

JOANNA SPRING
WESTERN AUSTRALIA

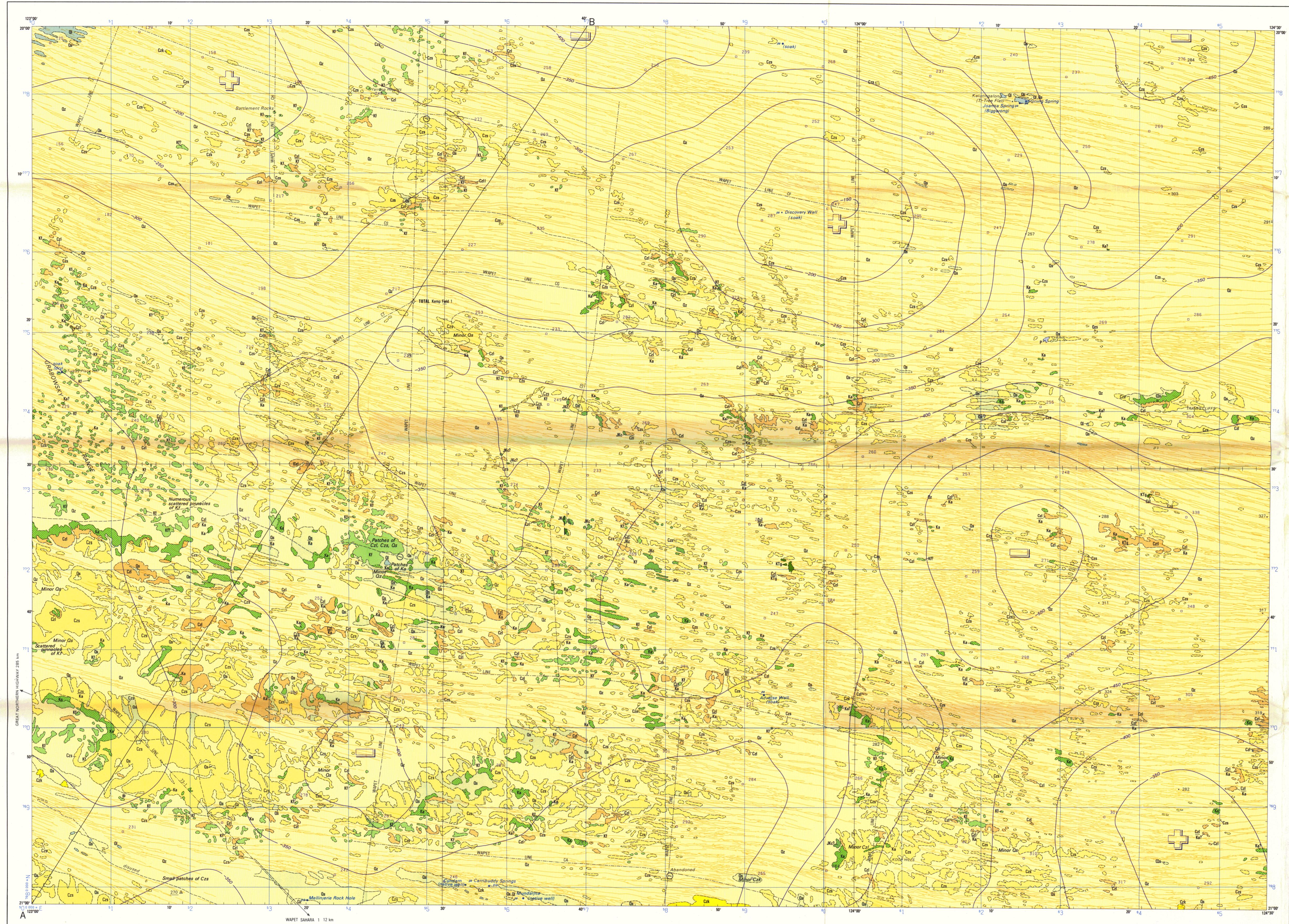
