

1963/165

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT
BUREAU OF MINERAL RESOURCES
GEOLOGY AND GEOPHYSICS

RECORDS:

1963/165

011087

COMPILATION AND REVIEW OF THE GEOPHYSICS OF THE

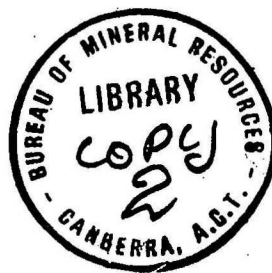
BONAPARTE GULF BASIN

GRAVITY COMPILATION

(Volume IV, Part 2)

by

A. L. Bigg-Wither



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PART 9
of 11

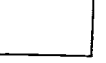
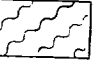
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SEISMIC SURVEYS

TO THE END OF 1962

(and in 1963, by Australian Aquitaine
Petroleum Pty Ltd, shown thus )

Plate 19

-  } B.M.R. 1956
-  AUSTRAL GEOPROSPECTORS 1960
-  GEOSEISMIC 1960
-  GENERAL GEOPHYSICAL 1962
-  G.S.I. 1962
-  MINES ADMIN. 1961

JOSEPH BONAPARTE

GULF

CAMBRIDGE
GULF

QUEENS
CHANNEL

Fitzmaurice
River

Victoria
River

Ninbing HS

Legune HS

OWYNDHAM

Carlton Hill HS

Spirit Hill No 1

Ivanhoe HS

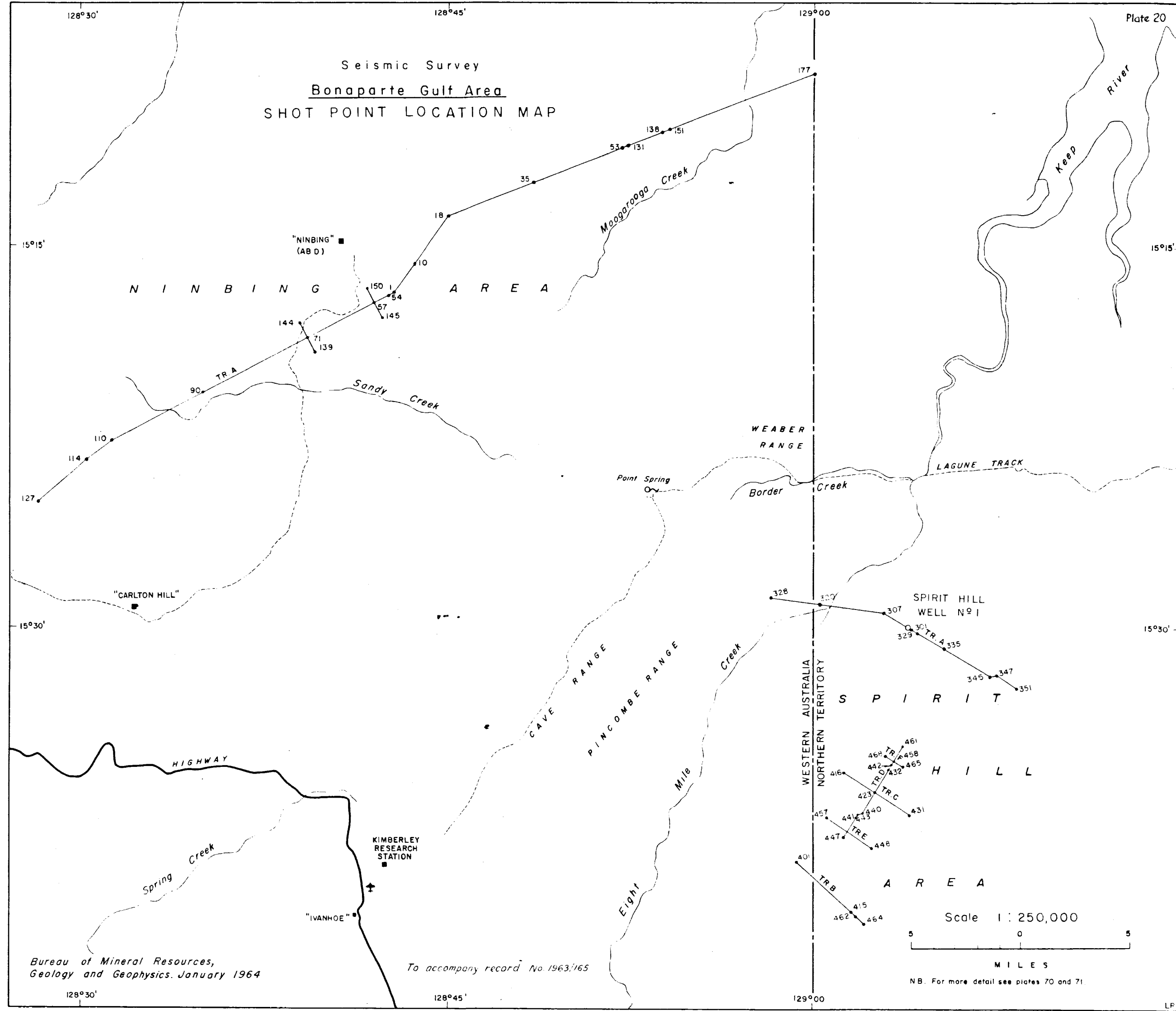
BURT RA

Auvergne HS

Scale 1:1,000,000



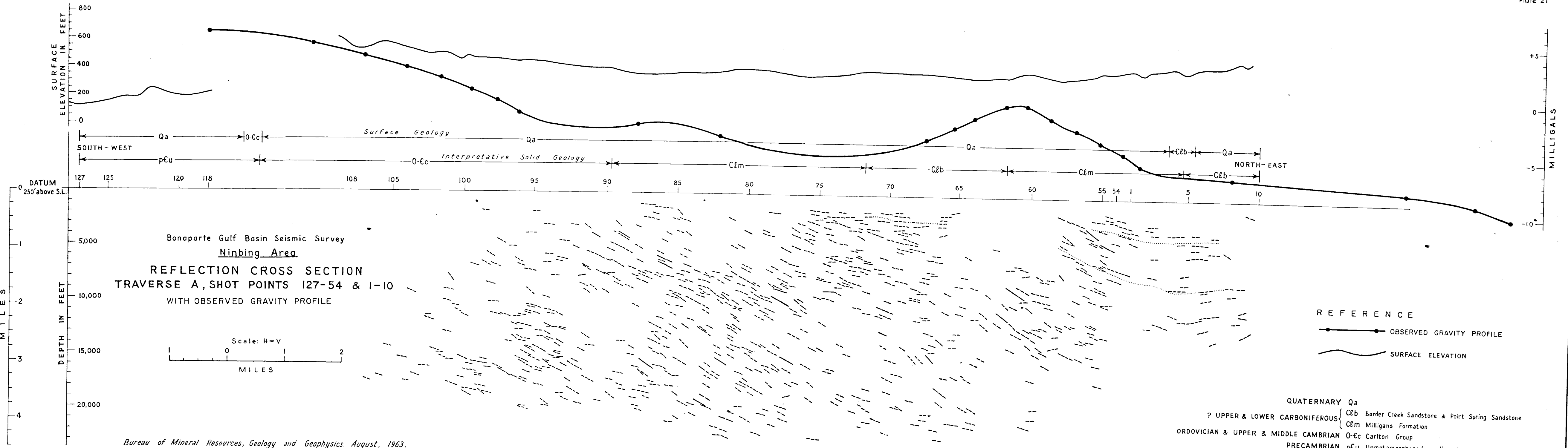
Seismic Survey
Bonaparte Gulf Area
SHOT POINT LOCATION MAP



