MAJO GEOLOGIC-LINE CAI EGO IE

Dike	(.DIK.)	Geologic contact	(.CON.)	Mapped marker horizon	(.MMH.)
Fault	(.FLI .)	Geomorphic feature	(.GEO.)	Miscellaneous line	(.M C.)
Fold axial trace	(.FAX.)	Lineament	(.LIN.)	Vein	(.VEN.)

GEOLOGIC CONI ACI (.CON.)

Generic	(.CONG.)
Igneous	(.CONI.)
Landslide	(.CONL.)
Metamorphic	(.CONM.)
egolith and (or) pedogenic soil	(.CON .)
edimentary	(.CON .)
I erraced alluvial	(.CON I .)

FOLD-AXIAL I ACE (.FAX.)

Fold-form not determined	(.FAXN.)	e-folded folds	(.FAX .)
Antiform	(.FAXNA.)	Fold-form not determined	(.FAX N.)
ynform	(.FAXN .)	Fold-form determined	(.FAX D.)
Fold-form determined	(.FAXD.)	Antiformal syncline	(.FAX DA.)
Anticline	(.FAXDA.)	ynformal anticline	(.FAX D .)
yncline	(.FAXD .)		

Fold axial-plane geometry	(.FAXA.)
Axial-plane upright	(.FAXAJ .)
Axial-plane overturned	(.FAXAO.)
Fold-hinge geometry	(.FAXH.)
Fold-hinge subhorizontal	(.FAXH .)
Fold-hinge plunges	(.FAXHP.)

DIKE (.DIK.)

Andesite	(.DIKN.)
Aplite	(.DIKA.)
Basalt	(.DIKB.)
Dacite	(.DIKD.)
Granitic	(.DIKG.)
leucogranitic	(.DIKGL.)
Pegmatite	(.DIKP.)
Quartz	(.DIKQ.)

VEIN (.VEN.)

Aplite	(.VENA.)
Granite	(.VENG.)
Pegmatite	(.VENP.)
Quartz	(.VENQ.)

FAJ LI (.FLI .)

Fault geometry	(.FLI G.)	everse-slip	(.FLI .)
High-angle	(.FLI GH.)	everse fault	(.FLI .)
Low-angle	(.FLI GL.)	otational normal-slip	(.FLI N .)
Variable-angle	(.FLI GV.)	lide fault	(.FLI N .)
J nspecified geometry	(.FLI GJ .)	trike-slip	(.FLI .)
Fault slip-style & type	(.FLI .)	right-lateral strike-slip	(.FLI .)
lip unspecified	(.FLI J .)	left-lateral strike-slip	(.FLI L.)
high-angle generic fault	(.FLI J HG.)	I hrust-slip	(.FLI I .)
low-angle generic fault	(.FLI J LG.)	decollement	(.FLI I D.)
Normal-slip	(.FLI N.)	thrust fault	(.FLI I I .)
high-angle normal fault	(.FLI NH.)	thrust fault, overturned	(.FLI I I O.)
low-angle normal faults	(.FLI NL.)	thrust fault, folded	(.FLI I I F.)
low-angle normal fault	(.FLI NLL.)	Fault hanging-wall relations	(.FLI W.)
detachment-related faults	(.FLI NLD.)	Younger over older	(.FLI WY.)
master detachment fault	(.FLI NLDM.)	Older over younger	(.FLI WO.)
detachment fault	(.FLI NLDD.)	Wall relations unspecified	(.FLI WJ .)
normal fault listric into	(.FLI NLDL.)	Fault scarp	(.FLI K.)
Oblique-slip	(.FLI O.)		
Oblique fault	(.FLI OO.)		

MAPPED MA KE HO IZON (.MMH.)