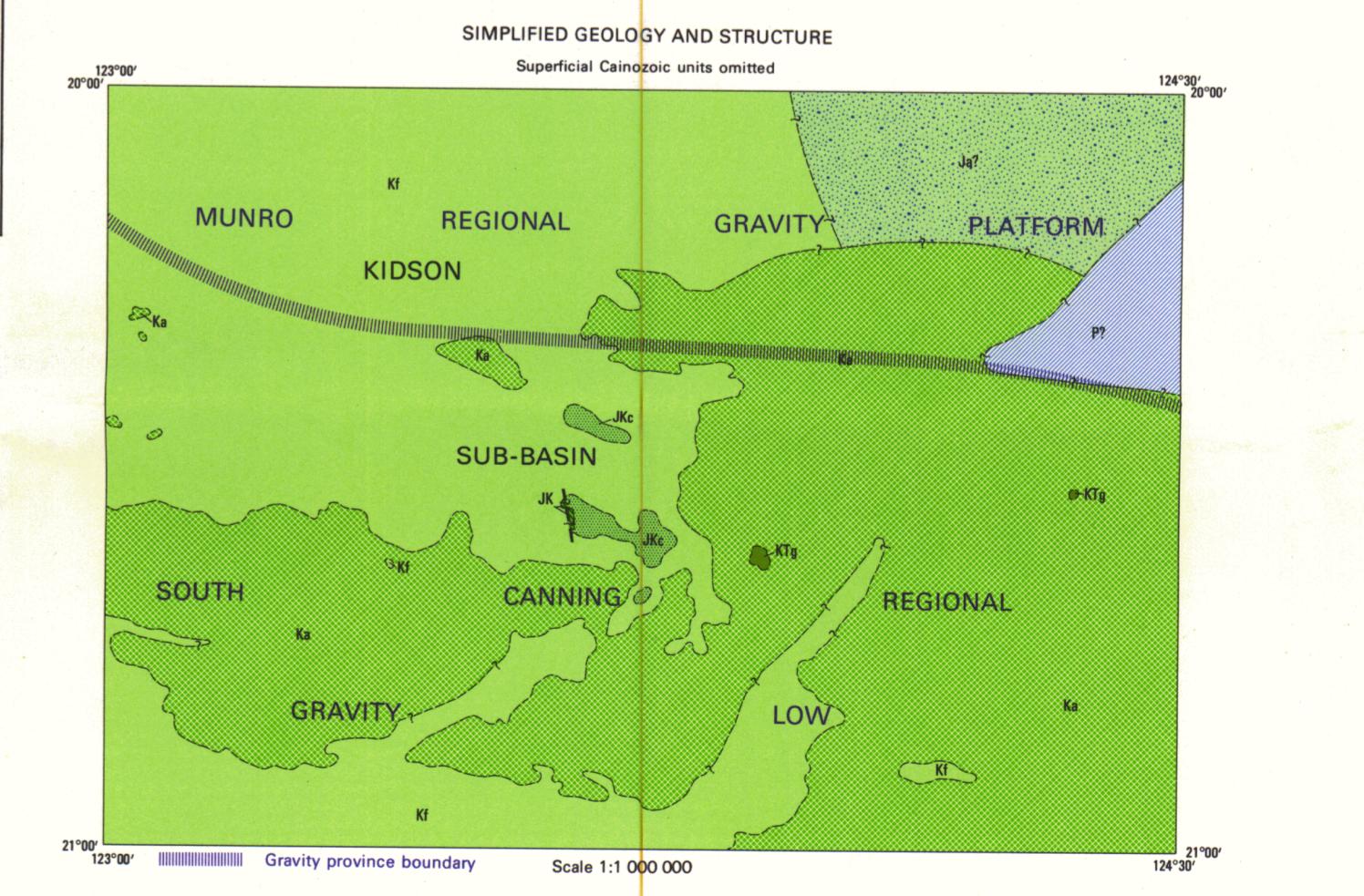
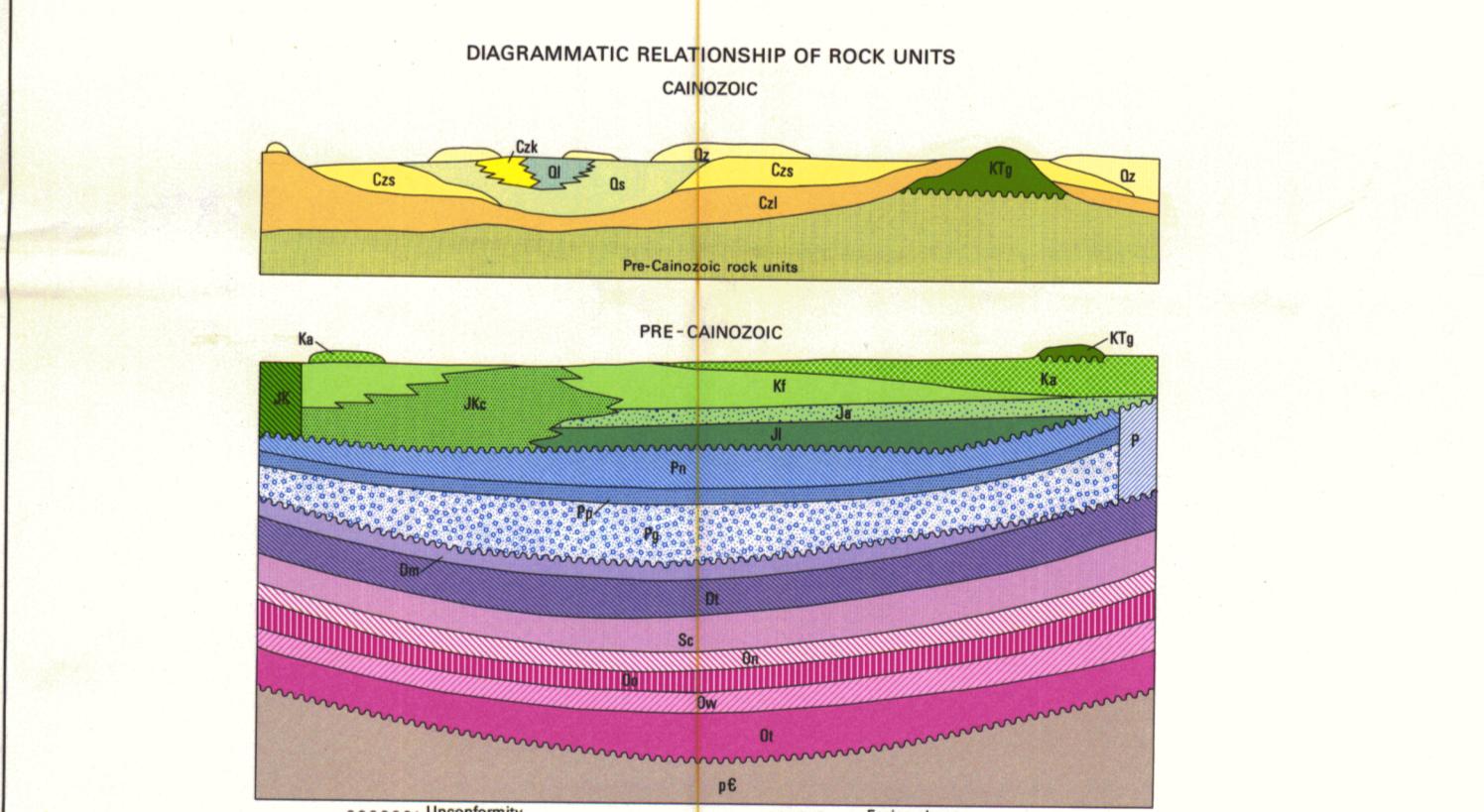
SHEET SF 51-3



