

QUATERNARY

Qco

COLLUVIUM and LANDSLIDES (Recent) -- Unconsolidated boulders, cobbles, pebbles, sand, and clay of varied composition.

Qya

YOUNGER ALLUVIUM (Recent) -- Unconsolidated boulders, cobbles, pebbles, sand, and clay of varied composition deposited as fans at canyon mouths; 300± m thick.

QToo

OLDER ALLUVIUM (Recent - Miocene) -- Generally unconsolidated boulders, cobbles, pebbles, sand, and clay of varied composition originally deposited as fan sediments but since exposed by uplift; 300± m thick.

Tca

CAZIER CANYON AGGLOMERATE (Oligocene) -- Massive volcanic conglomerate composed of angular to subangular clasts (60%) of dark gray and brownish red latite in a matrix of volcanic gravel. Equivalent to the middle agglomerate member of the Copperopolis Latite (Morris 1975) and the uppermost agglomerate member of the Copperopolis Latite (Morris and Lovering 1979); 0-230 m thick.

COPPEROPOLIS LATITE (Middle Oligocene)

TcIf

UPPER FLOW MEMBER -- (Morris and Lovering 1979) --Lenticular, dark brownish red aphanitic latite, poorly exposed; 0-15 m thick.

TfQ

FERNOW QUARTZ LATITE (Oligocene) -- Light gray to medium gray, medium-grained ash-flow tuff containing phenocrysts of quartz (doubly terminated), sanadine, andesine, and biotite; locally lenticular; correlates with the Packard Quartz Latite of the Tintic district (Morris 1975); 0-15 m thick.

GOLDENS RANCH FORMATION (Oligocene)

Tgos

SAGE VALLEY LIMESTONE MEMBER Yellow to light gray, medium- to coarse-grained, lacustrine limestone; locally contains numerous twig and leaf impressions as well as limited occurrences of fresh-water gastropods; limestone is often interbedded with lenses of conglomerate and bentonitic shale; 0-80 m thick.

Tgov

Tgoq

HALL CANYON CONGLOMERATE MEMBER -- Unconsolidated conglomerate composed of subrounded to rounded boulders, cobbles, and pebbles in a bentonitic matrix; the lower part of this conglomerate (Unit Q) is composed of Cambrian and Precambrian quartzite and Paleozoic limestone clasts; the upper part (Unit V) is composed of similar clasts plus Oligocene volcanic clasts; forms low, rounded, boulder-strewn hills; 0-245 m thick.

Tgot

CHICKEN CREEK TUFF MEMBER -- White to light gray, fine- to medium-grained ash-flow tuff containing mostly lithic fragments of varied composition and biotite phenocrysts; equivalent to the Chicken Creek Tuff (Evernden and James 1964); 0-15 m thick.

Tos

ORME SPRING CONGLOMERATE (Paleocene ?) -- Conglomerate composed of 70 to 80 percent Paleozoic limestone clasts and 20 to 30 percent Cambrian quartzite clasts; clasts make up 80 to 90 percent of the formation; matrix varies from light brown to grayish brown to moderate reddish brown; clasts and matrix particles are angular to subangular; crops out in ledges and rounded knobs; about 275 m thick.

Trn

RED NARROWS CONGLOMERATE (Paleocene ?) -- Interbedded, calcareous, light to moderate reddish orange, medium- to fine-grained sandstone and conglomerate consisting of 75 to 85 percent Cambrian and Precambrian quartzite boulders and cobbles and 15 to 20 percent Paleozoic limestone cobbles; forms ledgy slopes and rounded, boulder-strewn hills; about 365 m thick.

TKsc

CONGLOMERATE OF SPRING CANYON (Paleocene ? - Cretaceous ?) -- Conglomerate consisting of 60 to 70 percent Paleozoic limestone clasts and 30 to 40 percent Cambrian and Precambrian quartzite clasts; matrix is pale to moderate reddish brown and makes up 20 to 25 percent of the conglomerate, exposed locally as 3 to 5-m-high cliffs; 0-335 m thick.