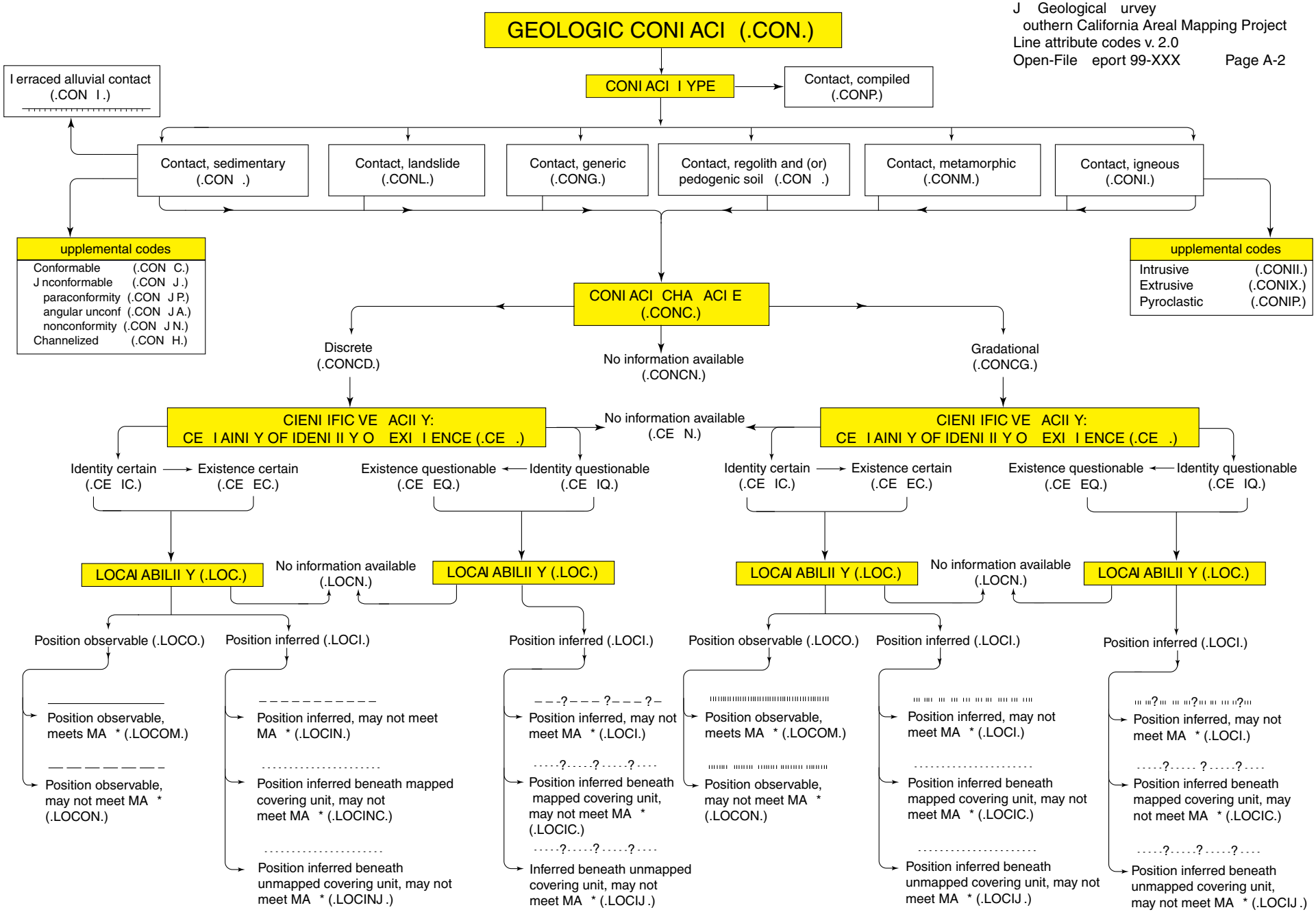
Buried paleosol	(.MMHB.)
Gravel layer	(.MMHG.)
Named marker	(.MMHN.)
Volcanic-ash layer	(.MMHA.)
Volcanic flow	(.MMHV.)
Andesite flow	(.MMHVA.)
Basalt flow	(.MMHVB.)
hyolite flow	(.MMHV .)

LINEAMENI (.LIN.)

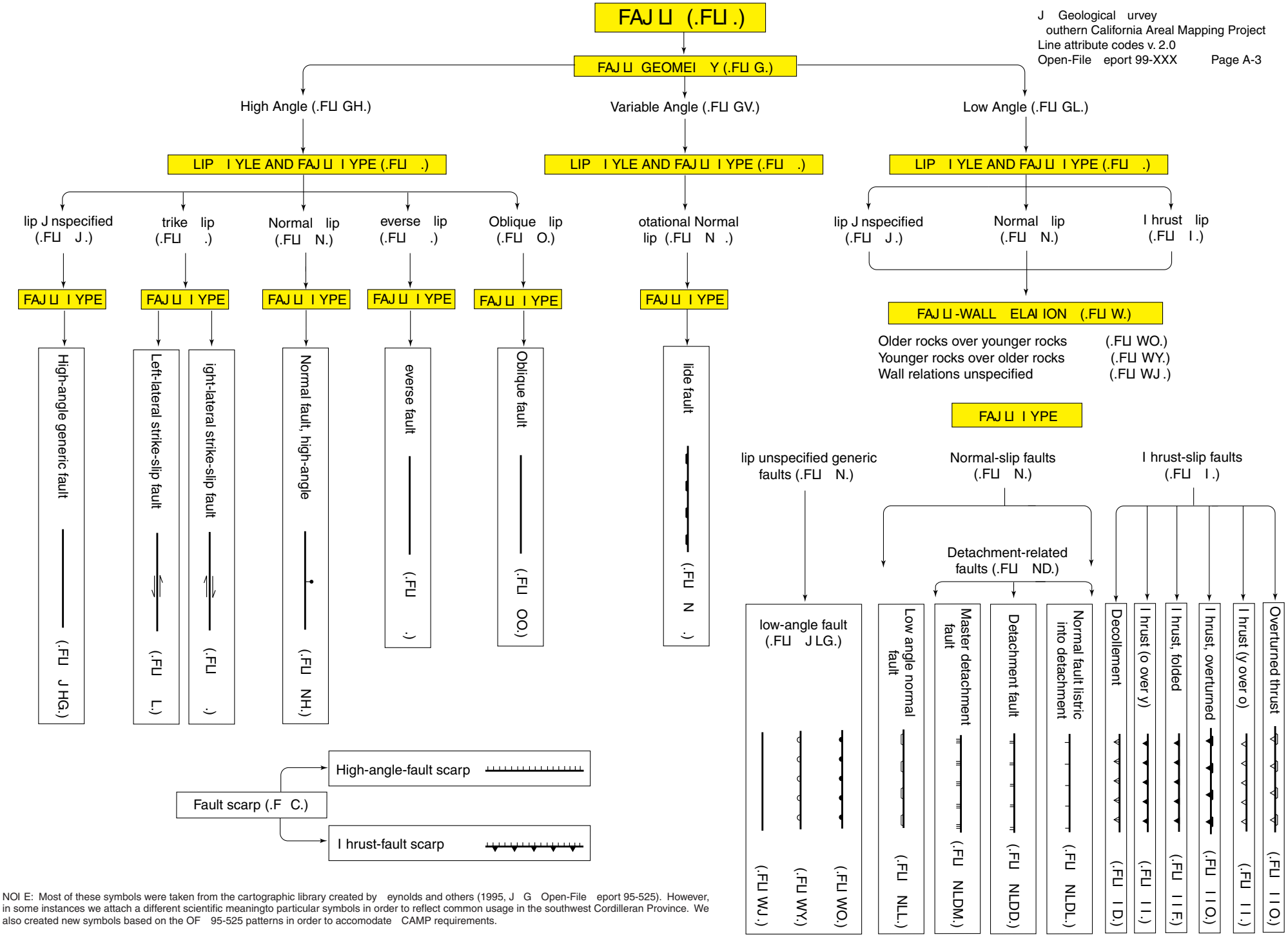
Aligned topographic saddles	(.LINA.)
Base of fold-controlled slope	(.LINB.)
Eroded edge of resistant bed	(.LINE.)
Fault-line escarpment	(.LINE.)
Origin unknown	(.LINJ .)

