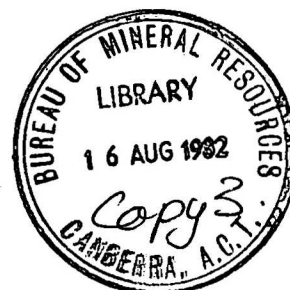


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BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

Record 1982/8

RECORD

ESMERALDA AND ADJACENT PARTS OF PROSPECT AND
PELHAM 1:100 000 GEOLOGICAL SHEETS

CATALOGUE OF PRELIMINARY FIELD DATA COMPILATION SHEETS

by

D.E. Mackenzie¹, G.A.M. Henderson¹, and
J.V. Warnick²

¹ BMR

² Geological Survey of Queensland

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1:100 000 GEOLOGICAL SHEETS

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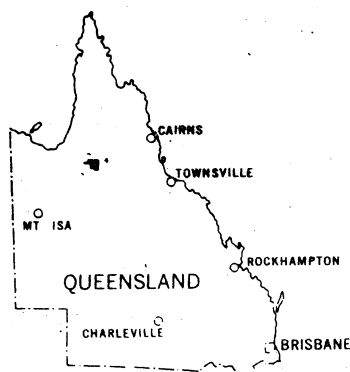
This Record presents preliminary geological maps and observation point overlays, reproduced at 1:100 000 scale, from ESMERALDA and adjacent parts of PROSPECT and PELHAM 1:100 000 Sheets. They were prepared in the field from colour airphotograph overlays at approximately 1:25 000 scale by the combined BMR-Geological Survey of Queensland (GSQ) Croydon Geological Party during June-October, 1980. The results of a brief reconnaissance of the Croydon region during August, 1979 by D.E. Mackenzie and R.L. McLeod (GSQ) are also included in the maps.

Interpretative work carried out since these photo-reductions were made has led to some changes. These changes have been incorporated in the 1:25 000-scale (approx.) transparencies, copies of which are held by the Australian Government Printer, and in the 1:100 000-scale Preliminary Edition geological map. They are also included in a 1:250 000-scale Special Edition geological map of the Croydon region that is being prepared by BMR.

Notification of any errors or omissions in these maps, or in the Preliminary Edition map, would be greatly appreciated, and should be communicated to the Director, Bureau of Mineral Resources, P.O. Box 378, Canberra City, A.C.T., 2601.

Copies of the 1:25 000-scale field compilation sheets, reproduced here at 1:100 000 scale, are available from the Copy Service, Australian Government Printer (Production), G.P.O. Box 84, Canberra, A.C.T. 2600.

MAP LOCALITY



INDEX TO 1:100 000 MAPS

141°00'	142°00'	143°00'	144°00'	145°00'
BROWN CREEK 7161	CORALIE 7261	CROYDON 7361	GILBERT RIVER 7461	FOREST HOME 7561
CROYDON SE 54-11	SE 54-12	GEORGETOWN SE 54-12		
IFFLEY 7160	CLARAVILLE 7260	PROSPECT 7360	ESMERALDA 7460	NORTH HEAD 7560
TALPOORA 7159	SAMMANNAH BONNES 7259	TRENTON 7359	MOLLAH 7459	MARAFIELD 7559
MILLUNGERRA SE 54-15	SE 54-16	GILBERTON SE 54-16		
MUMIL 7158	MILLUNGERRA 7258	MALPAS 7358	ETHELBALE 7458	MOUNT NORMAN 7558
141°00'	142°00'	143°00'	144°00'	145°00'

- Geological boundary
- ↕ Anticline
- ↔ Syncline showing trend of plunge of axis
- ↔ Overturned anticline
- Fault

Where location of folds and faults is approximate, line is broken; where inferred, queried; where concealed, folds are dotted, faults are shown by short dashes