Bureau of Mineral Resources,
Geology and Geophysics. January 1964

To accompany record No 1963/165

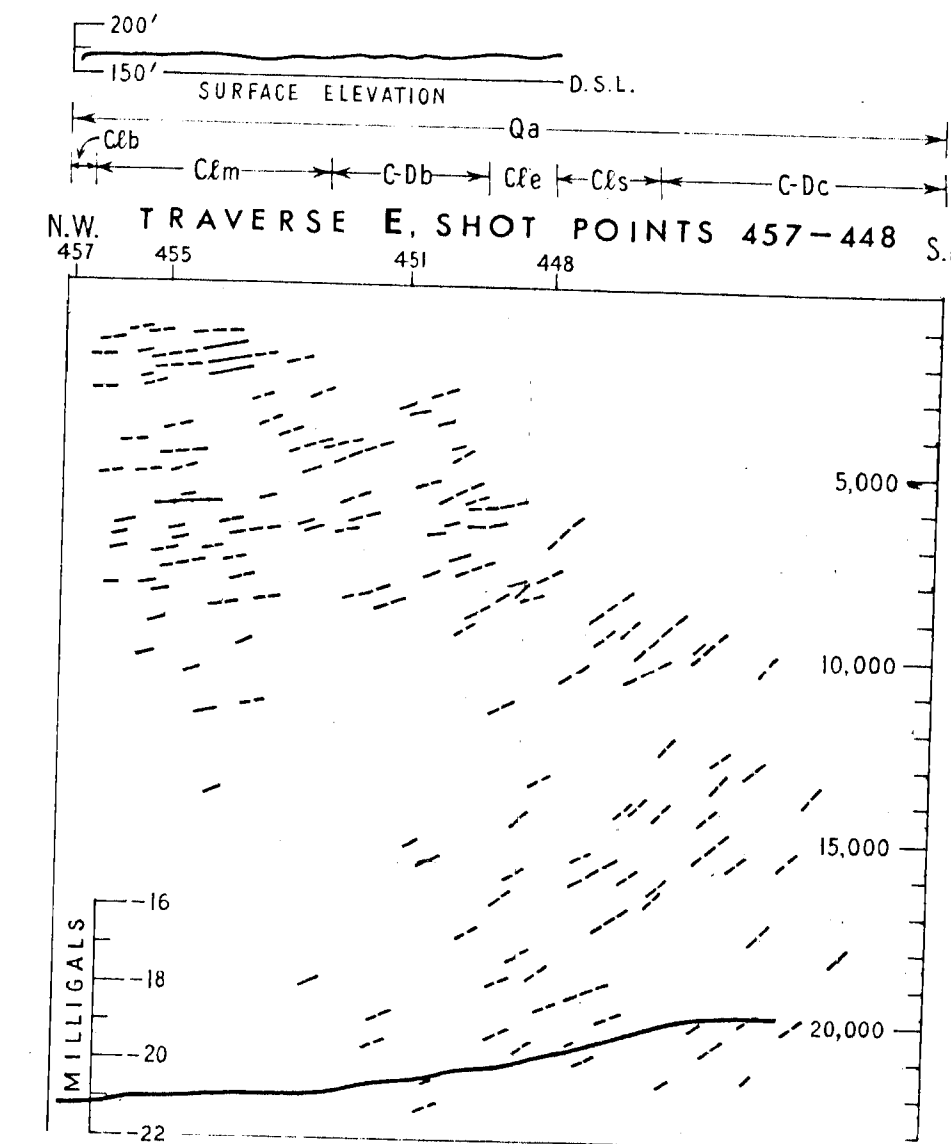
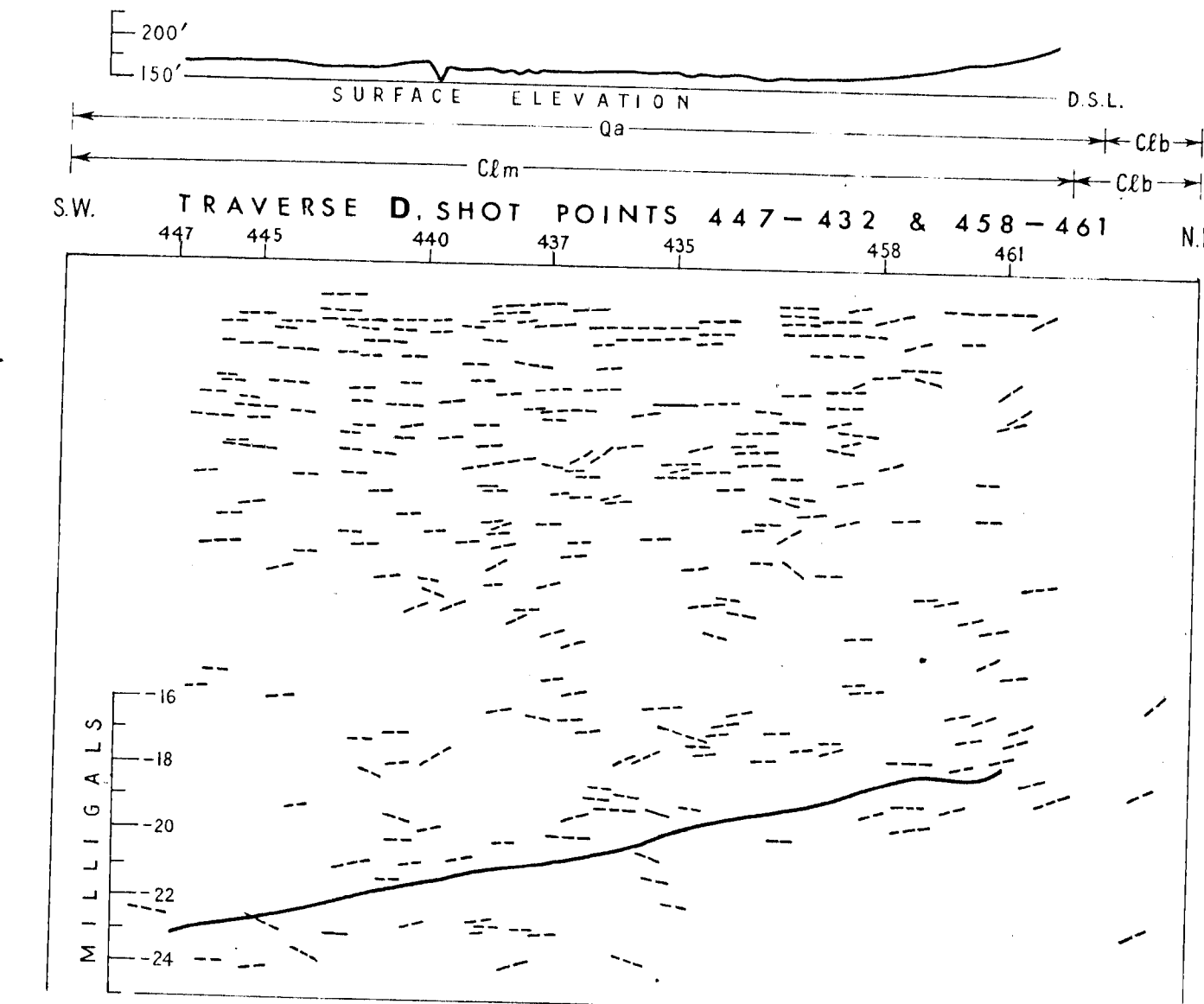