GEOMOPHIC FEAI J E (.GEO.)

Debris-flow crest	(.GEODC.)
Debris-flow outline	(.GEODO.)
Eolian sand-dune crest	(.GEOE.)
Glacial-moraine crest	(.GEOG.)
lateral-moraine crest	(.GEOGL.)
medial-moraine crest	(.GEOGM.)
terminal-moraine crest	(.GEOGI .)
Ground fissure	(.GEOF.)
Desiccation related	(.GEOFD.)
Expansive-clay related	(.GEOFE.)
ubsidence related	(.GEOF .)
owing to ground-water withdrawal	(.GEOF W.)
owing to tectonism	(.GEOF I .)
unspecified origin	(.GEOF J .)
Lakeshore strand line	(.GEO .)
Landslide closed depression	(.GEOLD.)
Landslide debris-train crest	(.GEOLC.)
ag-pond outline	(.GEOP.)
I opographic scarp	(.GEOI .)
Ground-failure crown scarp	(.GEOI G.)
Origin unknown	(.GEOI J .)



* MA = Map Accuracy tandard



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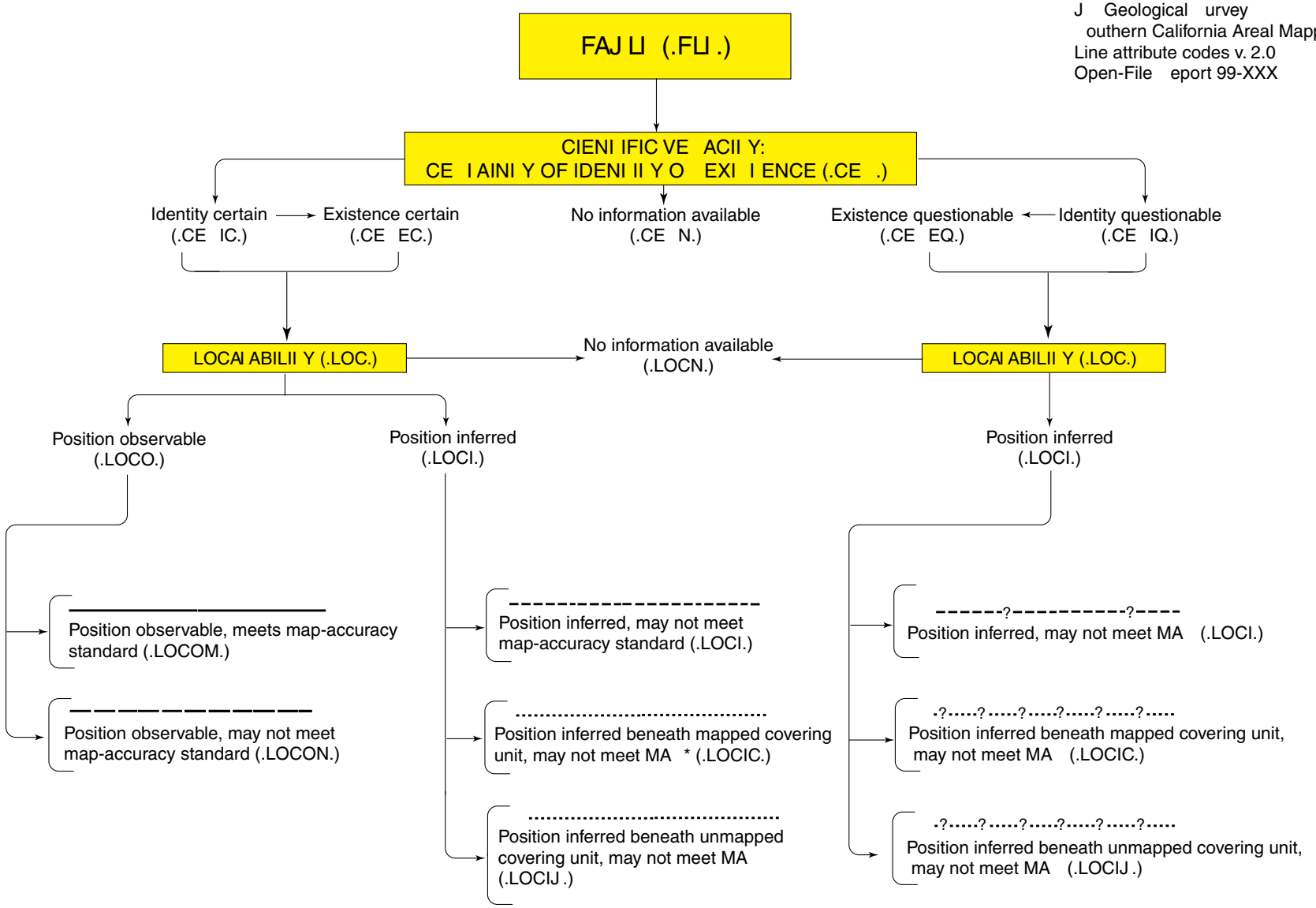