- Waterhole
- Minor road
- Vehicle track
- Esmeralda Homestead
- Building
- Yard
- Fence
- ▲ Trigonometrical station
- 171 Elevation in metres

- ~~~~~ Shear zone
- ↖ Strike and dip of strata
- ↗ Prevailing strike and dip of strata
- ↖ Prevailing strike and dip of strata, facing not known
- ⊥ Vertical strata
- ↖ Strike and dip of strata, dip 5° to 15°
- Trend-line
- Joint pattern
- Lineament
- ⇒ Trend of plunge of columnar jointing
- ↖ Strike and dip of foliation
- ↖ Strike and dip of cleavage
- ⊙ Macrofossil locality
- Dyke or vein; rh - rhyolite, q - quartz
- ✖ Mine, abandoned

airphoto interpretation

REFERENCE TO ACCOMPANY COMPILATION SHEETS FOR THE ESMERALDA REGION 1:100 000 MAP AREA

QUATERNARY

LATE TERTIARY

LATE CRETACEOUS TO EARLY TERTIARY

CRETACEOUS

LATE JURASSIC TO EARLY CRETACEOUS

MIDDLE TO LATE JURASSIC

PERMIAN ?

PALEOZOIC ?

PROTEROZOIC

EURO QUEEN GROUP

LANGLOVALE GROUP

ETHERIDGE GROUP

DEMOCRAT RHYOLITE MEMBER

CROFTON VOLCANIC GROUP

Unconformity

Facies boundary

Gradational boundary

Qha Sand, gravel, silt, mud: modern active alluvium

Qa Sand, gravel, silt, mud: flood plain alluvium; some young soils

TQi Clarville Formation: Clayey quartzose sand and silt; sandy mudstone

TQs Quartzose sand and gravel, largely residual

Czs Sand, soil, colluvium, outwash fan deposits, lag gravels; some laterite

Cza Sand, gravel, silt, soil: dissected alluvium; minor colluvium