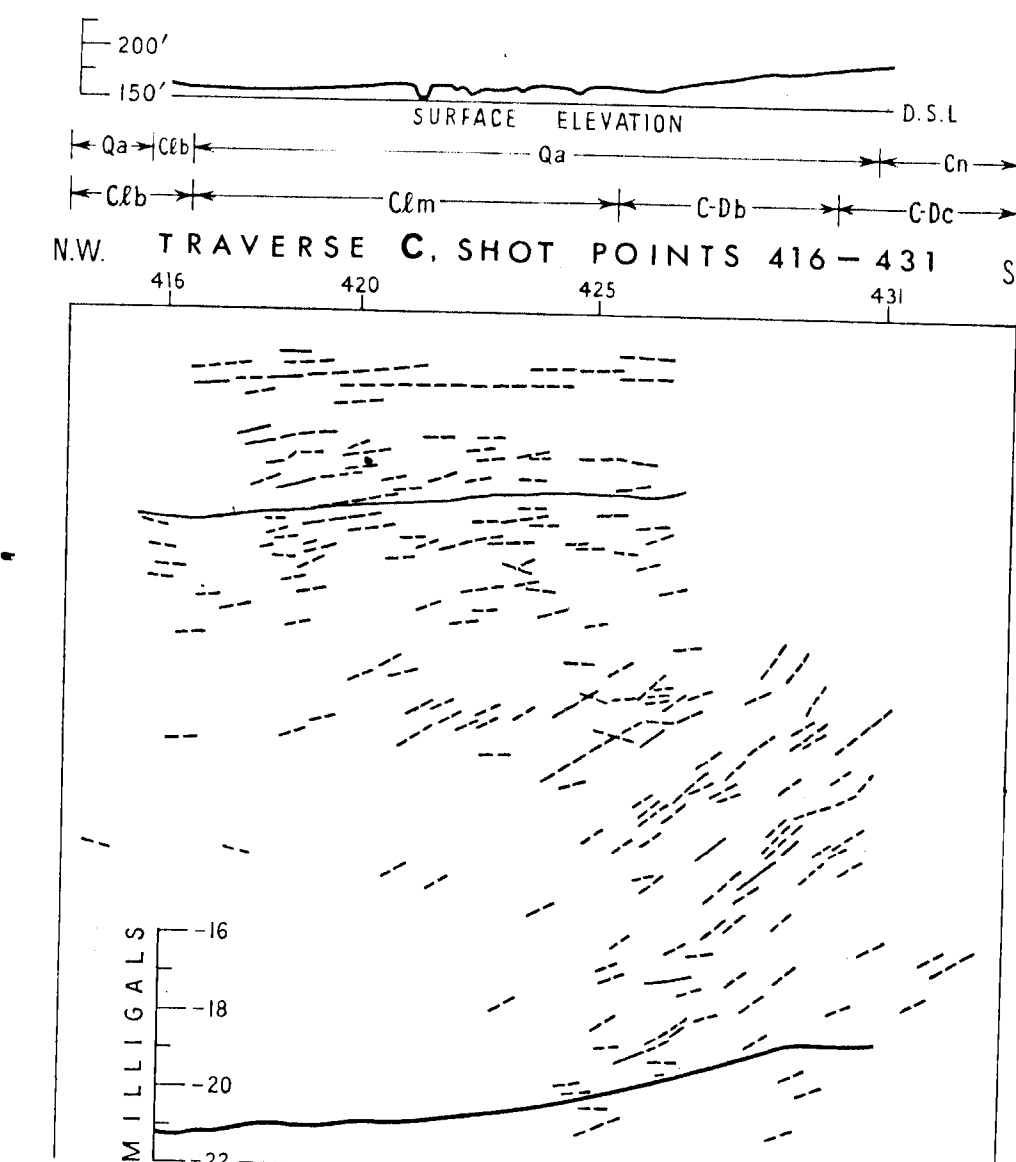
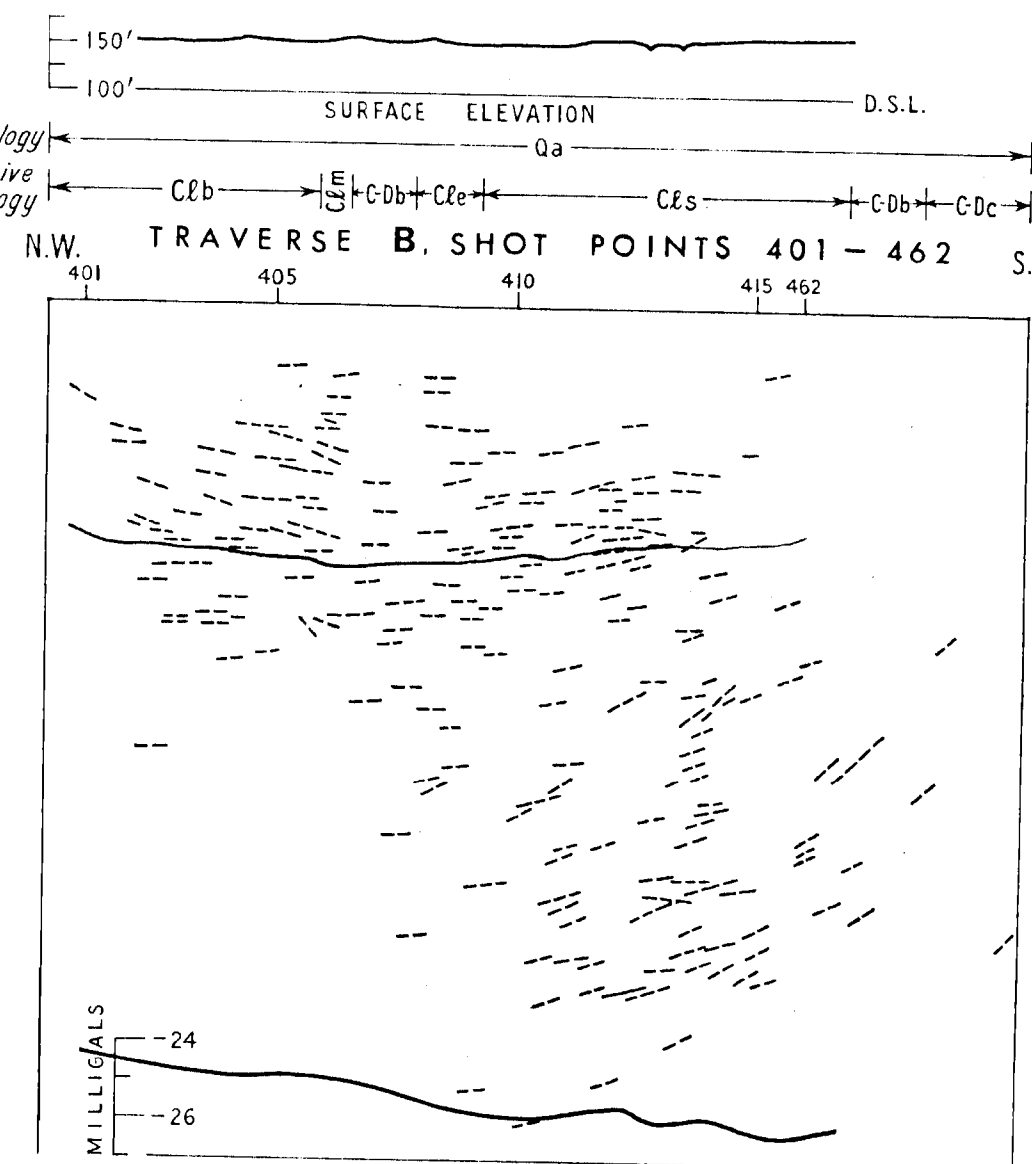
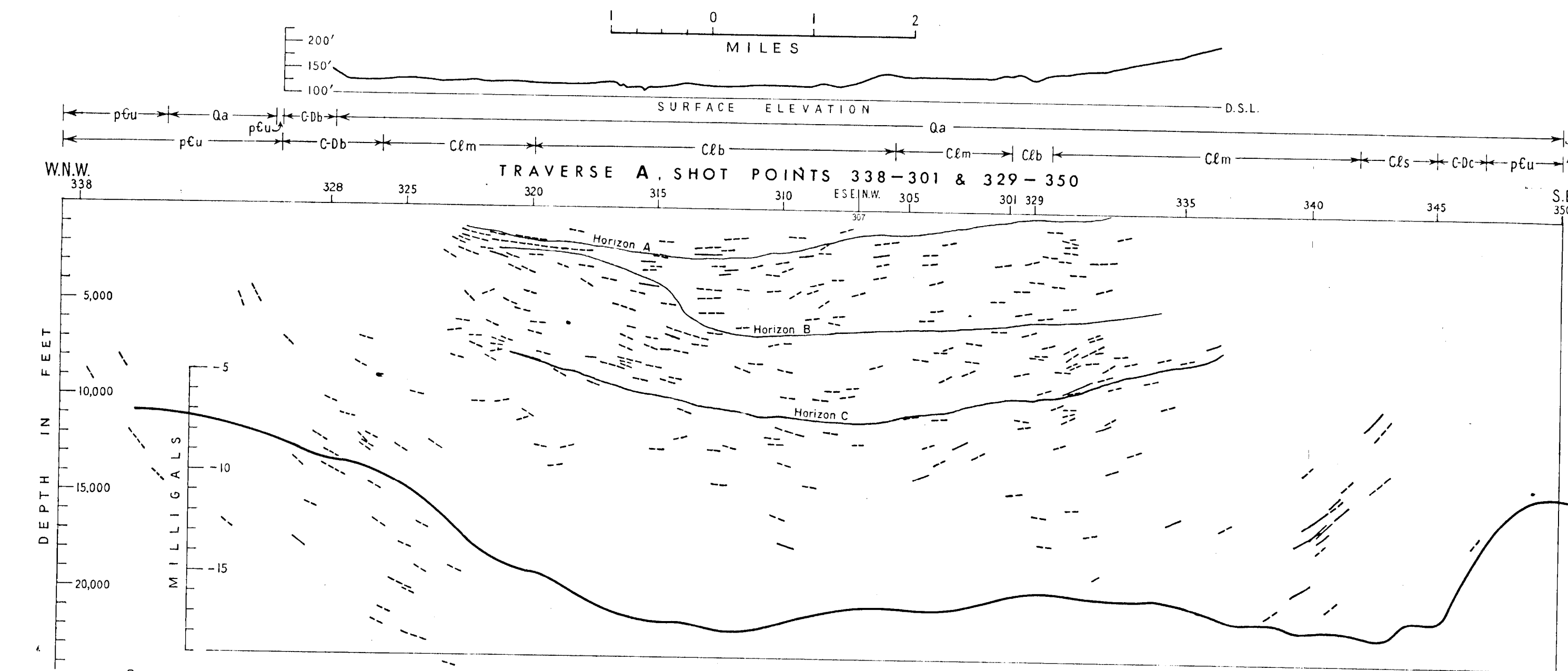
NB. For more detail see plates 70 and 71