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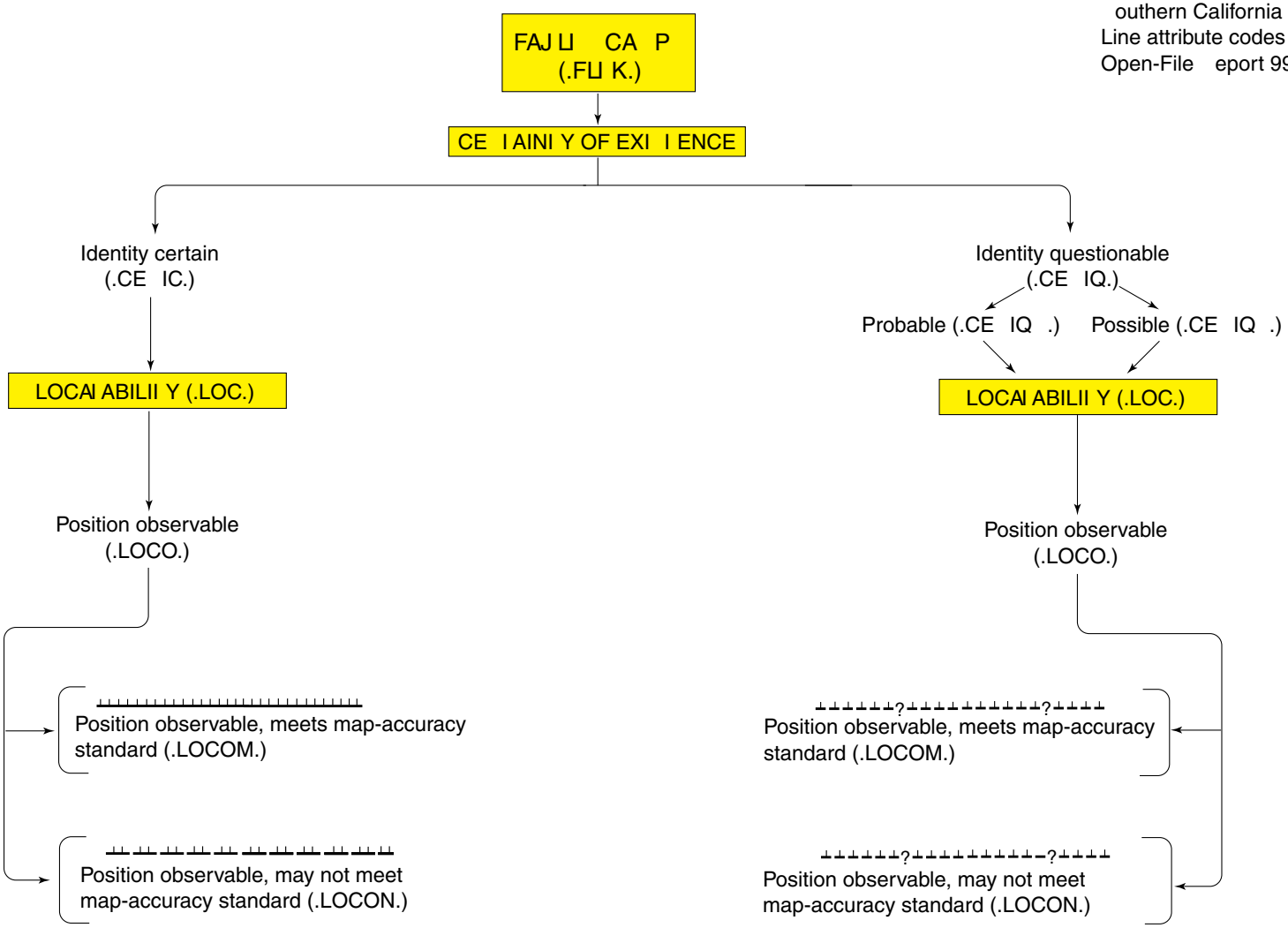