Tf Nodular ferricrete/laterite; lateritised fine lag gravel or soil

Td Ferruginised colluvium, alluvium, valley fill, or piedmont deposits

KTi Bulimba Formation: Poorly sorted clayey quartz sandstone, commonly pebbly; pebbly clay-rich siltstone, mudstone; conglomerate: stream sediments, commonly preserved in depressions

Klu Wallumbilla Formation: Purplish-grey or red-brown to white clay-rich mudstone, silty mudstone, sandy siltstone, and sandstone; generally lithic, quartz-poor

JKg Gilbert River Formation: Fine to coarse clayey quartzose and lithic-quartz sandstone; siltstone, shale

KIf Fine to coarse clayey lithic-quartz sandstone, commonly ferruginous and/or glauconitic; mottled purple siltstone, massive, commonly mottled, soft shale/claystone; minor pebbly clay-rich sandstone, siltstone

JKy Coarse to fine, commonly clayey quartz sandstone and (minor) lithic-quartz sandstone, commonly ferruginised; pebbly in places. Minor quartz and volcanic-pebble conglomerate; minor interbedded siltstone

Jul Loh Formation: White to yellow-brown poorly sorted clayey fine quartz sandstone and siltstone, commonly micaceous and/or feldspathic; pebbly, clayey quartz sandstone; minor sandy pebble conglomerate

Jh Hampstead Sandstone: Coarse to very coarse white clayey quartz sandstone, commonly pebbly; sandy quartz-pebble conglomerate; micaceous fine sandstone, minor grey siltstone