Bureau of Mineral Resources, Geology and Geophysics. August, 1963.

To accompany record No. 1963/165

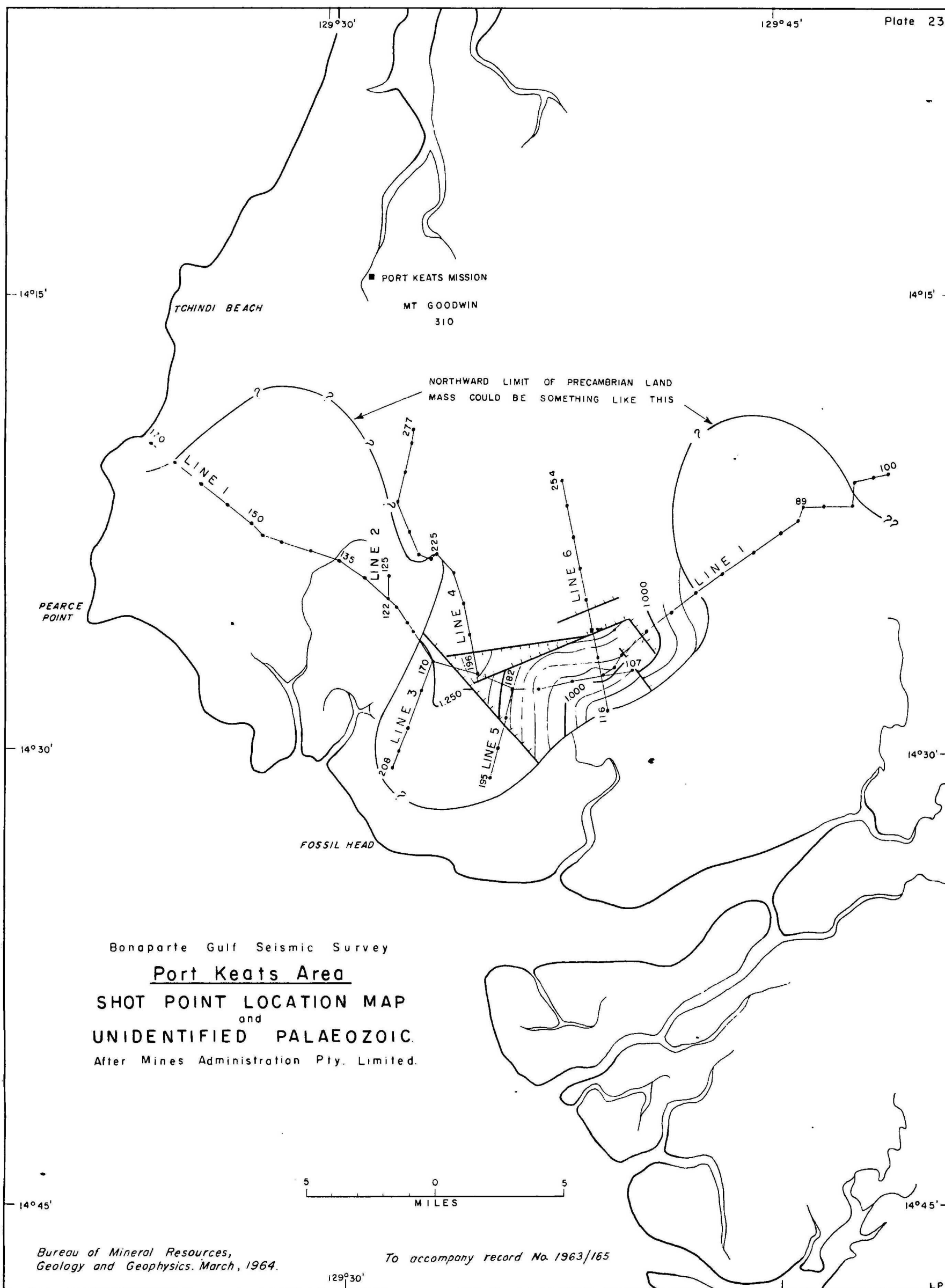
REFLECTION CROSS SECTIONS

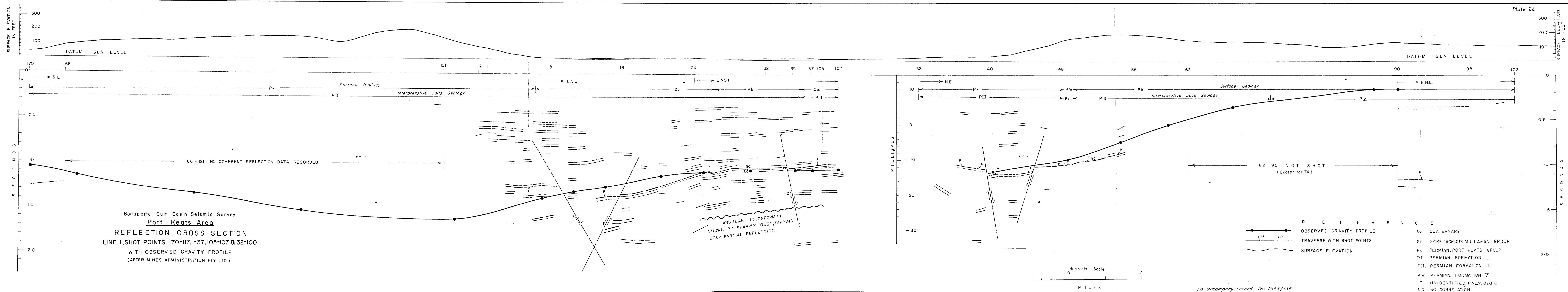


R E F E R E N C E

QUATERNARY Qa
? UPPER & LOWER CARBONIFEROUS CDb { Border Creek Sandstone
Point Spring Sandstone
LOWER CARBONIFEROUS Clm Milligans Beds
Cls Septimus Limestone
Cle Enga Sandstone