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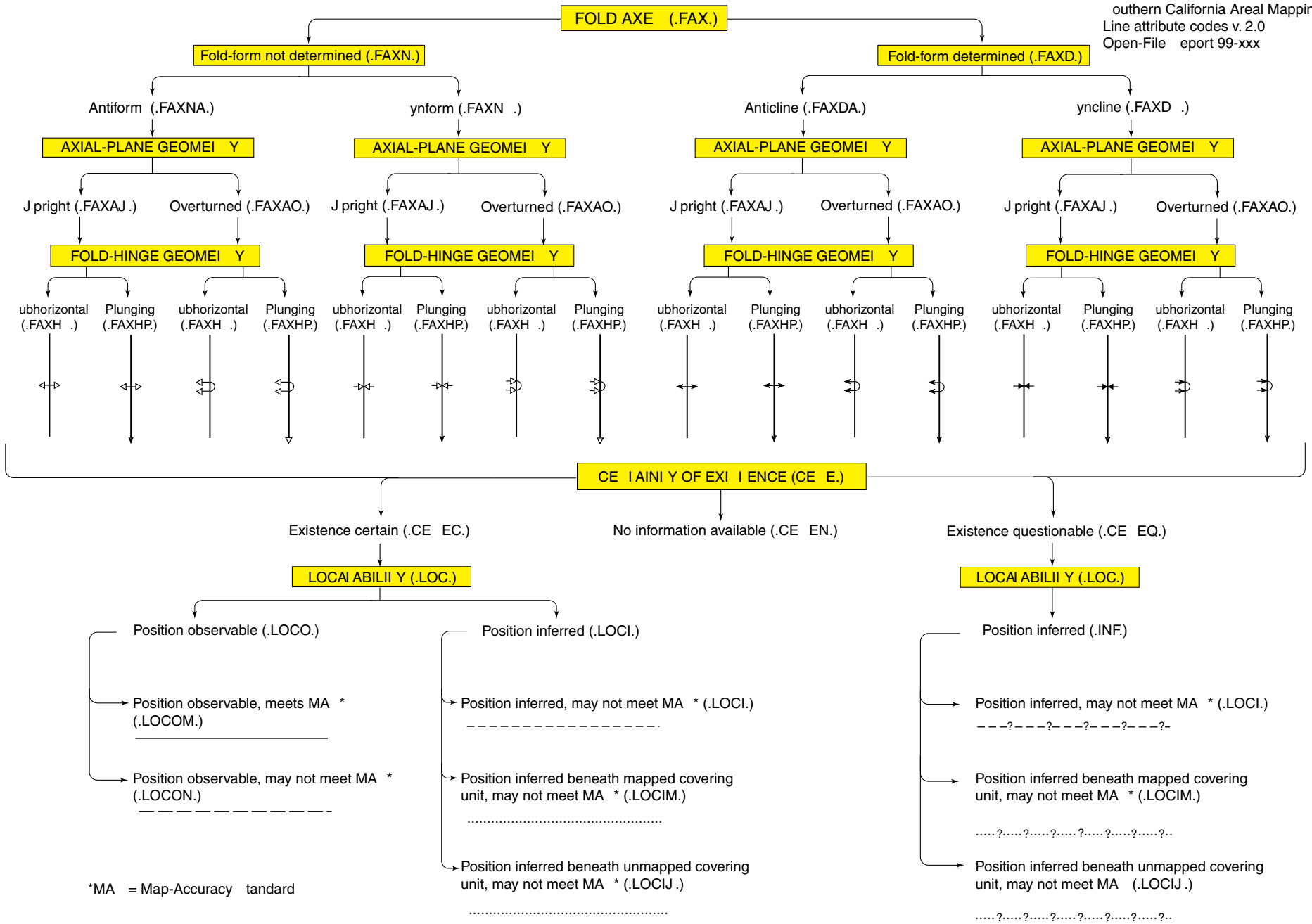