dl Augite dolerite with traces of biotite

Egn Fine to medium-grained biotite granite, commonly porphyritic and garnet-bearing

Egd Dregger Granite: Medium-grained porphyritic garnet-biotite granite

Egb Bimba Granite: Medium to fine-grained garnet-biotite granite; porphyritic, commonly with ophitic, needle or plate-like biotite phenocrysts; some graphite pellets

Egi Ilwamna Granite: Medium-grained, slightly porphyritic garnet-biotite granite

Ego Disens Granite: Very coarse to fine-grained muscovite-biotite granite, porphyritic in part

Egoz Fine to very fine-grained granite, microgranite, commonly melanocratic

Egn Nonda Granite: Fine to very fine-grained melanocratic biotite granite, granodiorite, microgranite

Ege Esmeralda Granite: Very coarse to medium-grained (muscovite-) biotite granite, porphyritic in part

Er1 Idalia Rhyolite: Green-grey, bluish grey, or dark grey crystal-rich rhyolitic ignimbrite, 1-3 mm crystals, and 1-5 mm graphite pellets; eutaxitic texture in places. Intense alteration, mostly sericitic

Er2 Dark grey recrystallised crystal-rich rhyolitic ignimbrite; porphyritic rhyolite (intrusive?); disseminated graphite, some graphite pellets; garnet present in some rocks

Er3 Carron Rhyolite: Bluish-grey to very dark grey crystal-poor rhyolitic ignimbrite with 1 mm crystals, fine eutaxitic texture; flow-banded/laminated phenocryst-poor rhyolite; minor rhyolitic tuff; graphite pellets common. Intense alteration, mostly sericitic

