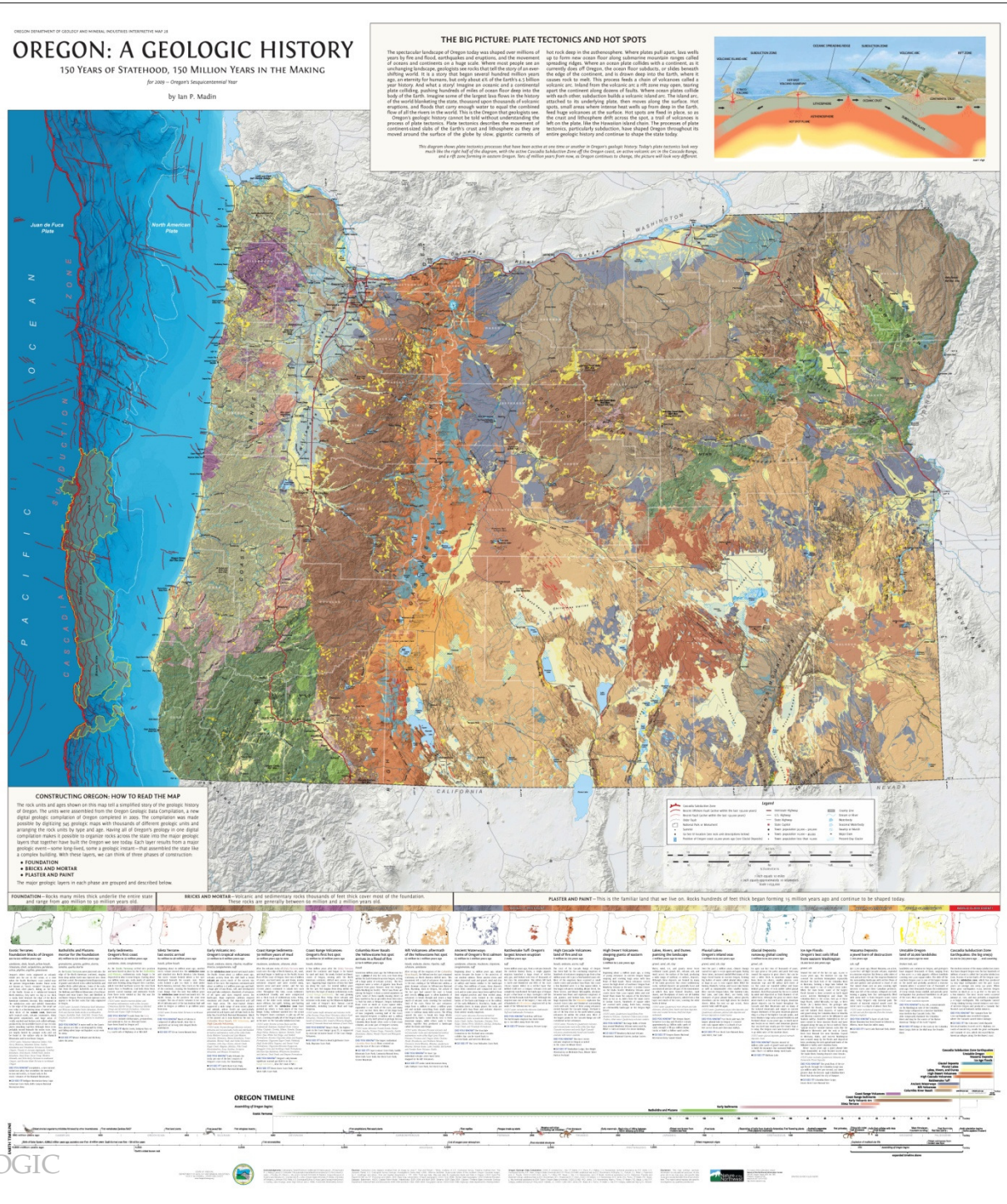
BENTON
LANE
BOOK
DESCHUTES
MALHEUR
DOUGLAS
COOS
LAKE
HARNEY
JACKSON
KLAMATH
CURRY
JOSEPHINE
Elevation
3,425 meters (11,237 feet)
1,712 meters (5,618 feet)
0 meters (0 feet)
SCALE 1:500,000
Miles
Kilometers
LOCATION MAP



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