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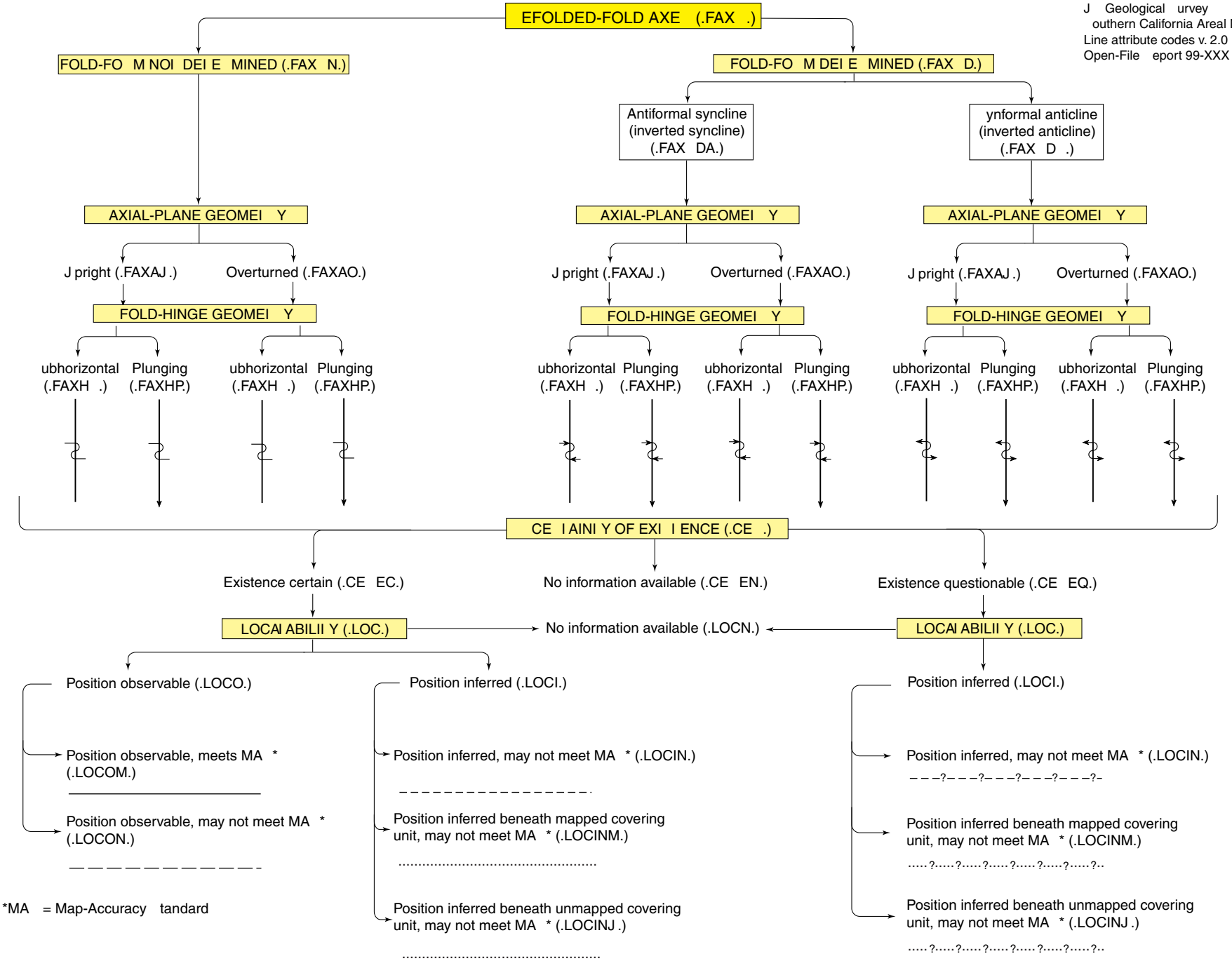

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FAJ LI FEAI J E (modified from harp (1972)			
Bench	(.FFEB.)	Ponded alluvium	(.FFEP.)
Depression	(.FFED.)	carp quality	(.FFEQ.)
Drainage channel	(.FFEC.)	Fresh	(.FFEQF.)
Beheaded	(.FFECB.)	lightly degraded	(.FFEQ .)
Beheaded, with alluvial ramp	(.FFECBA.)	Moderately degraded	(.FFEQM.)
Deflected	(.FFECD.)	Highly degraded	(.FFEQH.)
Offset	(.FFECO.)	eismicity associated with fault trace	(.FFE .)
Faceted ridge	(.FFEF.)	hutter-ridge scarp	(.FFE .)
Fault-movement indicators	(.FFEM.)	pring(s)	(.FFEG.)
Grooves	(.FFEMG.)	wale	(.FFEW.)
lickenside striations	(.FFEM .)	I rench	(.FFEI .)
Linear gully	(.FFEL.)	I rough or linear canyon	(.FFEK.)
Notch	(.FFEN.)	Vegetation lineament	(.FFEV.)