Er4 B Creek Rhyolite: Very dark grey to black recrystallised crystal-poor rhyolitic ignimbrite, dacitic ignimbrite, tuff, breccia; minor andesite. Contains disseminated graphite, scarce graphite pellets. Intense alteration, mostly sericitic

Er5 Dacitic to andesitic (?) ignimbrite; fine-grained aphyric andesite, amygdaloidal in part

Er6 Wonnemarra Rhyolite: Bluish grey crystal-rich rhyolitic ignimbrite with 1-3 mm crystals, including rare biotite, and 1-5 mm graphite pellets; eutaxitic texture in places

Ey Yarman Formation: Dark grey to maroon or brick-red mudstone, siltstone, and shale; scattered, isolated beds of cross-laminated fine quartz sandstone, commonly micaceous and/or feldspathic

Em Malacura Sandstone: Light brown fine to medium lithic-quartz and quartz sandstone, commonly feldspathic and micaceous; lithic-quartz siltstone, sandy siltstone; carbonaceous mudstone; very coarse quartz-lithic sandstone

El Langdon River Mudstone: Maroon/purple and dark grey banded, variably carbonaceous and ferruginous (pyritic or ex-pyritic) cleaved mudstone and phyllite; rare, cross-laminated micaceous fine quartz sandstone and sandy siltstone

Ec Candlow Formation: variably carbonaceous mudstone, fine lithic sandstone, siliceous siltstone, shale