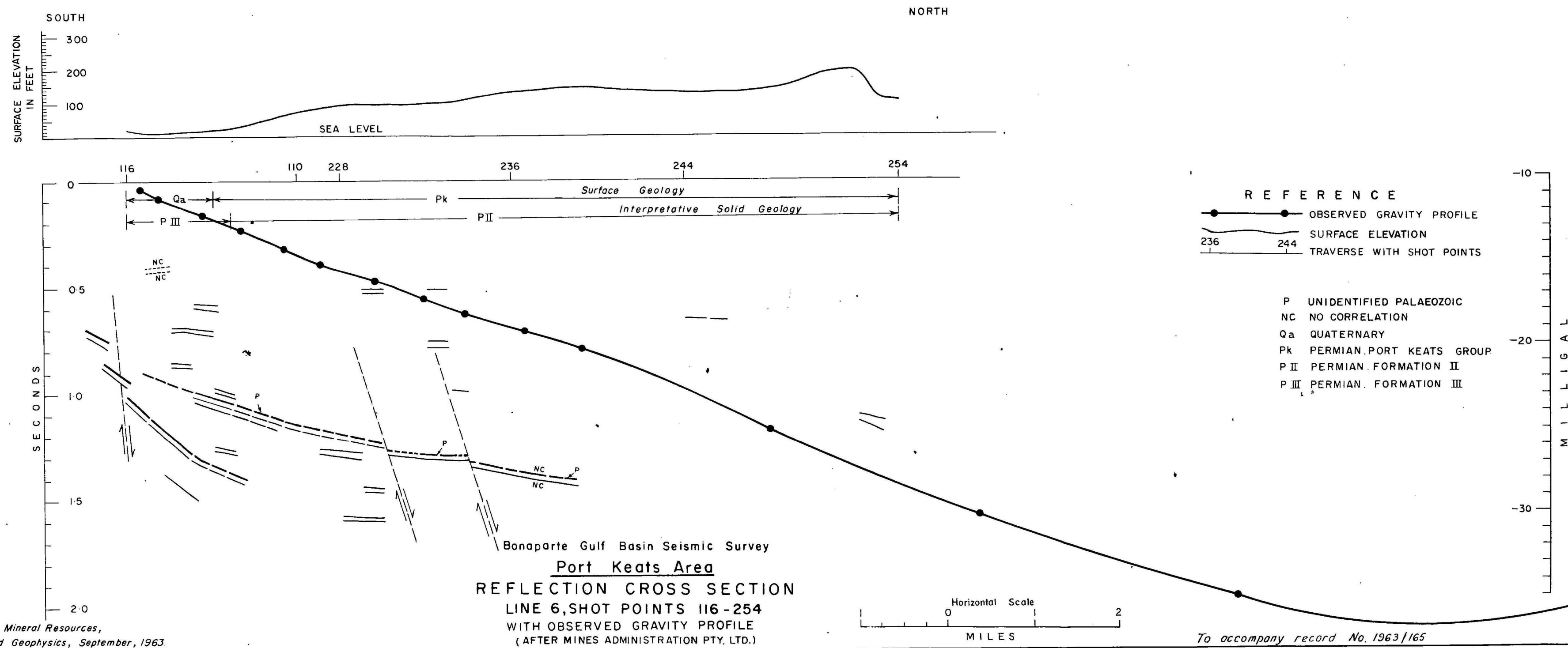
LOWER CARBONIFEROUS OR UPPER DEVONIAN CDb Burt Range Formation
C-Dc Cockatoo Sandstone
PRECAMBRIAN pCu Unmetamorphosed sediments





Bonaparte Gulf Basin Seismic Survey
Port Keats Area
REFLECTION CROSS SECTION
 LINE I, SHOT POINTS 170-117, 1-37, 105-107 & 32-100
 WITH OBSERVED GRAVITY PROFILE
 (AFTER MINES ADMINISTRATION PTY LTD.)

to accompany record No 1963/165



15/10/14 No 18

Bonaparte Gulf Basin Seismic Survey

Port Keats Area

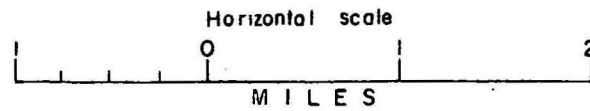
REFLECTION CROSS SECTIONS

(AFTER MINES ADMINISTRATION PTY LTD.)

R E F E R E N C E

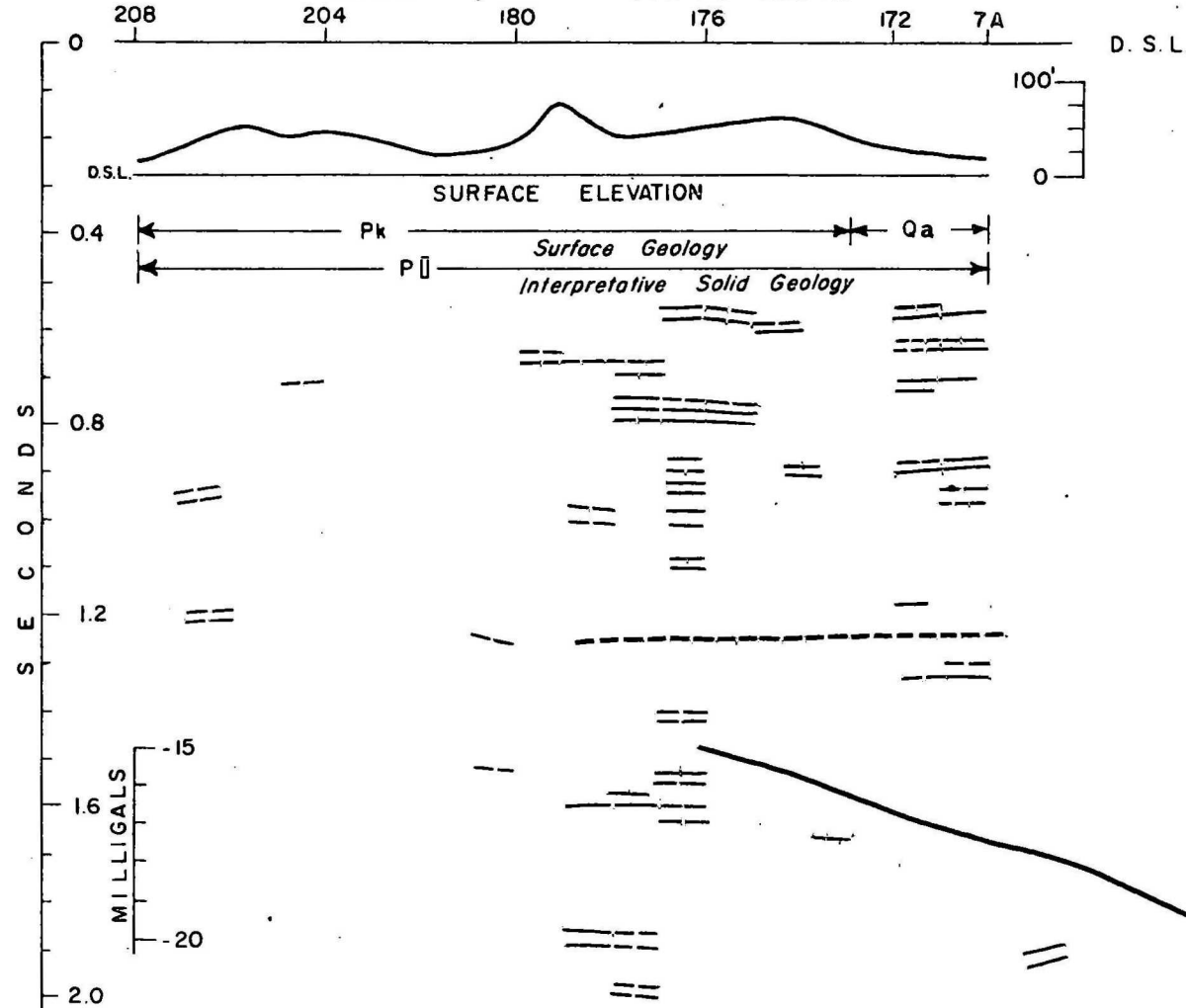
Qa QUATERNARY
Pk PERMIAN Port Keats Group
P PERMIAN Formation