Ku

CRETACEOUS UNDIVIDED (Lower Cretaceous ?) -- Unknown sandstone which contained pollen determined to be of Lower Cretaceous age encountered in the Placid Oil Company # 1 Howard well; not exposed; 610± m thick.

ARAPIEN SHALE (Jurassic)

Jtg

TWIST GULCH MEMBER -- Thinly interbedded calcareous siltstone and shale; not exposed; 600± m thick.

Ja

TWELVE MILE CANYON MEMBER -- Interbedded limestone and shale with common lenses of gypsum and/or salt, anomalously thick or thin; not exposed; 1,065± m thick.

Jn

NUGGET SANDSTONE (Jurassic) -- Moderate reddish brown, fine- to medium-grained, crossbedded, massive sandstone, some exposures have been bleached white, 285 m thick.

Ra

ANKAREH SHALE (Triassic) -- Poorly exposed red shale with interbeds of red siltstone and massive, crossbedded, medium- to coarse-grained sandstone; 285 m thick.

Rt

THAYNES LIMESTONE (Triassic) -- Fossiliferous limestone interbedded with siltstone and shale; not exposed; 285± m thick.

Rw

WOODSIDE SHALE (Triassic) -- Red shale with subordinate lenses of siltstone and sandstone; not exposed; 305± m thick.

Ppc

PARK CITY FORMATION (Permian) -- FRANSON MEMBER: gray, medium-bedded, medium-grained, cherty, hydrothermal dolomite; not exposed; 165± m thick. MEADE PEAK PHOSPHATIC SHALE TONGUE: brownish black, thin-bedded, cherty mudstone; not exposed; 75 to 100 m thick. GRANDEUR MEMBER: gray, medium-bedded, fine- to medium-grained, cherty, hydrothermal dolomite, sandy at base; 230 to 290 m thick.

Pdc

DIAMOND CREEK SANDSTONE (Permian) -- Yellow gray, medium- to fine-grained, bimodal, friable, crossbedded sandstone, some gray dolomite near base; 150 m thick.

OQUIRRH GROUP (Permian - Pennsylvanian)

PPfv

FURNER VALLEY LIMESTONE (Permian - Pennsylvanian) -- Lower part is blue gray, medium-bedded, cherty, silty limestone and upper part is gray, medium-bedded to massive, medium-grained, cherty, hydrothermal dolomite; contains a few thin beds of reddish brown, fine-grained sandstone; 1,675± m thick.

IPbm

BINGHAM MINE FORMATION (Pennsylvanian) -- Consists of 65 percent reddish brown-weathering, calcareous, quartz sandstone and 35 percent