Ec3 Green-grey to yellow-brown fine lithic sandstone, light to dark grey variably carbonaceous mudstone and siltstone; minor quartzose siltstone and fine sandstone. Mostly variably pyritic

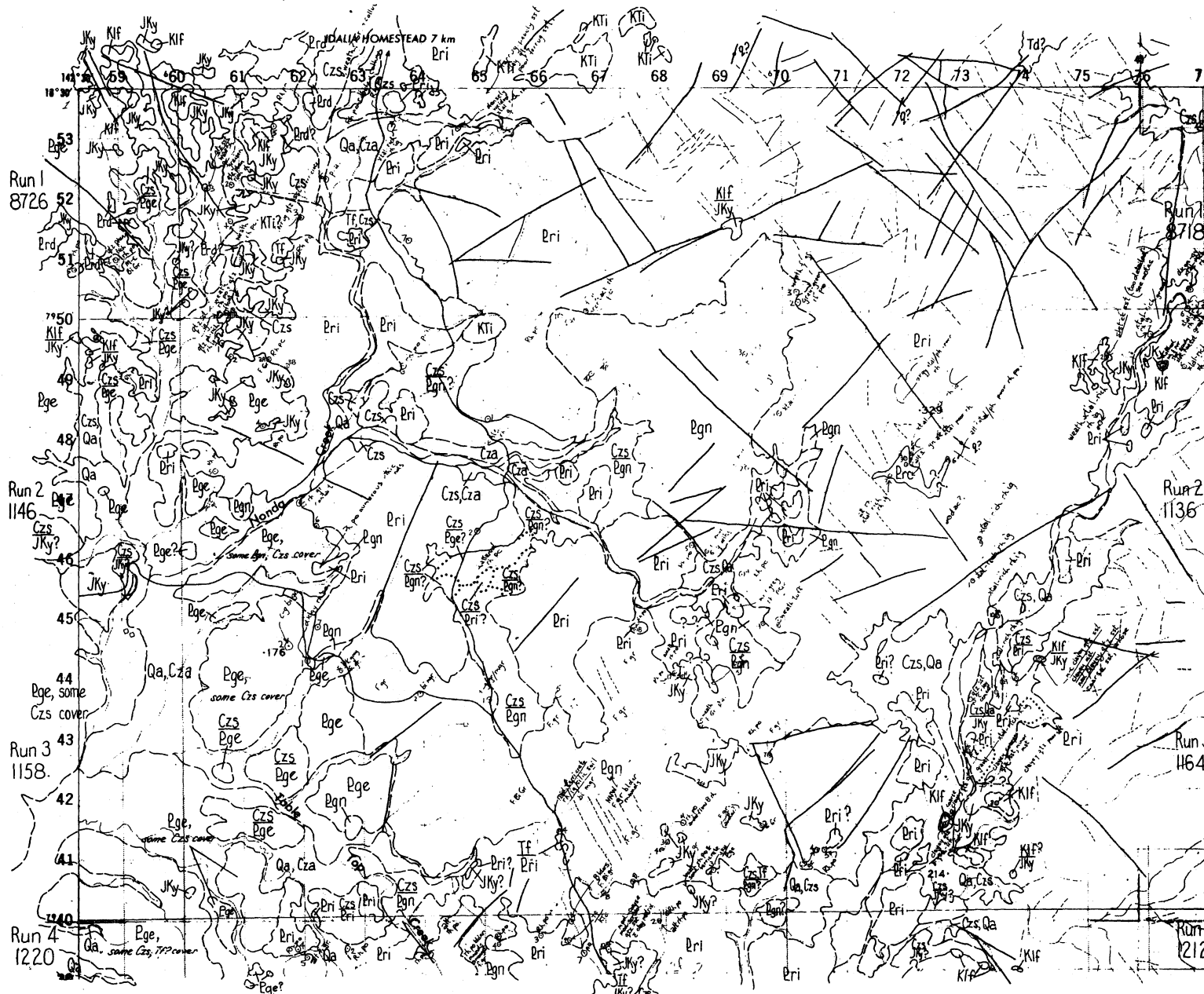
Es Stockyard Creek Mudstone Member: Dark grey to black carbonaceous mudstone and siltstone, variably pyritic

Ec2 Light grey to black variably carbonaceous and pyritic mudstone and siltstone; minor lithic sandstone; rare calcareous rocks and impure limestone. Commonly red-brown to purple in outcrop, due to Fe oxides

Ec1 White Bull Member: Dark grey siliceous/quartzose siltstone, grey sublitic to lithic fine sandstone, variably carbonaceous mudstone and siltstone

Ec1 Light to dark grey mudstone and siltstone, carbonaceous in part; fine lithic and sublitic sandstone; minor siliceous siltstone; rare calcareous rocks and impure limestone; gypsum casts or moulds present in places

Ph3 Helman Formation (uppermost subunit): Sericitic sublitic to labile (lithic and feldspatholithic) sandstone, sandy siltstone, and mudstone; characteristic dark grey flinty siliceous siltstone to fine sandstone (10 to 30 percent)



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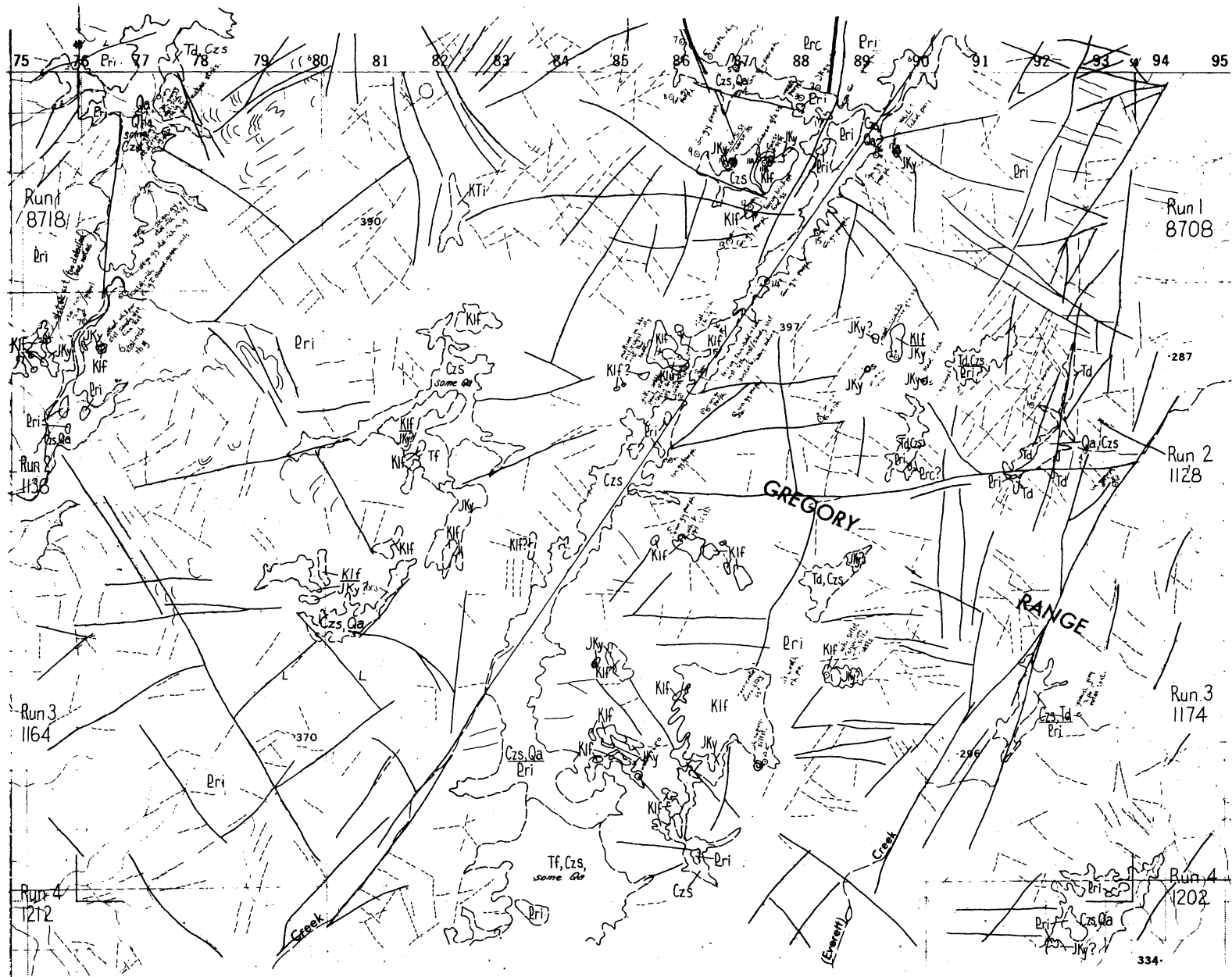
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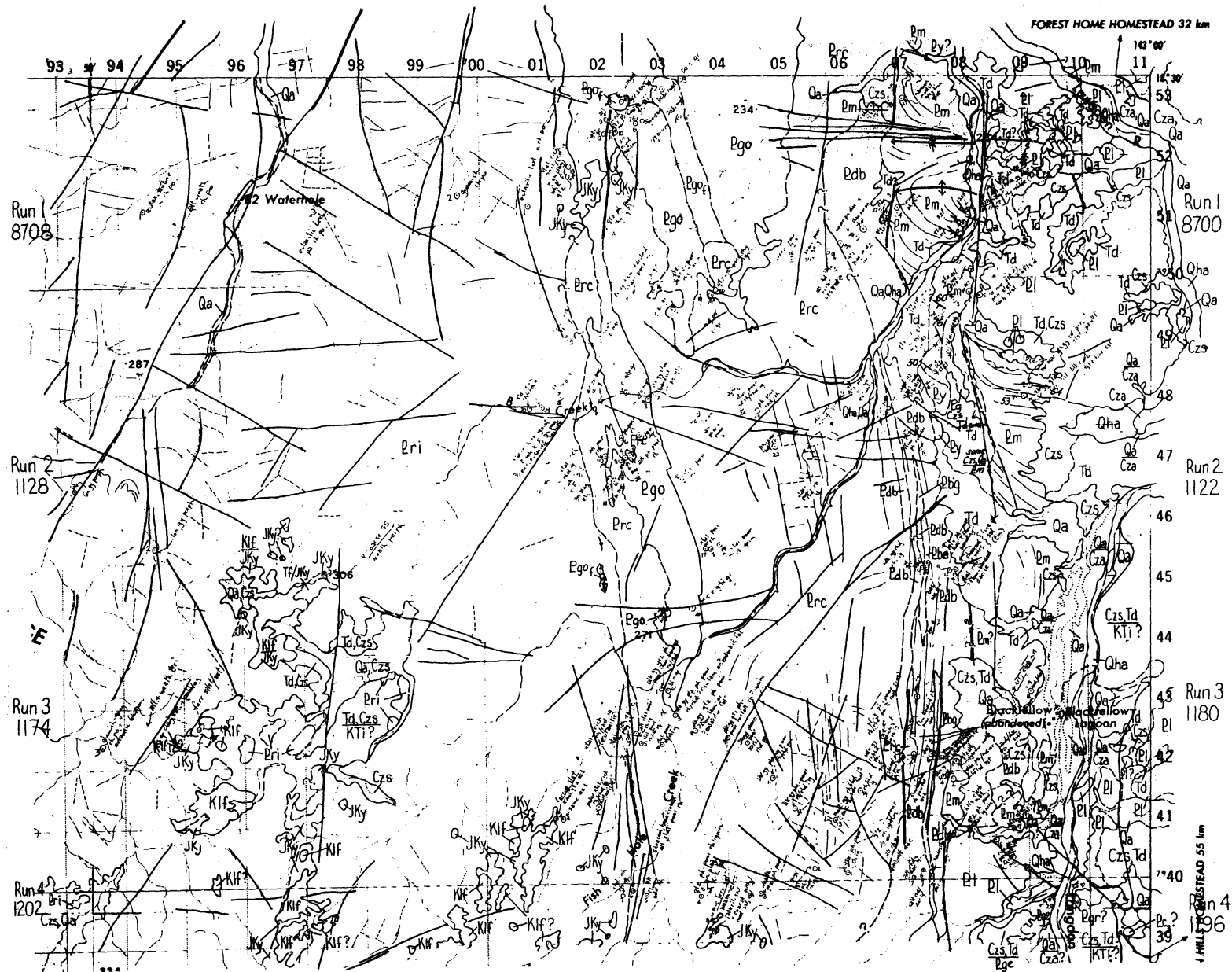