— OBSERVED GRAVITY PROFILE
— SURFACE ELEVATION
176 172 TRAVERSE WITH SHOT POINTS



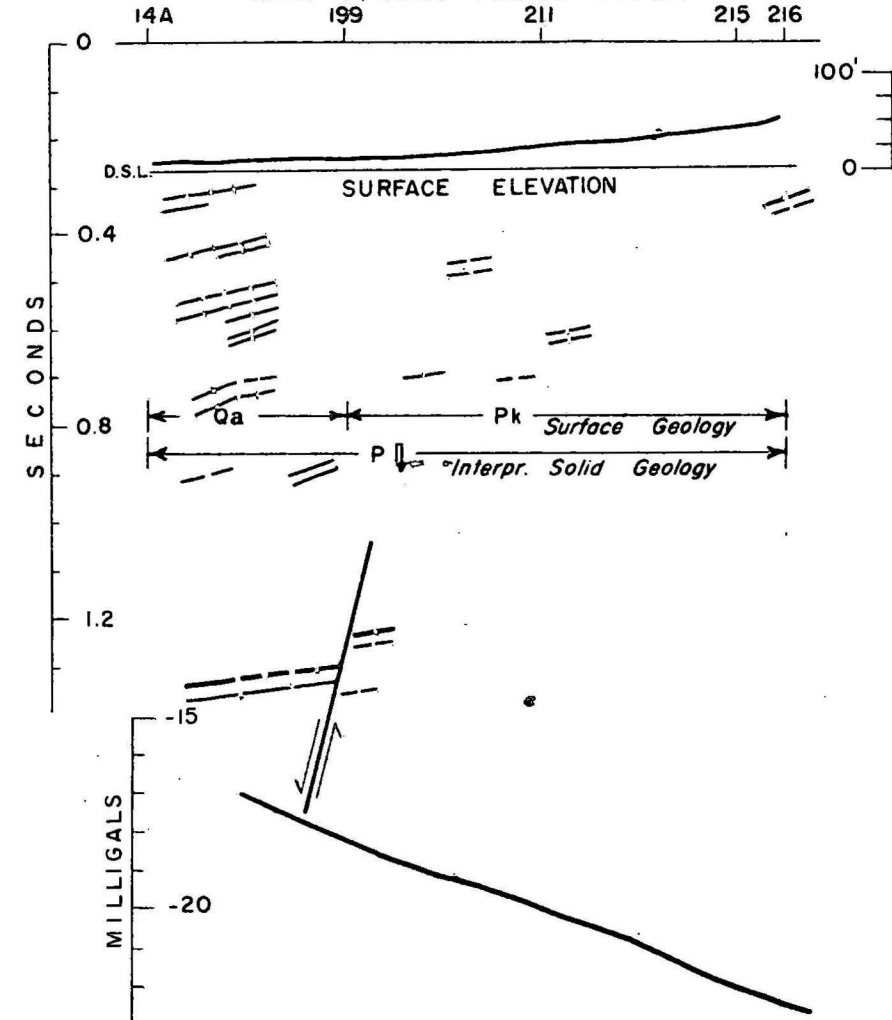
SOUTH

LINE 3, SHOT POINTS 208-7A



NORTH

LINE 4, SHOT POINTS 14A-216



Bureau of Mineral Resources,
Geology and Geophysics, February, 1964.

To accompany record No 1963/165

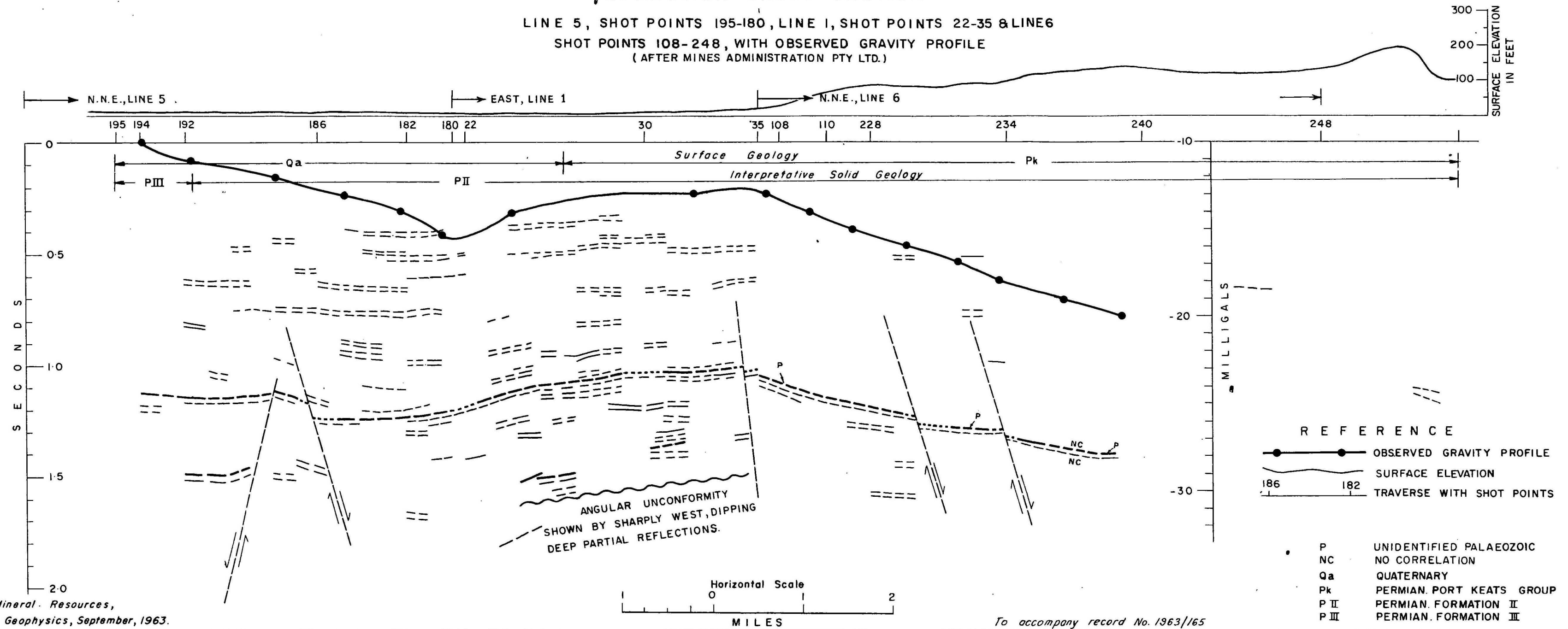
LP

Bonaparte Gulf Basin Seismic Survey

Port Keats Area

REFLECTION CROSS SECTION

LINE 5, SHOT POINTS 195-180, LINE 1, SHOT POINTS 22-35 & LINE 6
SHOT POINTS 108-248, WITH OBSERVED GRAVITY PROFILE
(AFTER MINES ADMINISTRATION PTY LTD.)