IGNEOJ CONI ACI AI I IBJ I E (.CONIA.)	
Contact character	(.CONIAC.)
Contact chilled	(.CONIACC.)
Contact deformed	(.CONIACD.)
Contact diffuse	(.CONIACF.)
Contact lit-par-lit	(.CONIACL.)
Contact mineralized	(.CONIACM.)
Contact geometry	(.CONIAG.)
Contact dip	(.CONIAGD.)
Contact dip variable	(.CONIAGDA.)
Contacts dip vertically	(.CONIAGDV.)
Contacts dip horizontally	(.CONIAGDH.)
Contacts dip inward toward body	(.CONIAGDI.)
steeply	(.CONIAGDI .)
moderately	(.CONIAGDIM.)
shallowly	(.CONIAGDIW.)
variably	(.CONIAGDIV.)
Contacts dip outward away from body	(.CONIAGDO.)
steeply	(.CONIAGDO .)
moderately	(.CONIAGDOM.)
shallowly	(.CONIAGDOW.)
variably	(.CONIAGDOV.)
Contact dip reverses inward-outward	(.CONIAGD .)
Contact dip unspecified	(.CONIAGDJ .)
Contact concordance	(.CONIAGK.)
Contact concordant	(.CONIAGKC.)
Contact discordant	(.CONIAGKD.)
Contacts parallel-sided	(.CONIAGKP.)
parallel-sided, planar	(.CONIAGKPP.)
parallel-sided, uneven	(.CONIAGKPJ .)
Contacts nonparallel-sided	(.CONIAGKN.)
nonparallel-sided, planar	(.CONIAKNP.)
nonparallel-sided, uneven	(.CONIAGKNJ .)
Contacts lensoidal	(.CONIAGKL.)
Contacts irregular	(.CONIAGKI.)

MINE ALIZED, ALI E ED, AND I AINED LINEA FEAI J E (.MIN.)			
Mineralized linear features	(.MINM.)	Altered linear features	(.MINA.)
Metallic mineralization	(.MINMM.)	Albitization	(.MINAA.)
Carbonate mineralization	(.MINMMC.)	Chloritic alteration	(.MINAC.)
Copper carbonate	(.MINMMCC.)	Dolomitization	(.MINAD.)
Lead carbonate	(.MINMMCL.)	Greisenization	(.MINAG.)
Zinc carbonate	(.MINMMCZ.)	Kaolinization	(.MINAK.)
Oxide mineralization	(.MINMMO.)	aussuritic alteration	(.MINAJ .)
Iron oxide	(.MINMMOI.)	ericitic alteration	(.MINA .)
Native-metal mineralization	(.MINMMN.)	ilicification	(.MINA .)
Copper	(.MINMMNC.)	Chalcedony	(.MINA C.)
Gold	(.MINMMNG.)	Jasperoid	(.MINA J.)
ilver	(.MINMMN .)	Opal	(.MINA O.)
ulphide mineralization	(.MINMM .)	Quartz	(.MINA Q.)
Iron sulphide	(.MINMM I.)	I ourmalinization	(.MINAI .)
Lead sulphide	(.MINMM L.)	Zeolitic alteration	(.MINAZ.)
Mercury sulphide	(.MINMM M.)	Laumontite	(.MINAZL.)
J nspecified metallic mineral	(.MINMMJ .)	tained linear features	(.MIN .)
Nonmetallic mineralization	(.MINN.)	Greenish staining	(.MIN G.)
Carbonate mineralization	(.MINNC.)	Pinkish staining	(.MIN P.)
Pegmatite mineralizaiion	(.MINNP.)	eddish staining	(.MIN .)
		Yellowish staining	(.MIN Y.)
		Yellowish-orange staining	(.MIN YO.)
		White staining	(.MIN W.)

FAJ LI -MOVEMENI AND FOLD-MOVEMENI HI I O Y (.MOV.)	
Age of faulting or folding known	(.MOVA.)
Age of most recent fault-movement known	(.MOVAF .)
Age of most recent folding known	(.MOVAD .)
Age of oldest fault-movement known	(.MOVAFO.)
Age of oldest folding known	(.MOVADO.)
Multiple fault-movement history	(.MOVM.)
Latest movement has multiple styles	(.MOVMM.)
Indicated slip style is latest movement	(.MOVMML.)
Indicated slip style is dominant movement	(.MOVMMD.)
Fault has been reactivated	(.MOVM .)
eactivated slip style same as earlier styles	(.MOVM .)
eactivated slip style different than earlier styles	(.MOVM D.)
Age of earlier movement known	(.MOVM E.)
Historic fault rupture has occurred	(.MOVH.)
ecurrence estimate determined	(.MOV .)
lip rate determined	(.MOV .)

CONFIDENCE AND BA I FO A IGNMENI OF LINEA GEOLOGIC FEAI J E (.CAL.)	
Identification based on field observation	(.CAGF.)
Geologic-line assignment is certain	(.CAGFC.)
Geologic-line assignment is likely but is not confirmed	(.CAGFL.)
Geologic-line assignment is uncertain	(.CAGFJ .)
* Observation station within polygon	(.CAGFO.)
Outcrop observation	(.CAGFOO.)
I hin-section observation	(.CAGFOI .)
tained-slab observation	(.CAGFO .)
* Binocular determination	(.CAGFB.)
Identification based on extrapolation	(.CAGE.)
Geologic-line assignment is certain	(.CAGEC.)
Geologic-line assignment is likely but is not confirmed	(.CAGEL.)
Geologic-line assignment is uncertain	(.CAGEJ .)
* Air-photo identification	(.CAGEA.)
* emote-sensing-imagery identification	(.CAGE .)
* Extrapolation in conjunction with published observation by other workers	(.CAGEWP.)
* Extrapolation in conjunction with unpublished observation by other wortkers	(.CAGEWJ .)
Identification determined by other workers	(.CAGW.)