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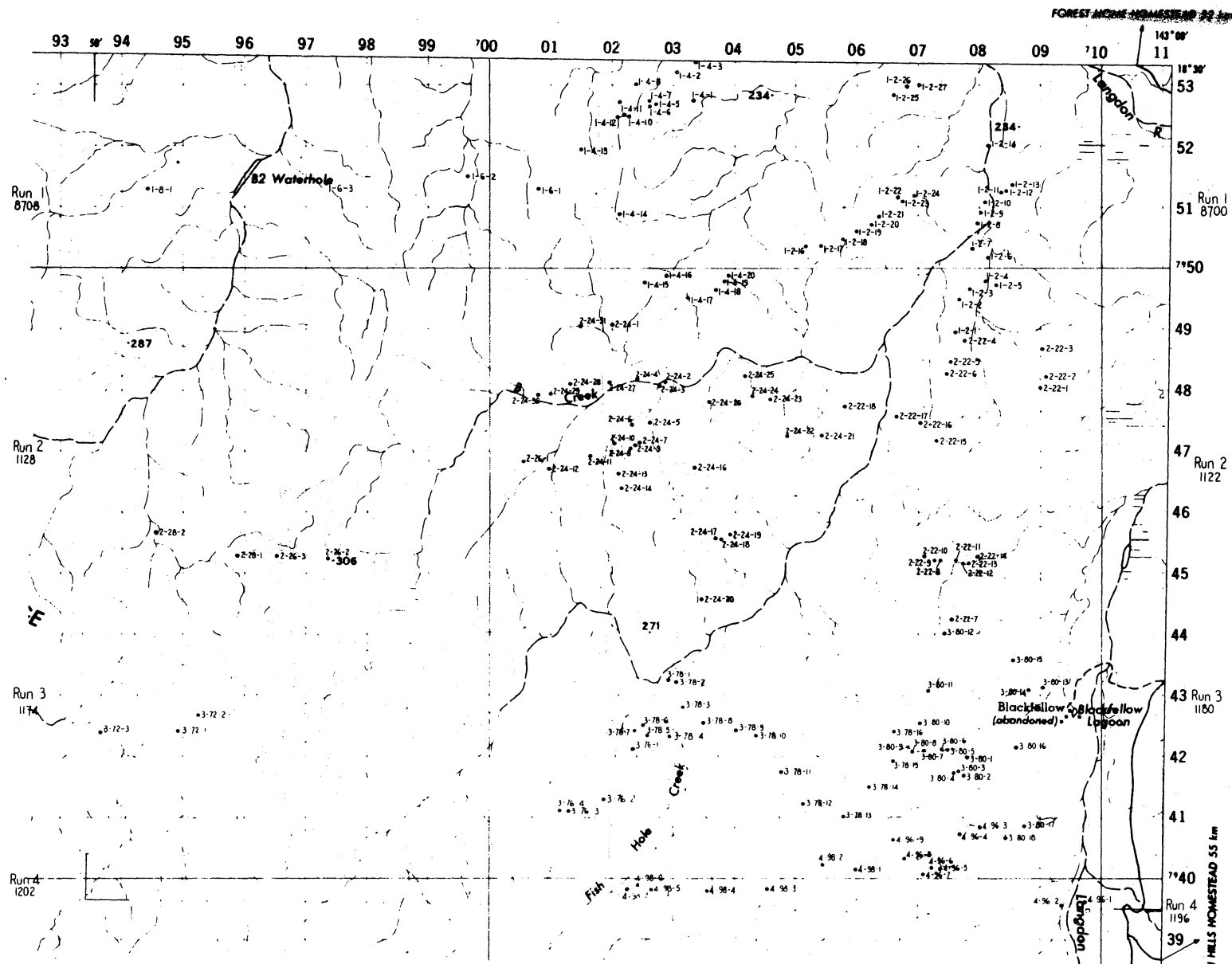
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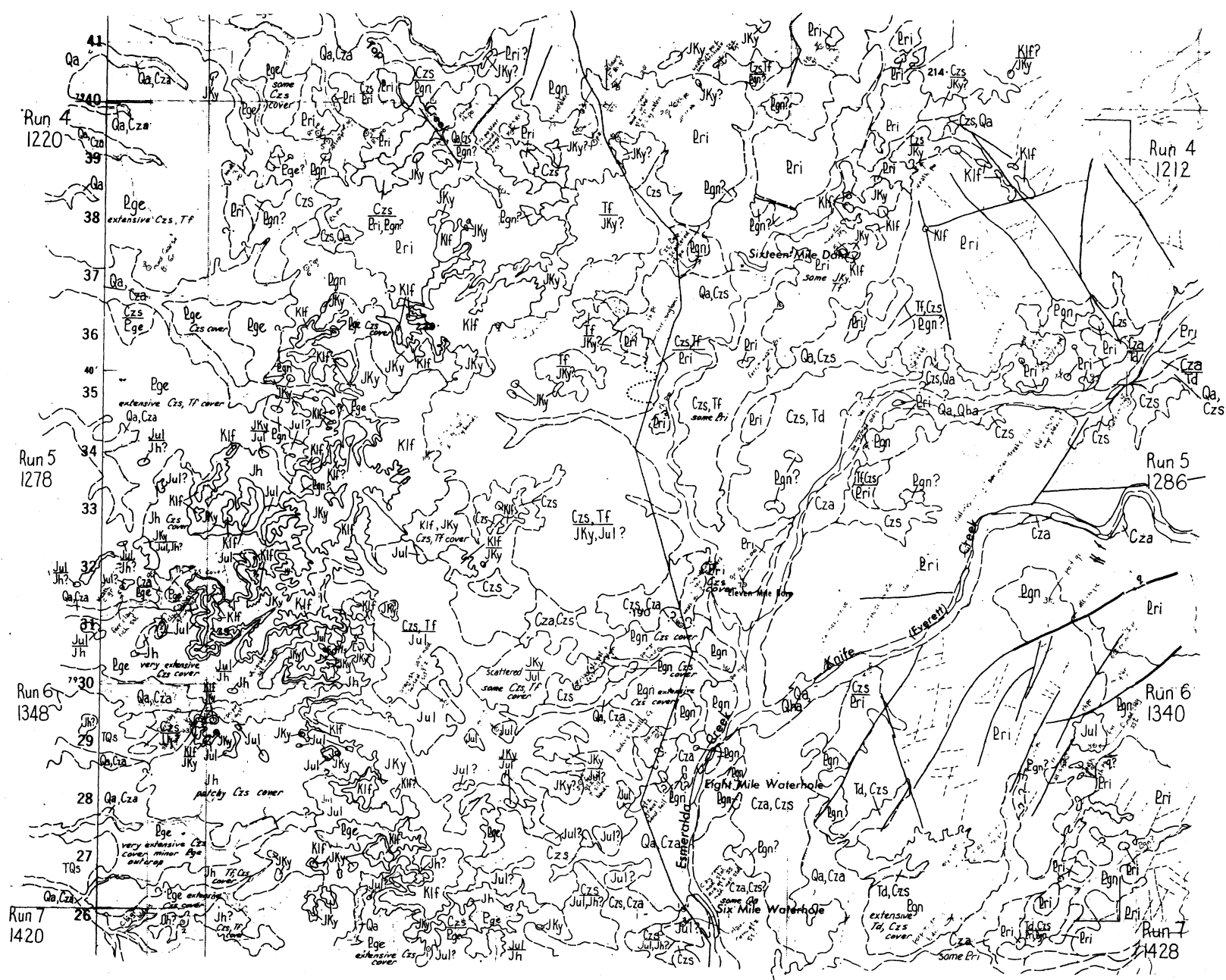


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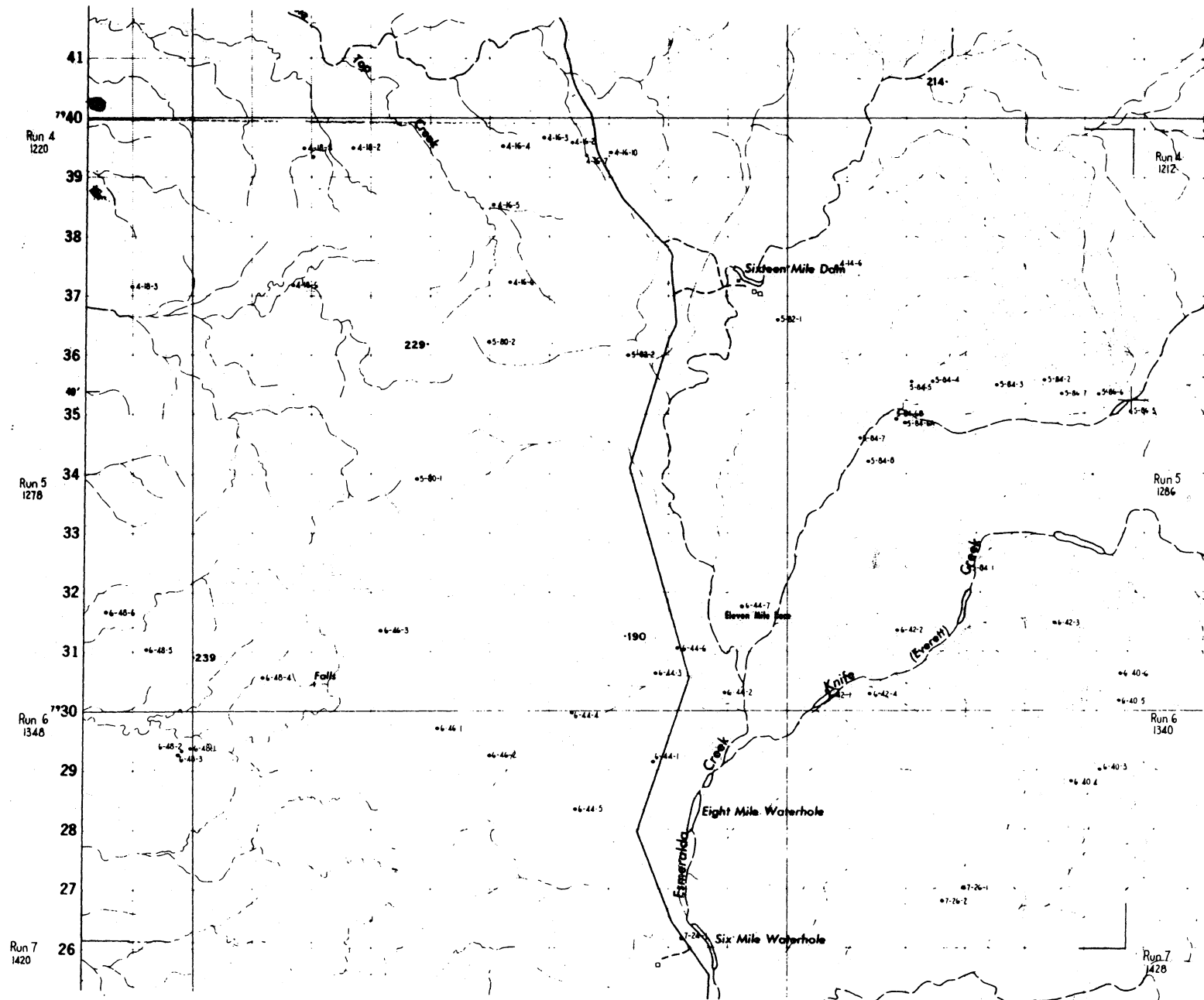
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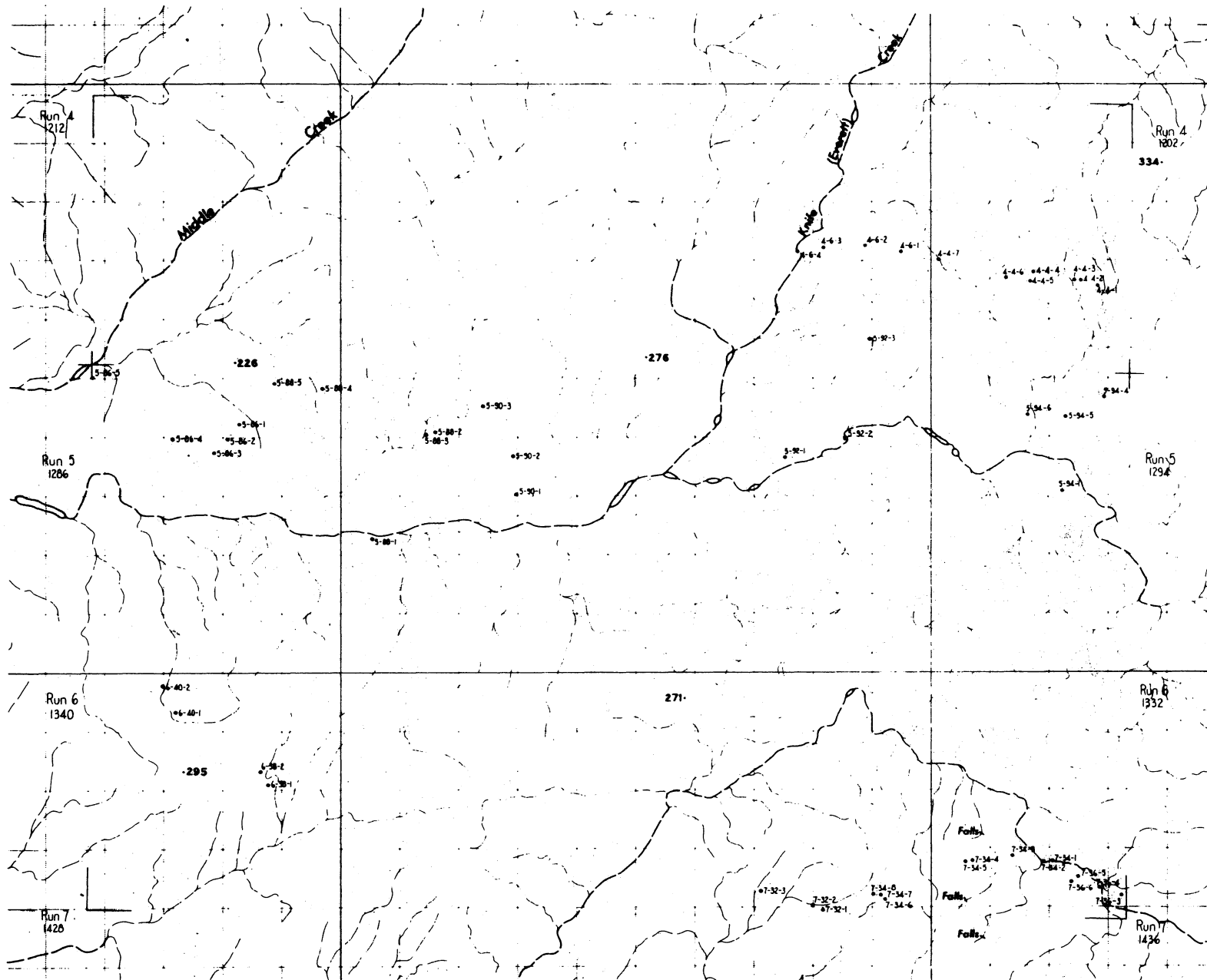
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16/E54-12/22(B)

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Run 6
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Run 7
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Run 4
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Run 5
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Run 6
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Run 7
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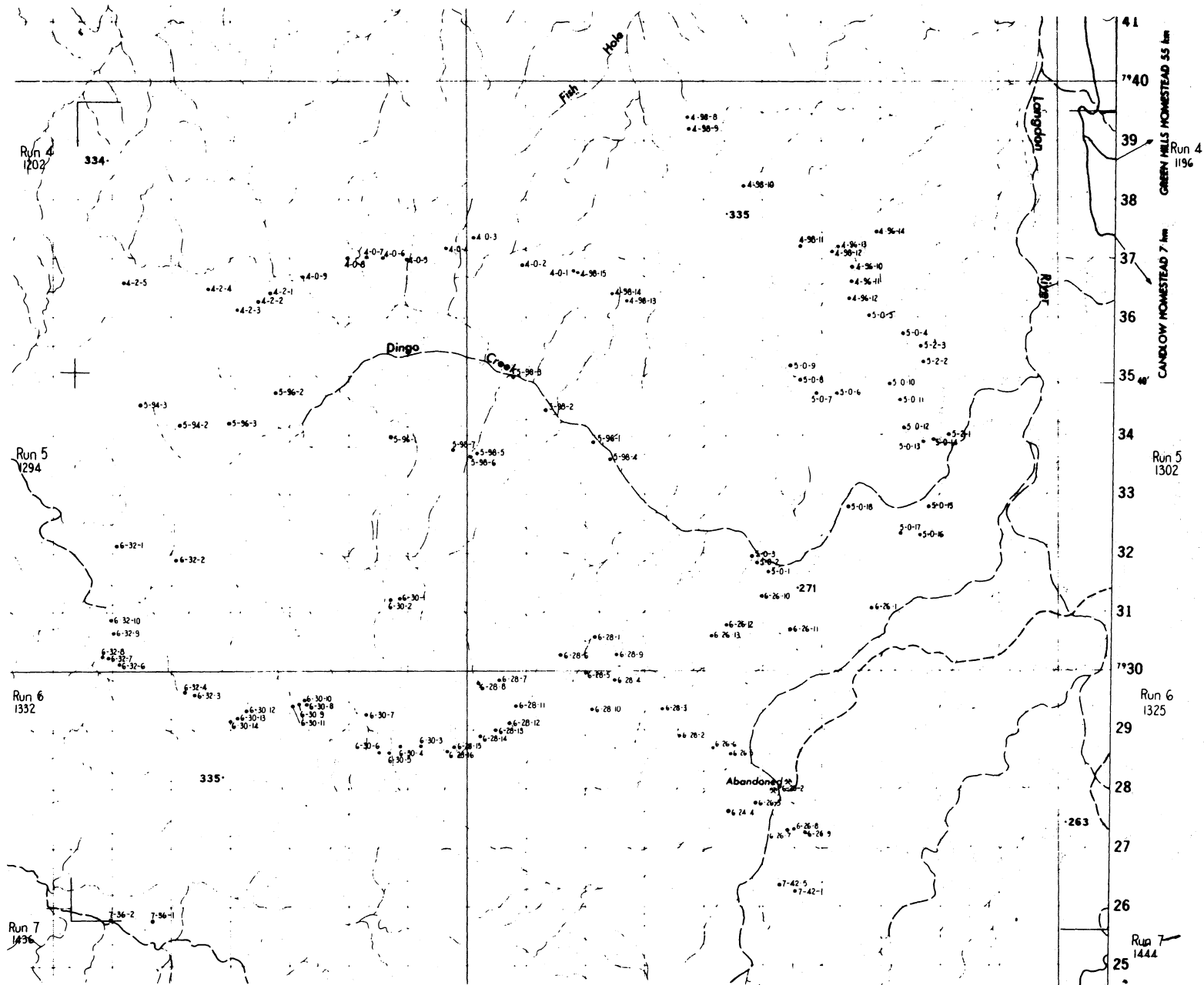
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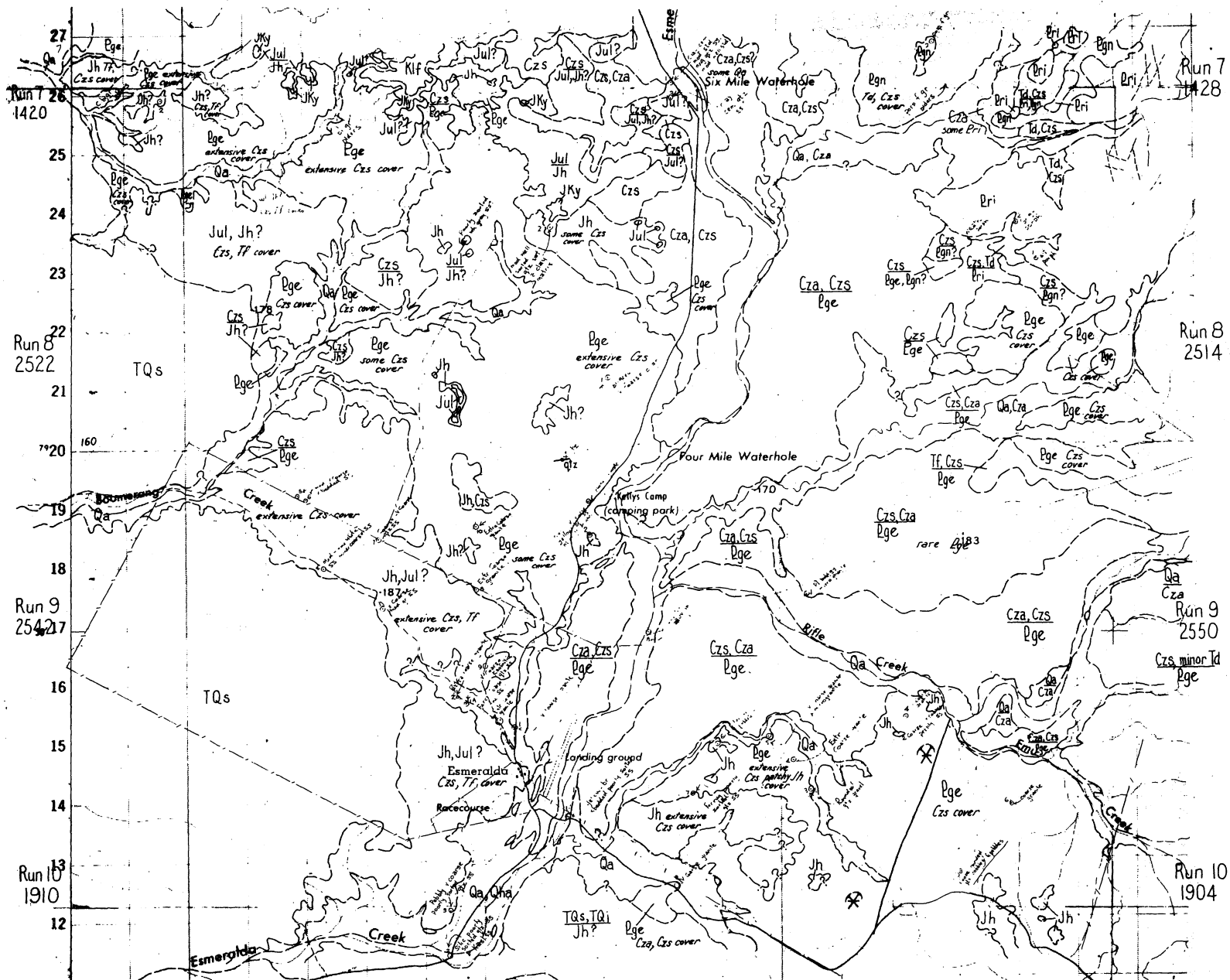
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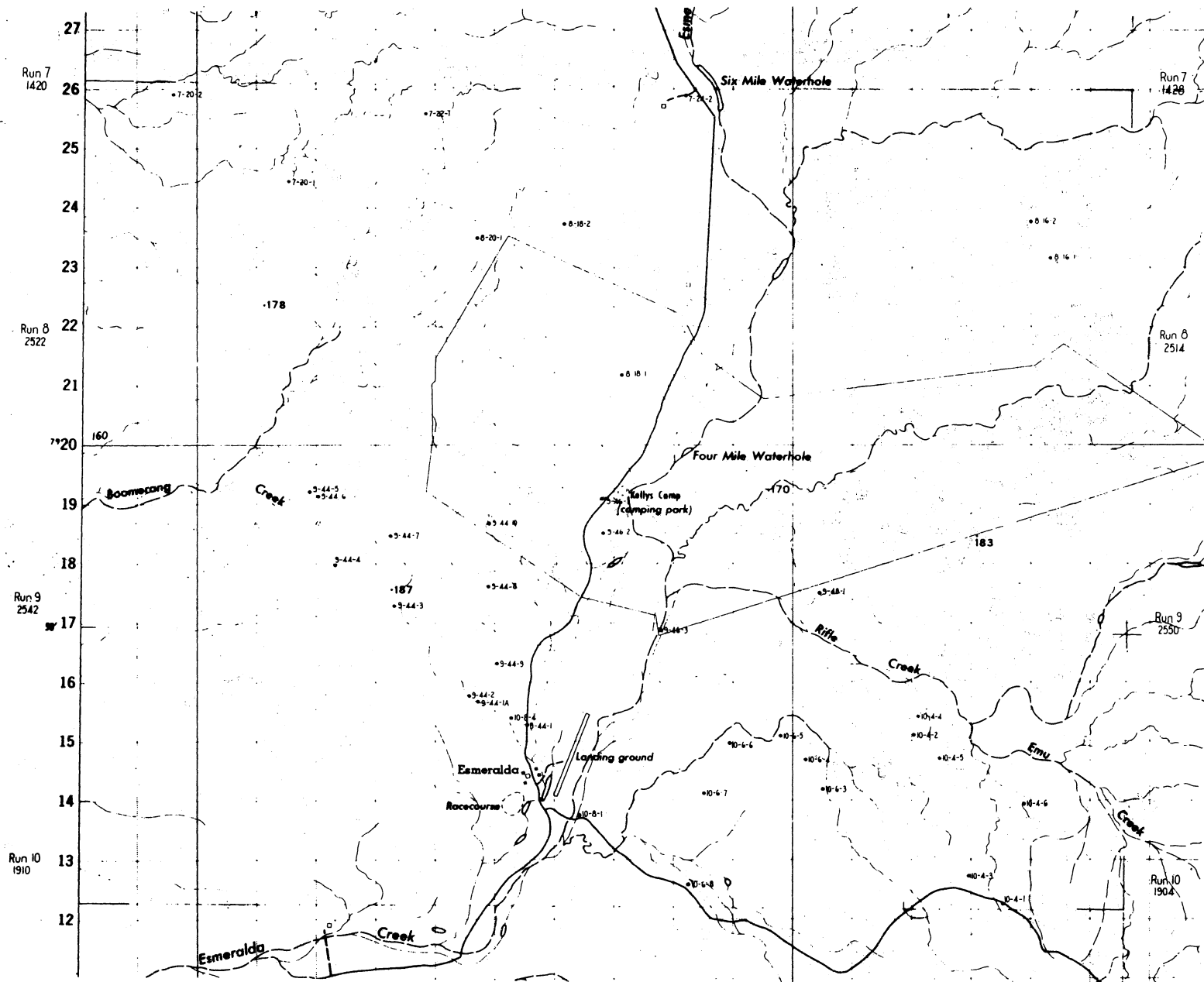
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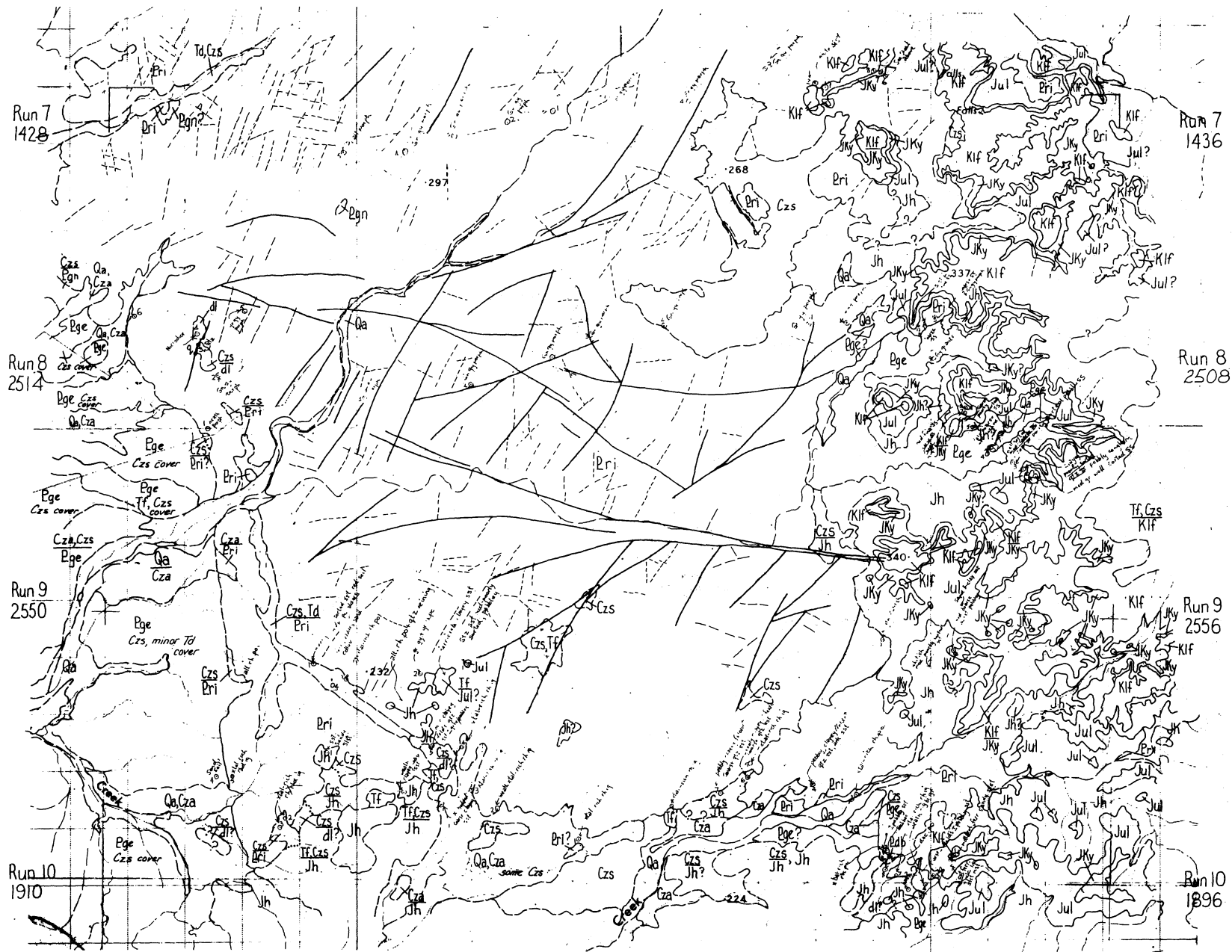
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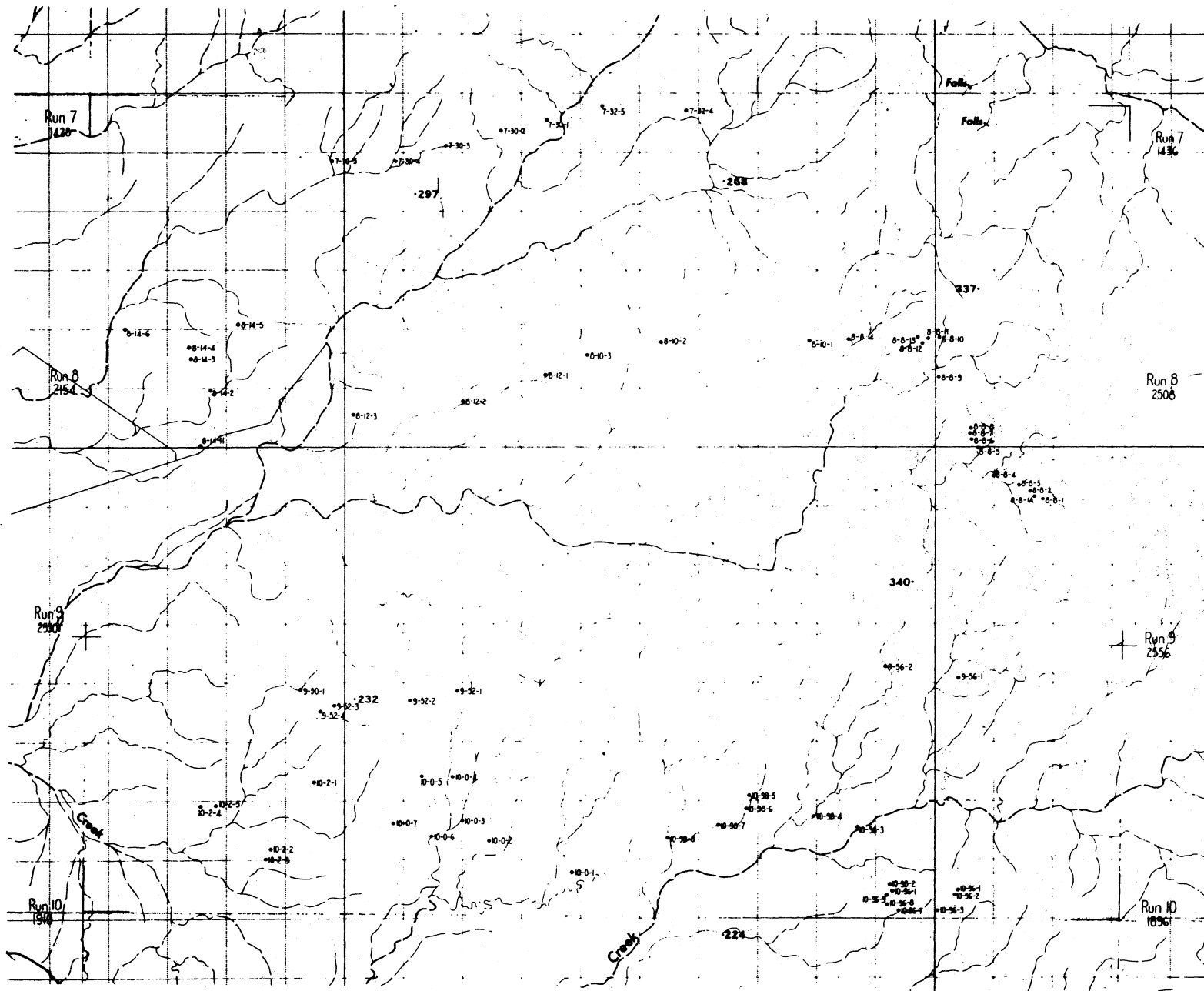
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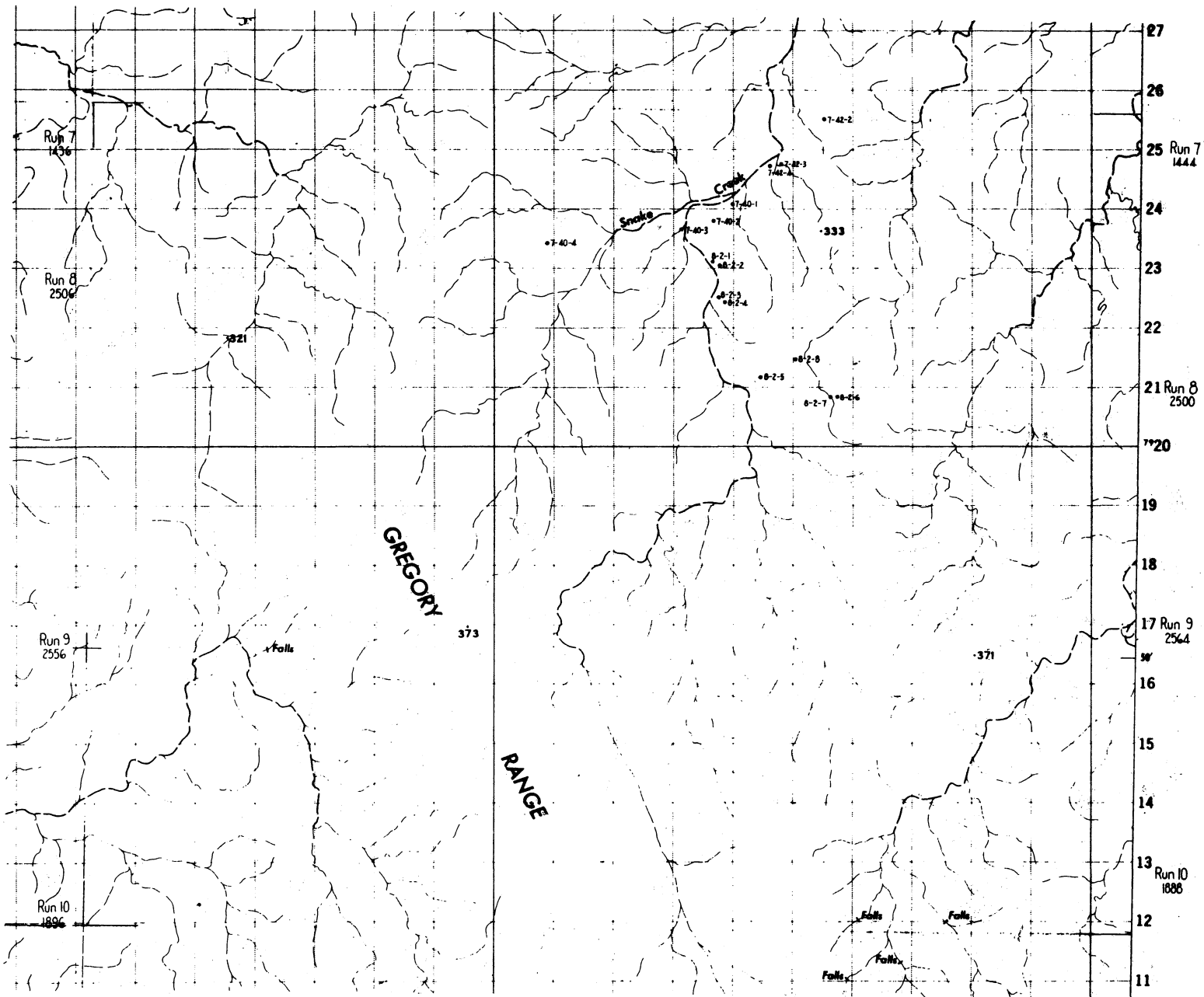
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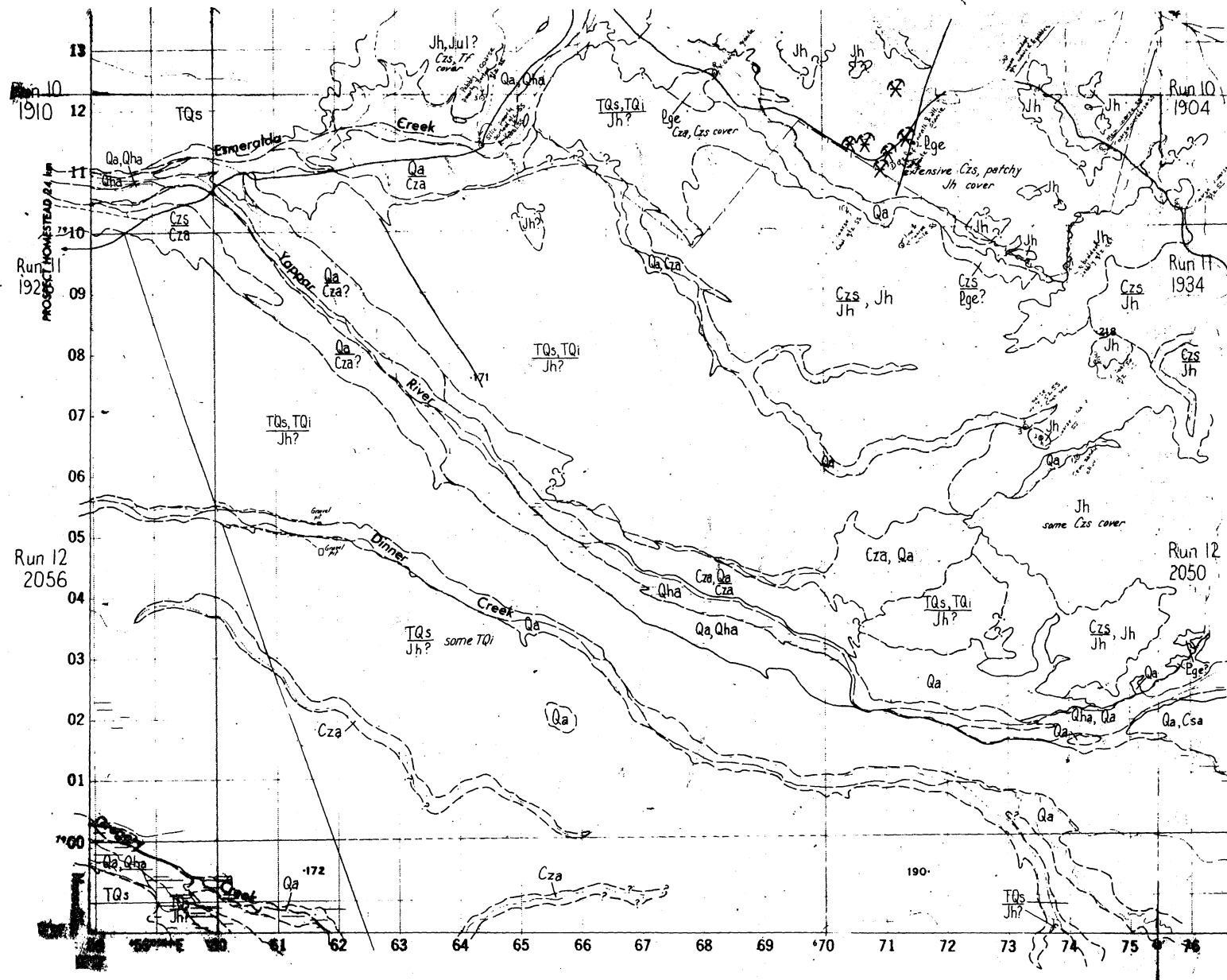