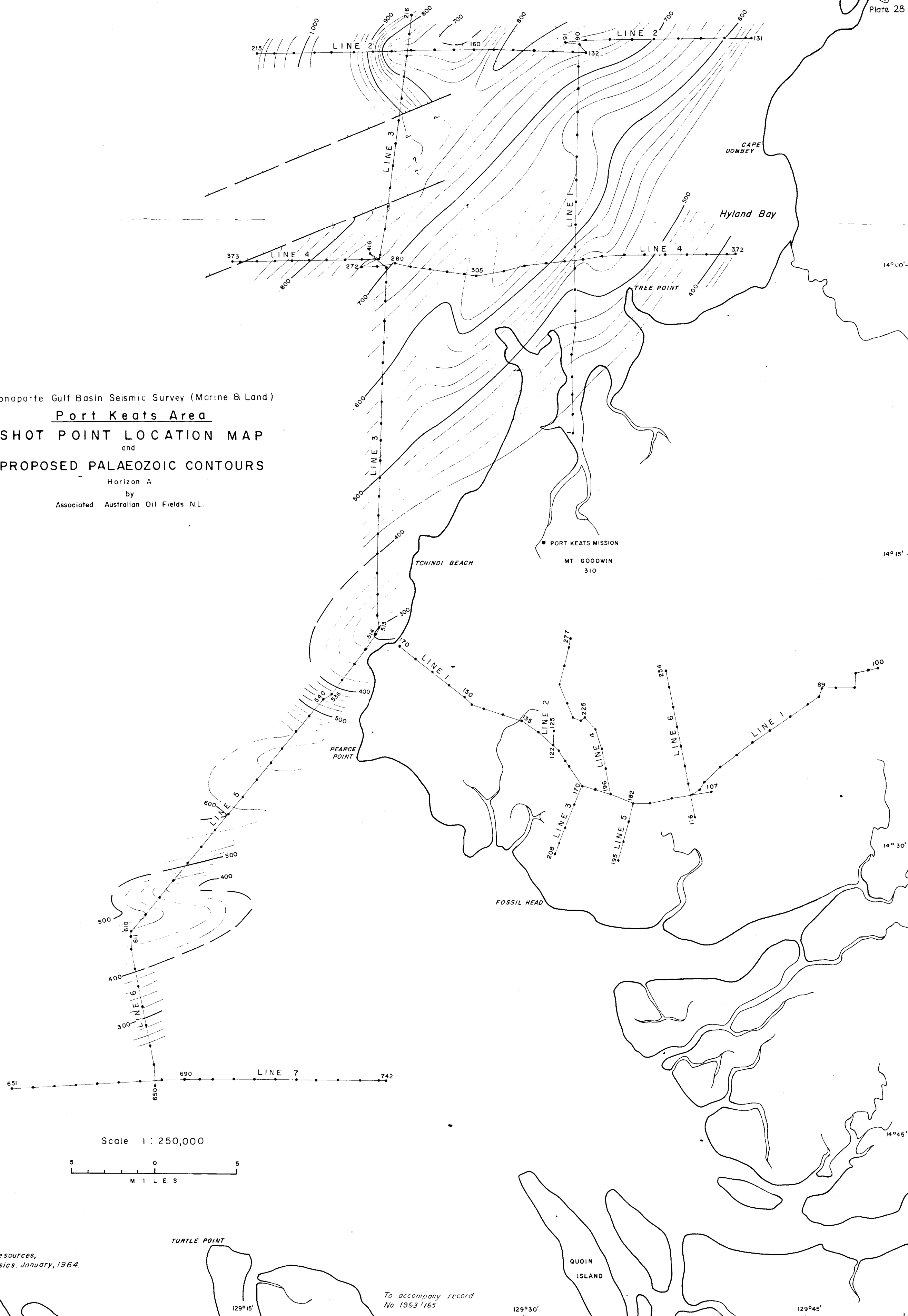


Bureau of Mineral Resources,
Geology and Geophysics, September, 1963.

Bonaparte Gulf Basin Seismic Survey (Marine & Land)

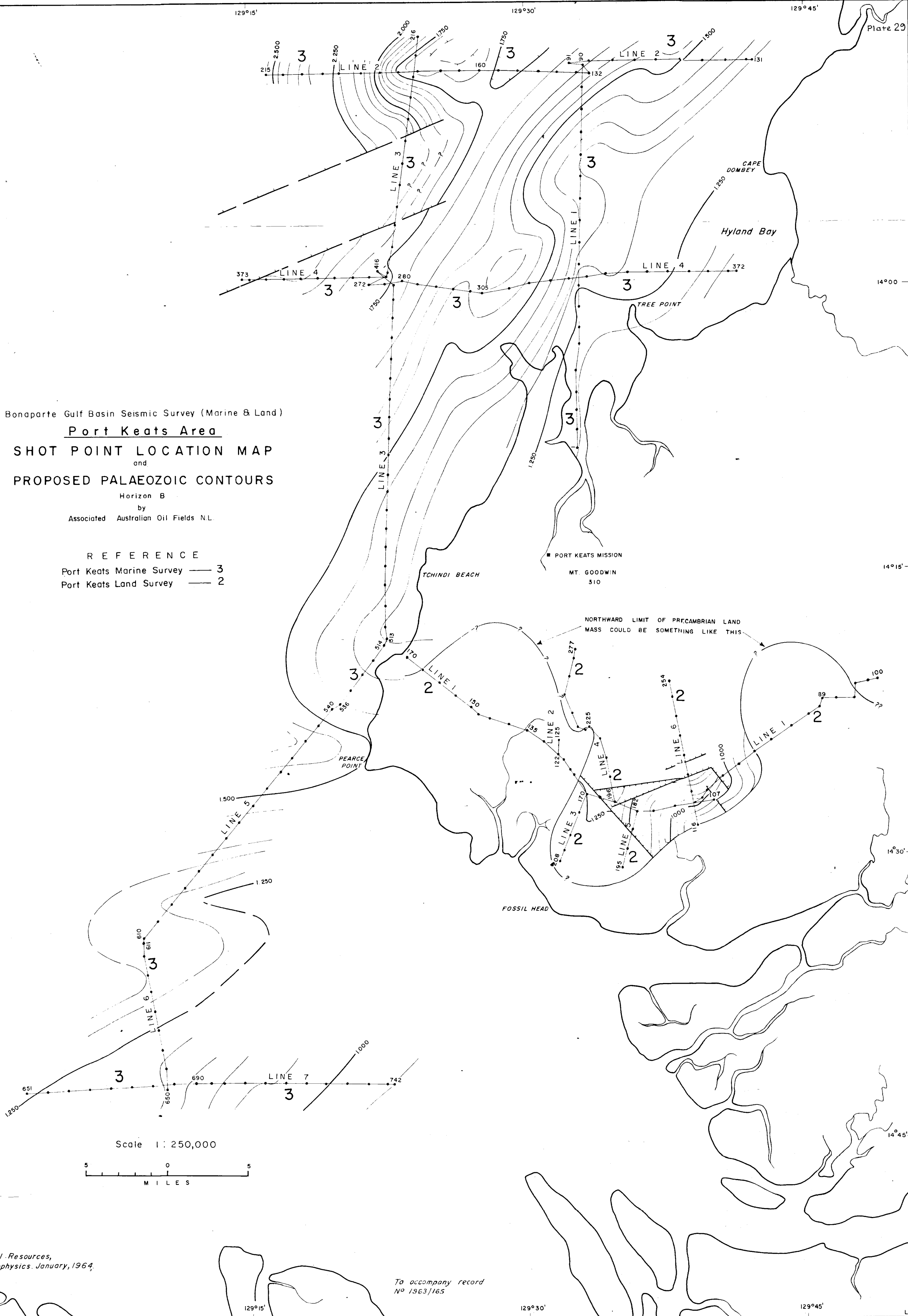
Port Keats Area
SHOT POINT LOCATION MAP
and
PROPOSED PALAEOZOIC CONTOURS

Horizon A
by
Associated Australian Oil Fields N.L.