TERTIARY

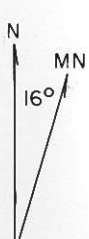
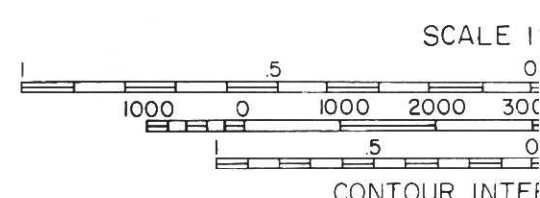
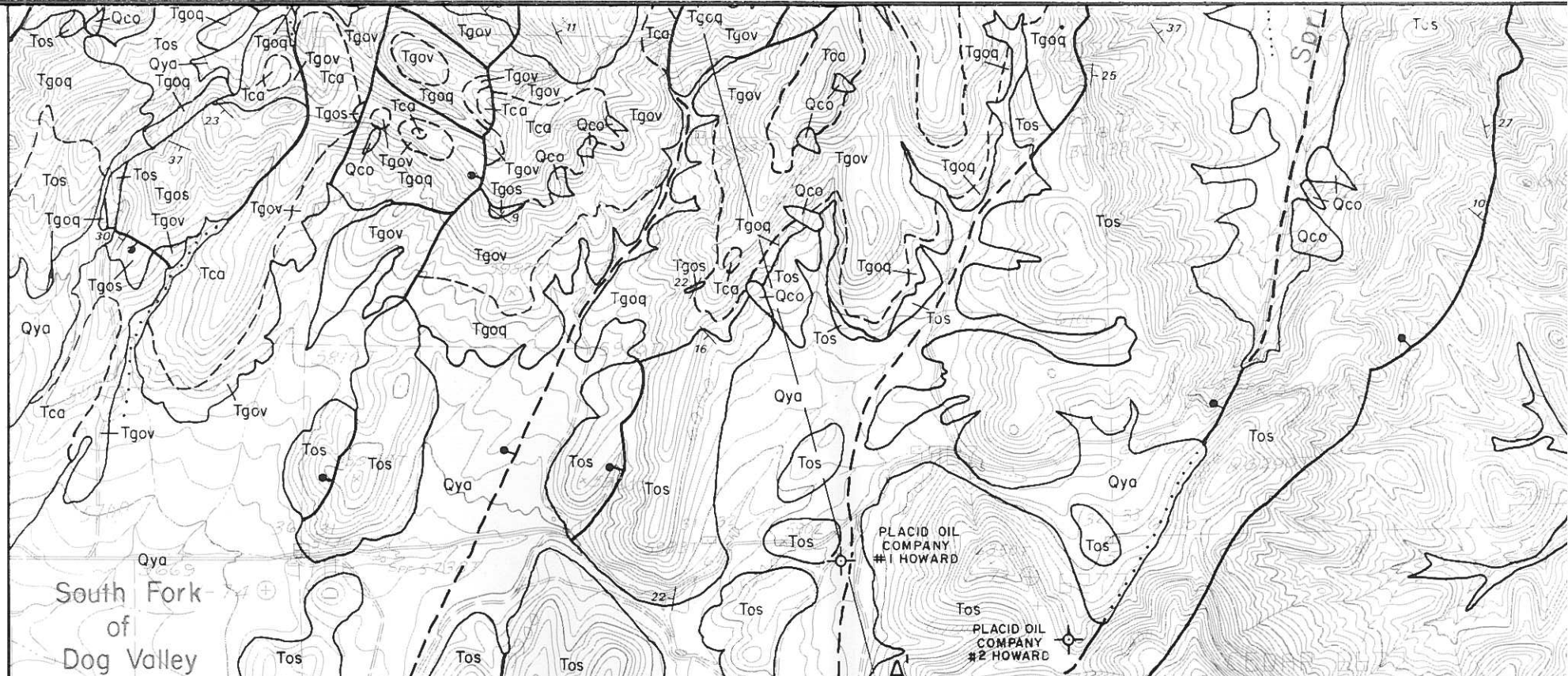