Q1	Clay, silt, sand; minor gypsum: lacustrine
Q2	Sand, silt; minor gravel; mixed aeolian and aeolian
Q3	Red sand, fine to medium; minor silt; aeolian
Ck	Calcareous; minor chalcocite; evaporitic, pedogenic
Cs	Sand, silt, ferruginous pisoliths; minor gravel, clay; pedogenic; gravel plains overlying C1
Cd	Lenticular, pisolithic or massive; pedogenic
K1g	Sandstone, fine to coarse; poorly sorted, massive; fluvial and pedogenic
K2g	Fine sandstone, siltstone, interbedded with coarse sandstone and granule conglomerates; laminated to thin-bedded; bioturbated; probably paralic
K3g	Sandstone, fine to coarse, poorly sorted; dolostatic, poorly bedded, some relict cross-bedding; fluvial to deltaic, probably pedogenic
K4g	Sandstone, fine to medium; interbedded mudstone, bioturbated, fossiliferous shallow water marine
J1g	Sandstone, minor siltstone, conglomerate; paleomorphs: probably paralic
P	Sandstone, very fine to fine, well sorted, thin-bedded
Pn	Mudstone, calcareous, micaceous; fine sandstone, limestone interbedded; fossiliferous marine
Pp	Sandstone, very fine to fine; interbedded siltstone; thick-bedded; clay pellet lenses; shallow water marine
Pt	Sandstone, fine to coarse; mudstone; minor conglomerate
Dm	Dolomitic limestone, dolomite, shale; minor sandstone, anhydrite
Di	Fine sandstone, reddish brown; minor siltstone, shale, limestone
Sc	Dolomite, dolomitic limestone, shale, anhydrite; minor sandstone
St	Limestone, dolomitic, interbedded shale
Sh	Shale, black, fossiliferous, carbonaceous, pyritic; interbedded limestone, dolomitic; minor siltstone lenses
Sw	Limestone, dolomitic, fossiliferous; interbedded shale and siltstone
Sh	Shale, grey to green; interbedded limestone and fine sandstone
p6	Igneous, metamorphic, and sedimentary rocks