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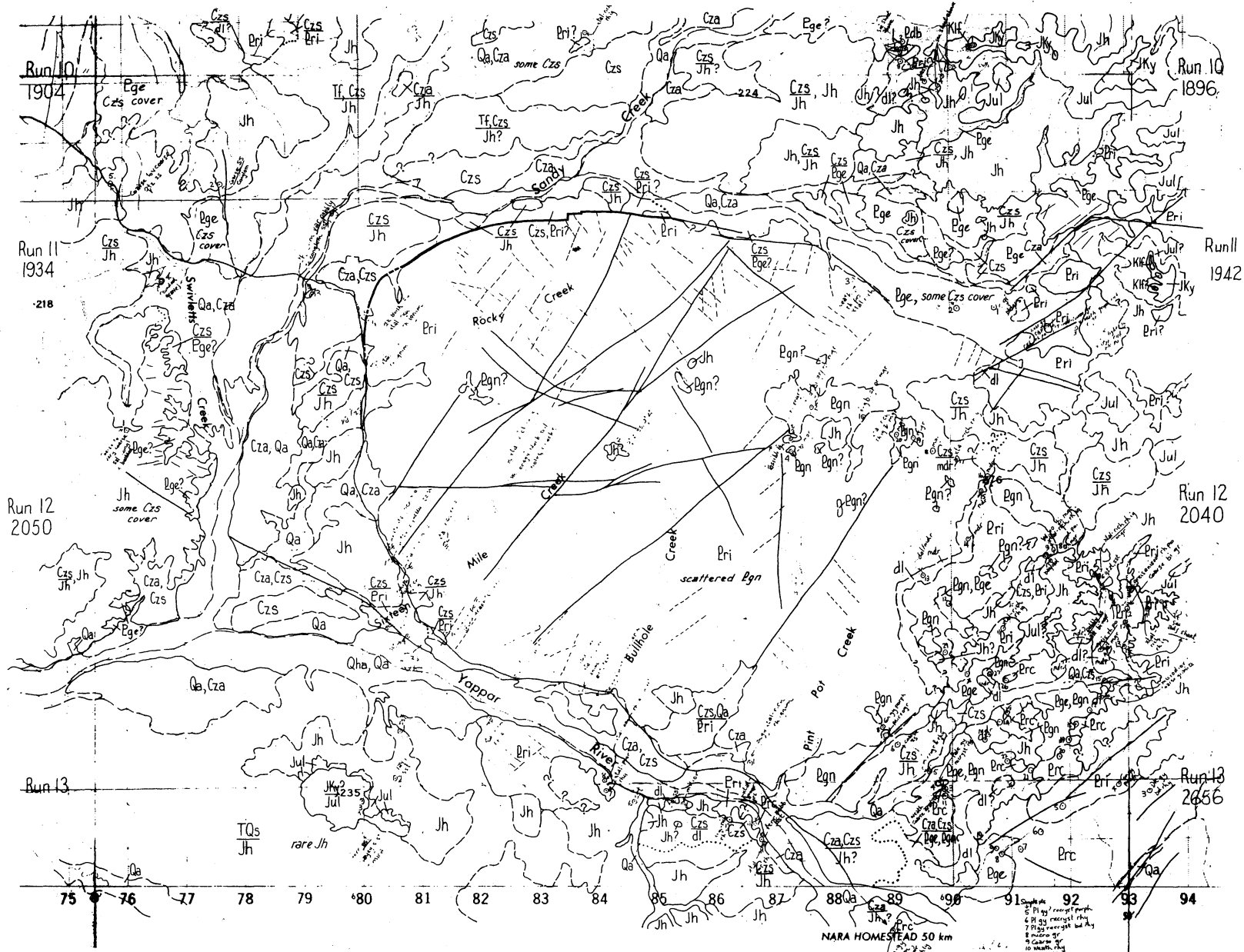
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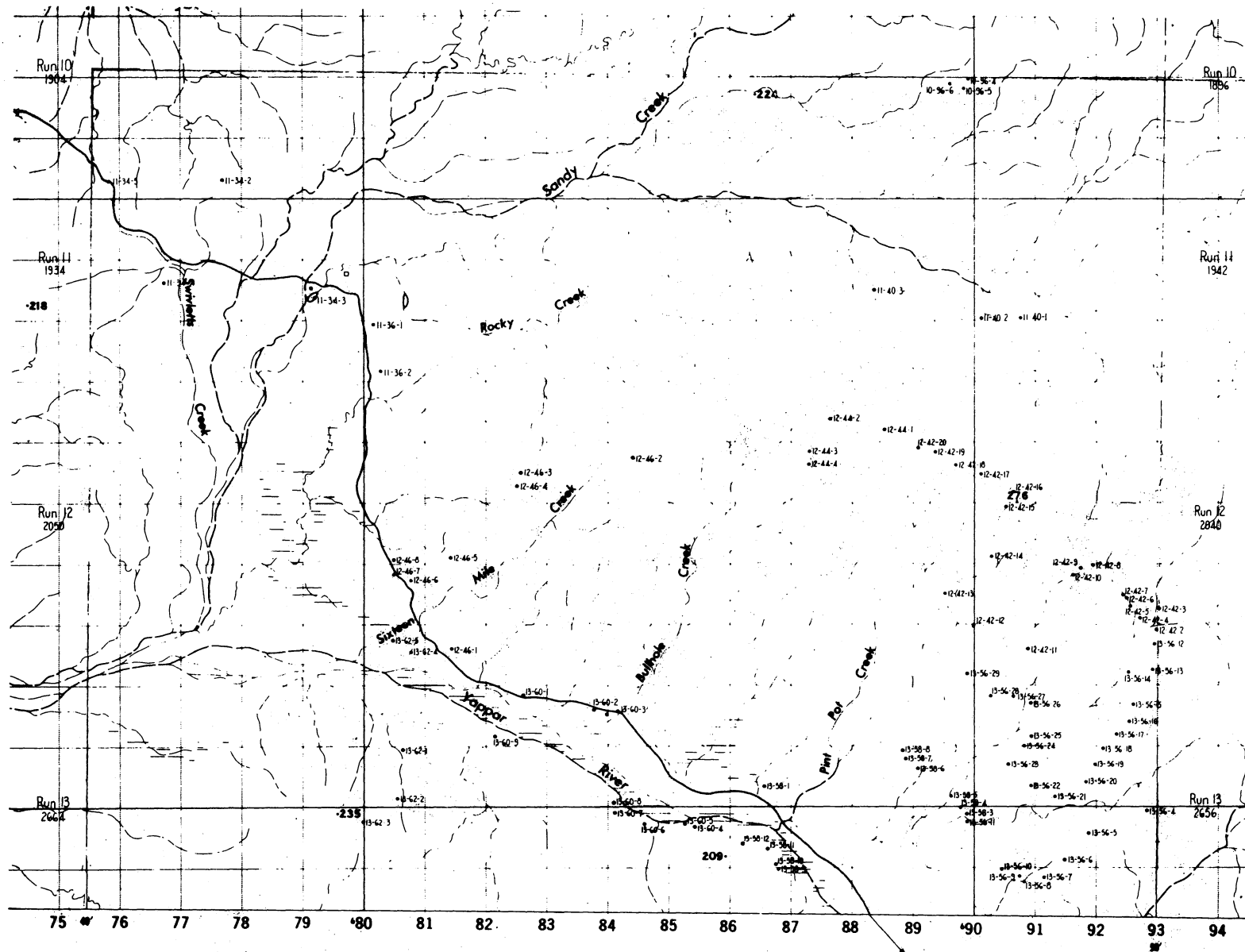
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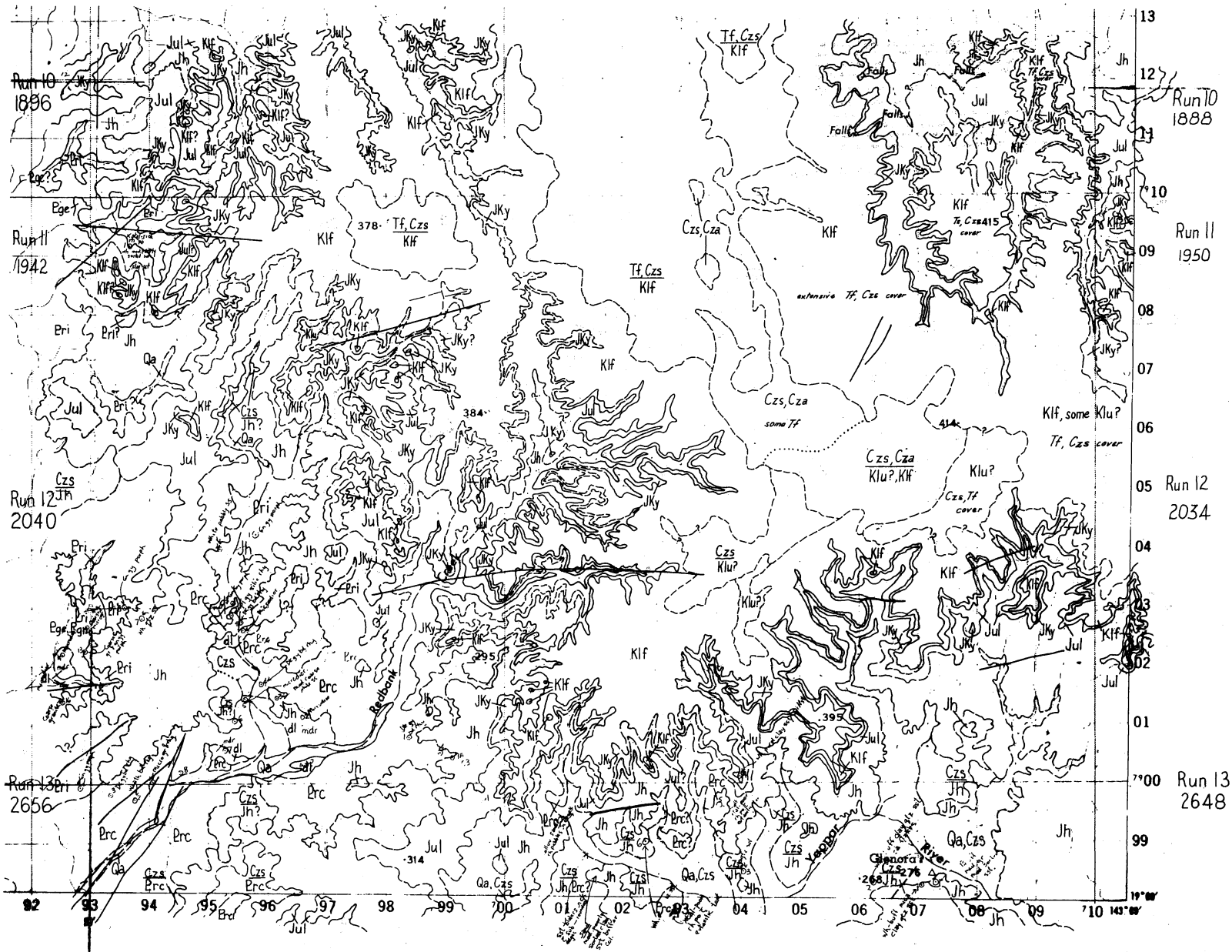
NARA HOMESTEAD 50 km

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ESMERALDA

Geology 1980 by D.E. Mackenzie, G.A.M. Henderson, BMR,
J.V. Warnick, GSG

Compiled 1980-81 by C.P. Knight, P.J. Corbett

Scale 1:100 000

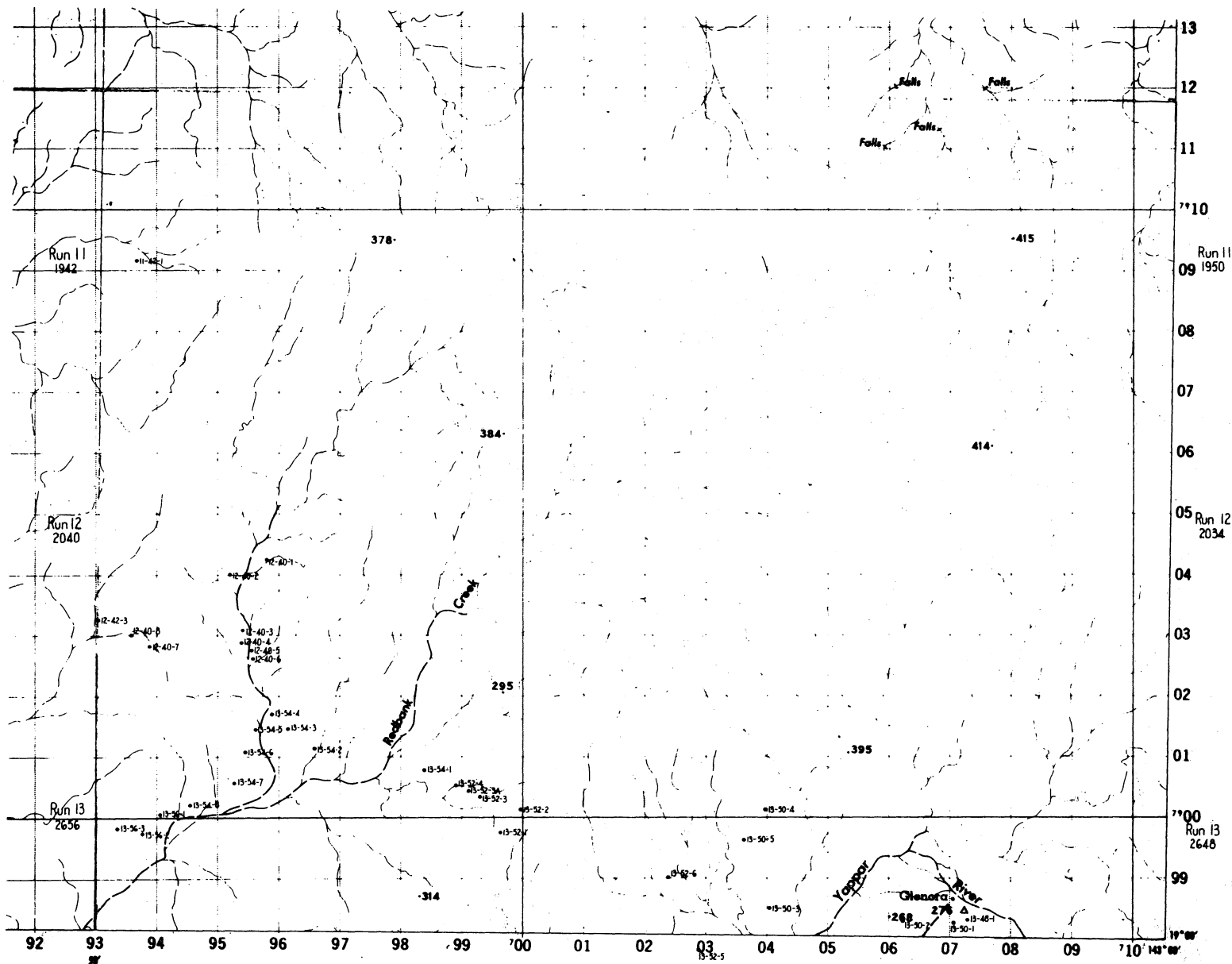
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16/E54-12/29(B)



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PROSPECT

Geology 1980 by D E Mackenzie, G A M Henderson, BMR;
J V Warnock, G S Q

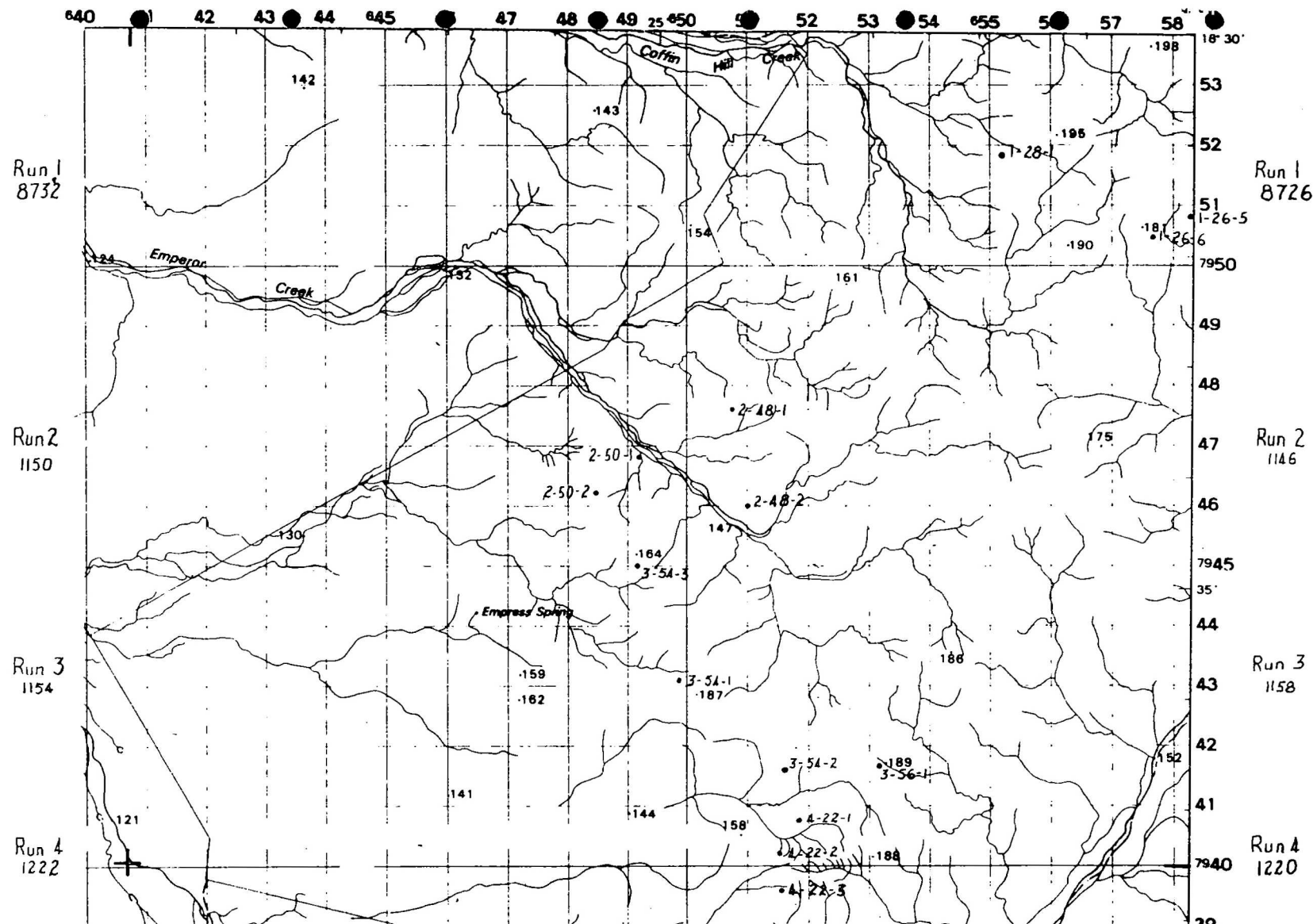
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PROSPECT

Geology 1980 by D.E. Mackenzie, G.A.M. Henderson, BMR;
J.V. Wornick, G.S.Q.

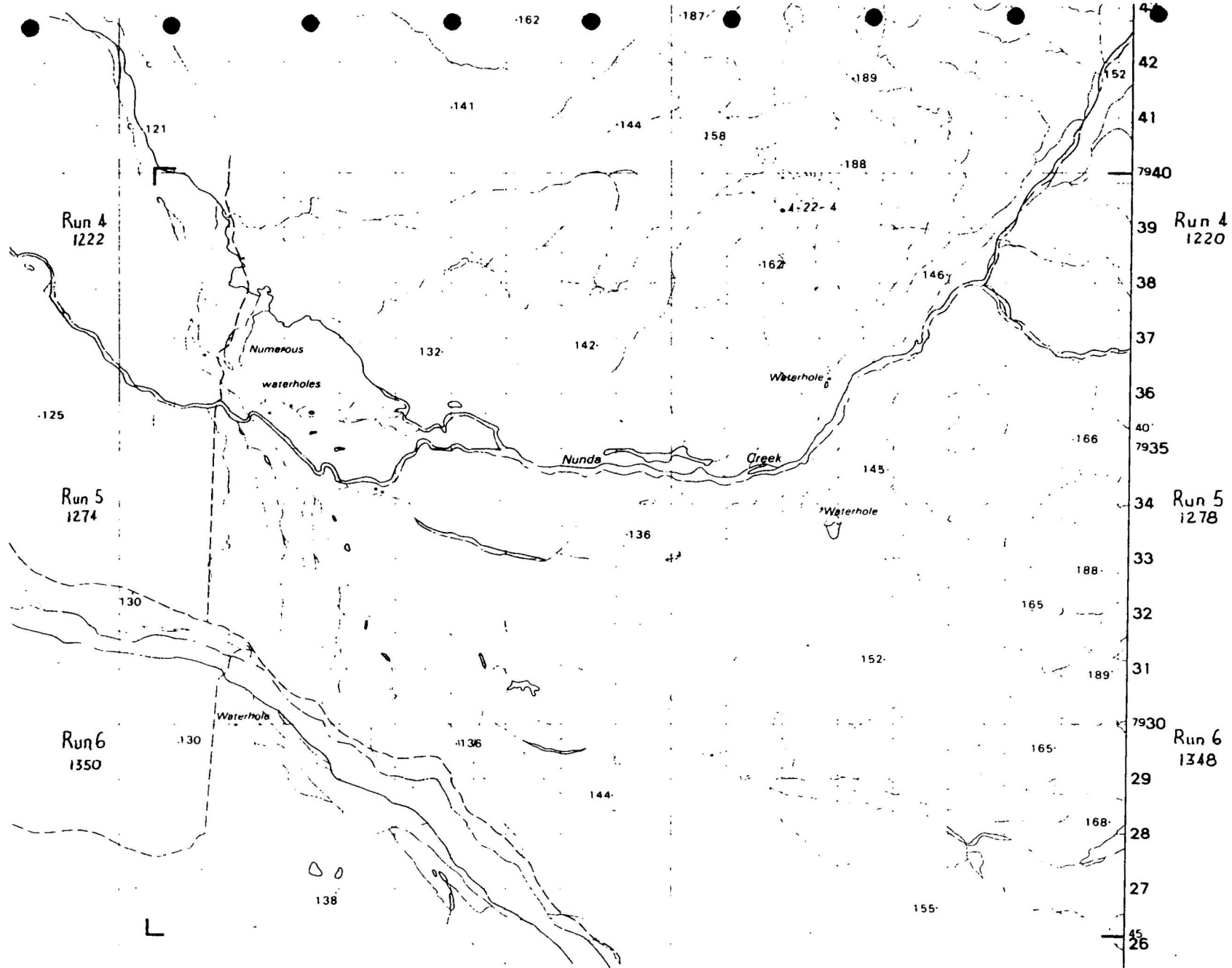
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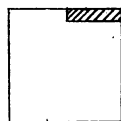
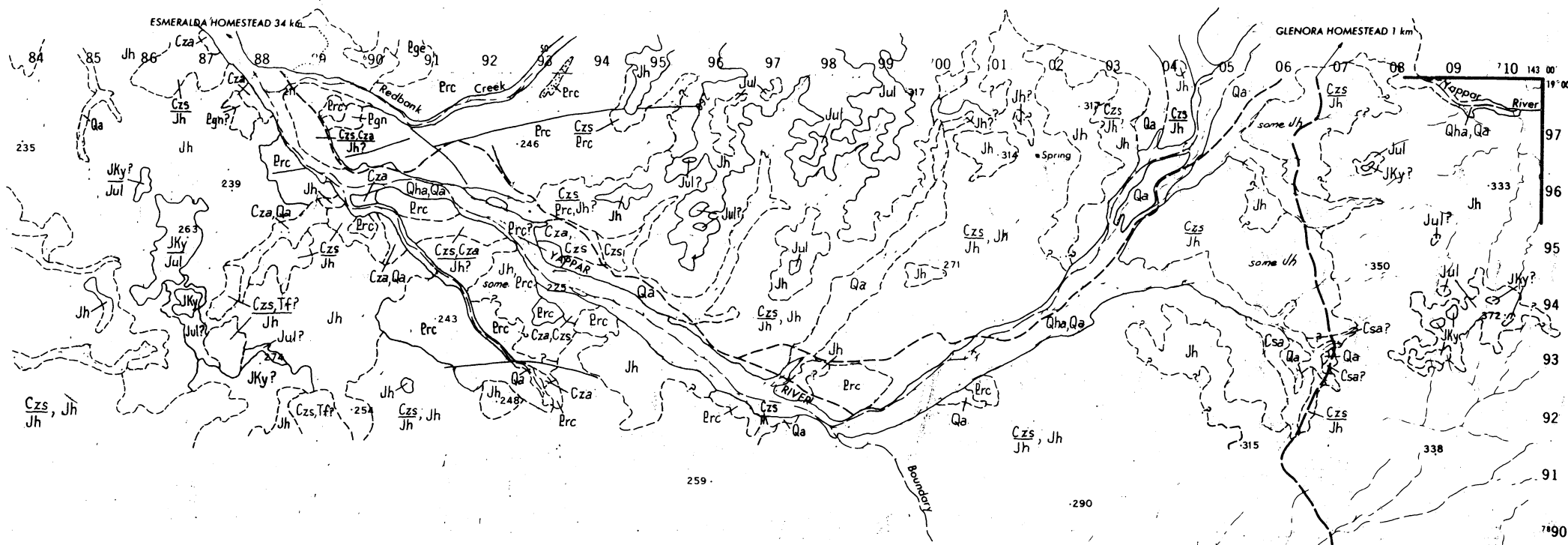


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PELHAM

Geology 1980 by D.E. Mackenzie, G.A.M. Henderson, BMR;
J.V. Warrick, GSO

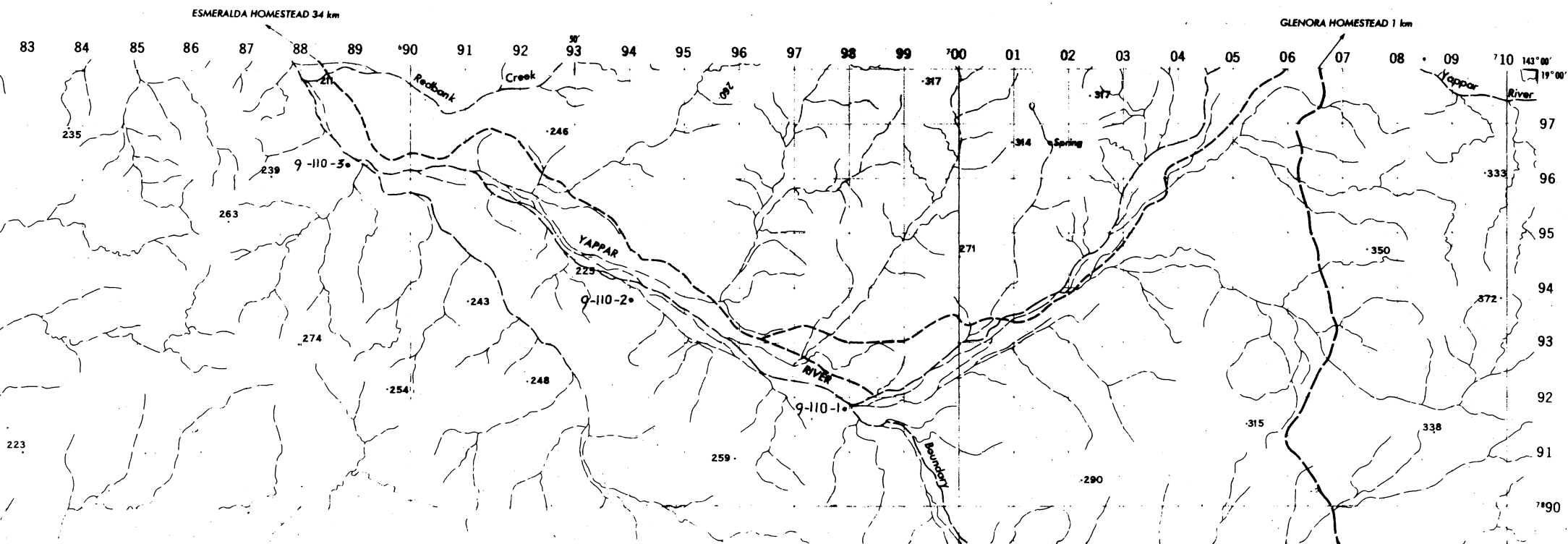
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