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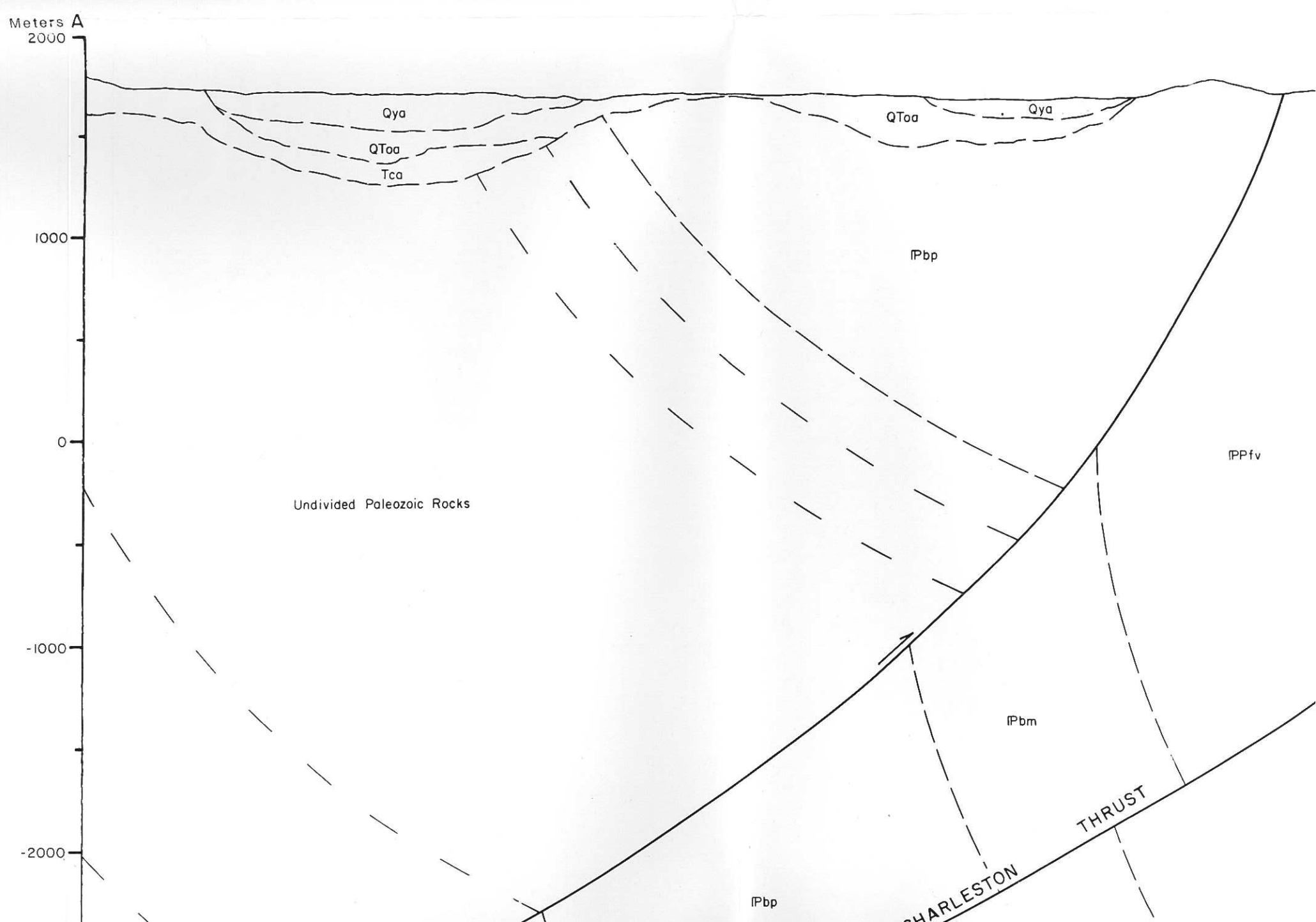
PERMIAN