QUATERNARY	
CRETACEOUS TO TERTIARY	
EARLY CRETACEOUS	Lake George Beds
Anketell Sandstone	
Frezier Sandstone	
JURASSIC TO EARLY CRETACEOUS	
LATE JURASSIC	Callawa Formation
EARLY ? TO LATE JURASSIC	Alexander Formation
PERMIAN	Wallal Sandstone
EARLY PERMIAN	Noonkanbah Formation
Poole Sandstone	
Grant Group	
MESOZOIC	
MIDDLE DEVONIAN	Mellinjerie Limestone
EARLY DEVONIAN	Tandalgo Red Beds
LATE ORDOVIOC ?	Cambugdy Formation
TO EARLY DEVONIAN	Nita Formation
MIDDLE ORDOVIOCIAN	Goldwyer Formation
EARLY ORDOVIOCIAN	Willara Formation
Nambeet Formation	
PALAEZOIC	
PRECAMBRIAN	

Geological boundary	
Fault	
Where location of boundaries, folds and faults is approximate, line is broken; where inferred, question mark is used; where concealed, boundaries and folds are dotted; faults are shown by short dashes	
Dip 5°-15°	
Trend-line	
Airphoto interpretation	
Joint pattern	
Macrofossil location	
Petroleum exploration well, dry, abandoned	
Well	
Spring	
Soil, native well	
Position approximate	

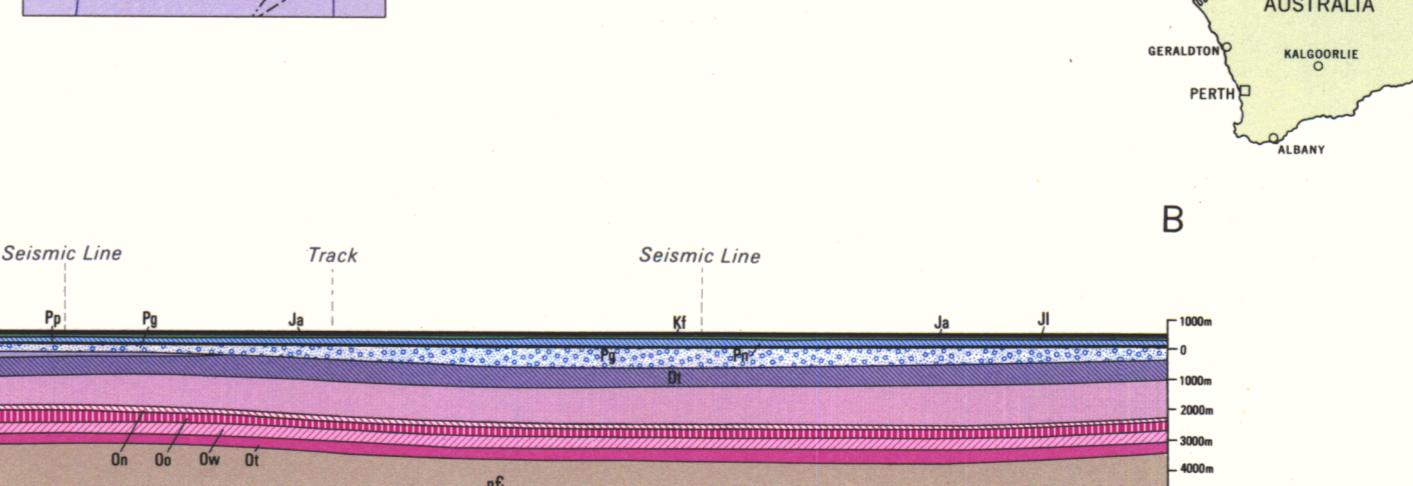
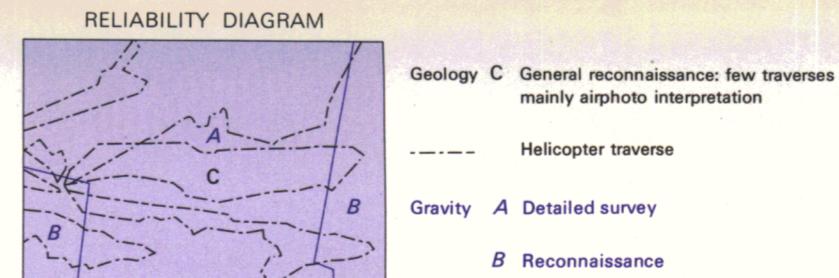


Published by the Bureau of Mineral Resources, Geology and Geophysics
Department of National Development and Energy, in conjunction with the
Geological Survey of Western Australia. Issued under the joint
authority of the Minister for National Development and Energy and the
Minister for Mines and Energy. This sheet is part of the State Map, compiled by
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SCALE 1:250000
BLUE NUMBERED LINES ARE 10 000 METRE INTERVALS OF THE AUSTRALIAN MAP GRID, ZONE 51
TRANSVERSE MERCATOR PROJECTION

5 0 5 10 15 20 25 Kilometres



A

B

FIRST EDITION 1980
JOANNA SPRING
SHEET SF 51-3

Copies of this map may be obtained from the Bureau of Mineral Resources, Geology and Geophysics, Canberra, A.C.T., or the Geological Survey of Western Australia, Perth.