CONFIDENCE AND BA I FO PLACEMENI OF LINEA GEOLOGIC FEAI J E (.CAL.)	
Placement based on field observation	(.CAGF.)
Placement based on GP determination	(.CAGFC.)
Placement based on visual determination	(.CAGFL.)
Placement based on site visit	(.CAGFL.)
Placement based on binocular determination	(.CAGFL.)
Placement based on remote-sensing-imagery	(.CAGE .)
Placement based on extrapolation	(.CAGE.)
Extrapolation using aerial photographs	(.CAGEC.)
Extrapolation using binoculars	(.CAGEC.)
Extrapolation using remote-sensing imagery	(.CAGEJ .)
Extrapolation using geophysical techniques	(.CAGEJ .)
* Extrapolation in conjunction with published observation by other workers	(.CAGEWP.)
* Extrapolation in conjunction with unpublished observation by other wortkers	(.CAGEWJ .)
Placement transfer from aerial photographs	(.CAGEA.)
I ransfer to cartographic base by eyeball	(.CAGEA.)
I ransfer to cartographic base using orthophotograph	(.CAGEA.)
I ransfer to cartographic base using PG-2 sterographic plotter	(.CAGEA.)
Placement determined by other workers	(.CAGW.)

GEOLOGIC AGE

- AGE J NKNOWN (.AGJ .)
- PHANE OZOIC (.PHO.)
  - Cenozoic (.CZO.)
    - Quaternary (.CZOQ.)
      - Holocene (.CZOQH.)
        - Modern (.CZOQHD.)
        - Late Holocene (.CZOQHL.)
        - Middle Holocene (.CZOQHM.)
        - Early Holocene (.CZOQHE.)
      - Pleistocene (.CZOQP.)
        - Late Pleistocene (.CZOQPL.)
        - Middle Pleistocene (.CZOQPM.)
        - Early Pleistocene (.CZOQPE.)
    - I ertiary (.CZOI .)
      - Pliocene (.CZOI P.)
        - Late Pliocene (.CZOI PL.)
        - Early Pliocene (.CZOI PW.)
      - Miocene (.CZOI M.)
        - Late Miocene (.CZOI ML.)
        - Middle Miocene (.CZOI MM.)
        - Early Miocene (.CZOI ME.)
      - Oligocene (.CZOI O.)
        - Late Oligocene (.CZOI OL.)
        - Early Oligocene (.CZOI OE.)
      - Eocene (.CZOI E.)
        - Late Eocene (.CZOI EL.)
        - Middle Eocene (.CZOI EM.)
        - Early Eocene (.CZOI EE.)
      - Paleocene (.CZOI A.)
        - Late Paleocene (.CZOI AL.)
        - Early Paleocene (.CZOI AE.)
  - Neogene (.NGN.)
  - Paleogene (.PGN.)
  - Mesozoic (.MZO.)
    - Cretaceous (.MZOK.)
      - Late Cretaceous (.MZOKL.)
      - Early Cretaceous (.MZOKE.)
    - Jurassic (.MZOJ.)
      - Late Jurassic (.MZOJL.)
      - Early Jurassic (.MZOKJE.)
    - I riassic (.MZOI .)
      - Late I riassic (.MZOI L.)
      - Early I riassic (.MZOI E.)
  - Paleozoic (.PZO.)
    - Permian (.PZO .)
      - Late Permian (.PZO L.)
      - Early Permian (.PZO E.)
    - Pennsylvanian (.PZOP.)
      - Late Pennsylvanian (.PZOPL.)
      - Early Pennsylvanian (.PZOPE.)
    - Mississippian (.PZOM.)
      - Late Mississippian (.PZOML.)
      - Early Mississippian (.PZOME.)
    - Devonian (.PZOD.)
      - Late Devonian (.PZODL.)
      - Early Devonian (.PZODE.)
    - ilurian (.PZO .)
      - Late ilurian (.PZO L.)
      - Early ilurian (.PZO E.)
    - Ordovician (.PZOO.)
      - Late Ordovician (.PZOOL.)
      - Early Ordovician (.PZOOE.)
    - Cambrian (.PZOC.)
      - Late Cambrian (.PZOCL.)
      - Early Cambrian (.PZOCE.
  - Late Paleozoic (.PZOL.)
  - Middle Paleozoic (.PZOI.)
  - Early Paleozoic (.PZOE.)
- P OI E OZOIC (.P O.)
  - Late Proterozoic (.P OL.)
  - Middle Proterozoic (.P OM.)
  - Early Proterozoic (.P OE.)
- A CHEAN (.A C.)
  - Late Archean (.A CL.)
  - Middle Archean (.A CM.)
  - Early Archean (.A CE.)
- Precambrian (.P C.)