SYLVANIAN



GEOLOGIC OF THE NEPHI NW 7 1/2 MIN JUAB COUNTY

LYNN C. MEYER



This topographic map depicts the Qya area, characterized by numerous contour lines indicating elevation. A prominent road, likely a railway or major highway, runs diagonally from the upper right towards the bottom center. Key features include:

- Elevation Points:** Several points are marked with elevations such as 5146.1, 5204, 5205, 5212, 5224, 5240, 5256.7, 5267, 5274, 5284, 5294, 5304, 5314, 5324, 5334, 5344, 5354, 5364, 5374, 5384, 5394, 5404, 5414, 5424, 5434, 5444, 5454, 5464, 5474, 5484, 5494, 5504, 5514, 5524, 5534, 5544, 5554, 5564, 5574, 5584, 5594, 5604, 5614, 5624, 5634, 5644, 5654, 5664, 5674, 5684, 5694, 5704, 5714, 5724, 5734, 5744, 5754, 5764, 5774, 5784, 5794, 5804, 5814, 5824, 5834, 5844, 5854, 5864, 5874, 5884, 5894, 5904, 5914, 5924, 5934, 5944, 5954, 5964, 5974, 5984, 5994, 6004, 6014, 6024, 6034, 6044, 6054, 6064, 6074, 6084, 6094, 6104, 6114, 6124, 6134, 6144, 6154, 6164, 6174, 6184, 6194, 6204, 6214, 6224, 6234, 6244, 6254, 6264, 6274, 6284, 6294, 6304, 6314, 6324, 6334, 6344, 6354, 6364, 6374, 6384, 6394, 6404, 6414, 6424, 6434, 6444, 6454, 6464, 6474, 6484, 6494, 6504, 6514, 6524, 6534, 6544, 6554, 6564, 6574, 6584, 6594, 6604, 6614, 6624, 6634, 6644, 6654, 6664, 6674, 6684, 6694, 6704, 6714, 6724, 6734, 6744, 6754, 6764, 6774, 6784, 6794, 6804, 6814, 6824, 6834, 6844, 6854, 6864, 6874, 6884, 6894, 6904, 6914, 6924, 6934, 6944, 6954, 6964, 6974, 6984, 6994, 7004, 7014, 7024, 7034, 7044, 7054, 7064, 7074, 7084, 7094, 7104, 7114, 7124, 7134, 7144, 7154, 7164, 7174, 7184, 7194, 7204, 7214, 7224, 7234, 7244, 7254, 7264, 7274, 7284, 7294, 7304, 7314, 7324, 7334, 7344, 7354, 7364, 7374, 7384, 7394, 7404, 7414, 7424, 7434, 7444, 7454, 7464, 7474, 7484, 7494, 7504, 7514, 7524, 7534, 7544, 7554, 7564, 7574, 7584, 7594, 7604, 7614, 7624, 7634, 7644, 7654, 7664, 7674, 7684, 7694, 7704, 7714, 7724, 7734, 7744, 7754, 7764, 7774, 7784, 7794, 7804, 7814, 7824, 7834, 7844, 7854, 7864, 7874, 7884, 7894, 7904, 7914, 7924, 7934, 7944, 7954, 7964, 7974, 7984, 7994, 8004, 8014, 8024, 8034, 8044, 8054, 8064, 8074, 8084, 8094, 8104, 8114, 8124, 8134, 8144, 8154, 8164, 8174, 8184, 8194, 8204, 8214, 8224, 8234, 8244, 8254, 8264, 8274, 8284, 8294, 8304, 8314, 8324, 8334, 8344, 8354, 8364, 8374, 8384, 8394, 8404, 8414, 8424, 8434, 8444, 8454, 8464, 8474, 8484, 8494, 8504, 8514, 8524, 8534, 8544, 8554, 8564, 8574, 8584, 8594, 8604, 8614, 8624, 8634, 8644, 8654, 8664, 8674, 8684, 8694, 8704, 8714, 8724, 8734, 8744, 8754, 8764, 8774, 8784, 8794, 8804, 8814, 8824, 8834, 8844, 8854, 8864, 8874, 8884, 8894, 8904, 8914, 8924, 8934, 8944, 8954, 8964, 8974, 8984, 8994, 9004, 9014, 9024, 9034, 9044, 9054, 9064, 9074, 9084, 9094, 9104, 9114, 9124, 9134, 9144, 9154, 9164, 9174, 9184, 9194, 9204, 9214, 9224, 9234, 9244, 9254, 9264, 9274, 9284, 9294, 9304, 9314, 9324, 9334, 9344, 9354, 9364, 9374, 9384, 9394, 9404, 9414, 9424, 9434, 9444, 9454, 9464, 9474, 9484, 9494, 9504, 9514, 9524, 9534, 9544, 9554, 9564, 9574, 9584, 9594, 9604, 9614, 9624, 9634, 9644, 9654, 9664, 9674, 9684, 9694, 9704, 9714, 9724, 9734, 9744, 9754, 9764, 9774, 9784, 9794, 9804, 9814, 9824, 9834, 9844, 9854, 9864, 9874, 9884, 9894, 9904, 9914, 9924, 9934, 9944, 9954, 9964, 9974, 9984, 9994, 10004.
- Contours:** Labeled with values like 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.
- Infrastructure:** A dashed line labeled 'FL' (likely a fence line) runs horizontally across the middle. A dotted line runs vertically on the left side.
- Labels:** 'Tos' appears twice on the left side. 'Qya' is labeled near the center. 'R-44' is labeled near the road.
- Other:** A small circle with a crosshair is located near the top center.

40

30

Strike and dip of beds

Strike of vertical beds

Strike and dip of overturned beds

Contact, dashed where approximately located

Thrust fault, dashed where approximately located, sawteeth on upper plate

Normal fault, dashed where approximately located, dotted where concealed, ball on downthrown block

Location of oil well test hole



ANGLE,