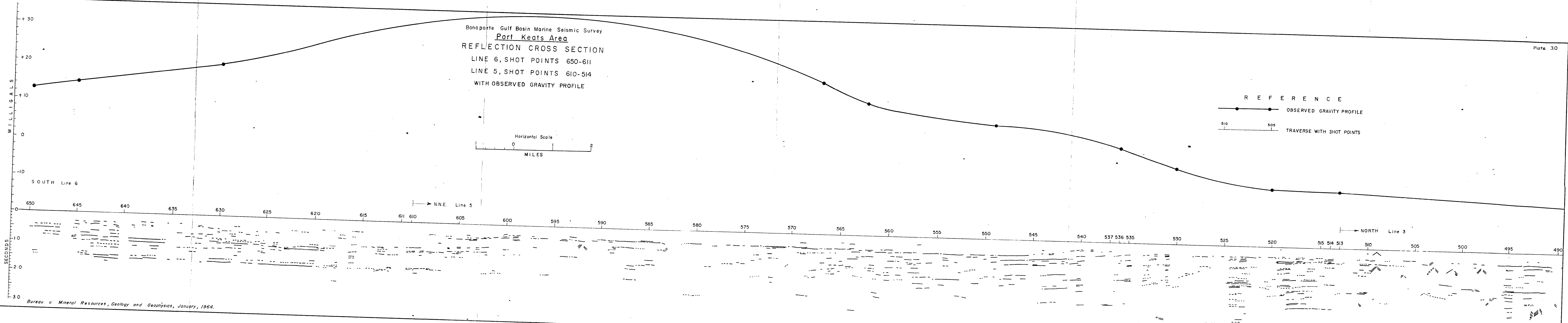
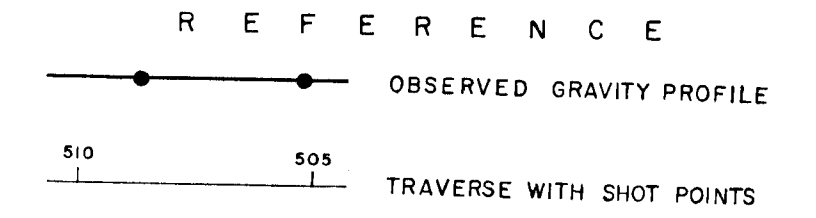
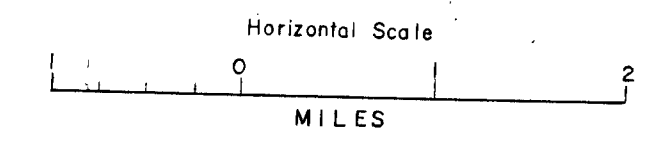


Bonaparte Gulf Basin Seismic Survey (Marine & Land)
Port Keats Area
 SHOT POINT LOCATION MAP
 and
 PROPOSED PALAEOZOIC CONTOURS
 Horizon B
 by
 Associated Australian Oil Fields N.L.

REFERENCE
 Port Keats Marine Survey — 3
 Port Keats Land Survey — 2

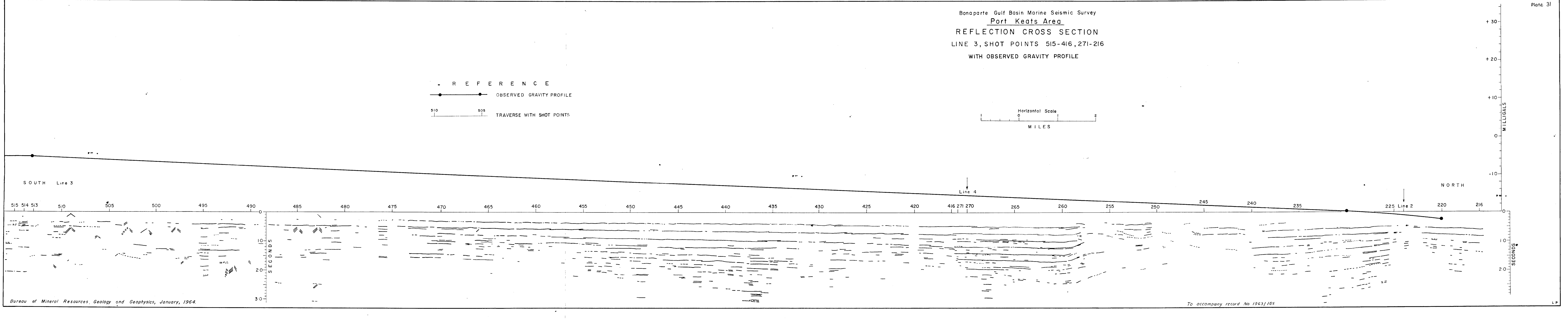
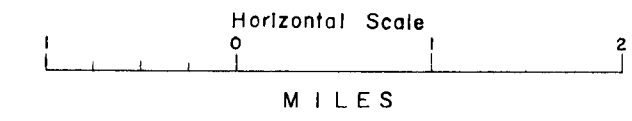


Bonaparte Gulf Basin Marine Seismic Survey
Port Keats Area
REFLECTION CROSS SECTION
LINE 6, SHOT POINTS 650-611
LINE 5, SHOT POINTS 610-514
WITH OBSERVED GRAVITY PROFILE

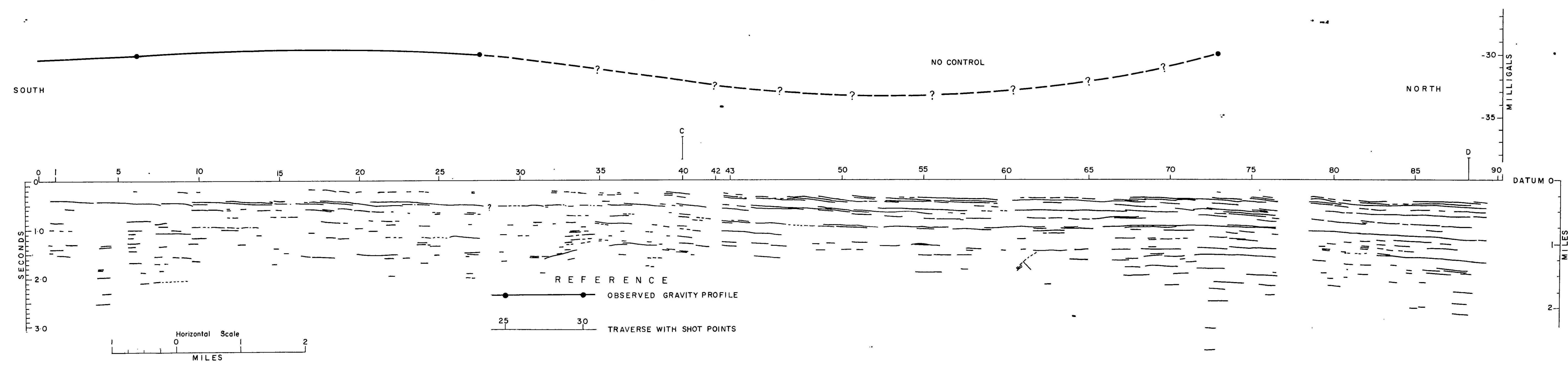


Bonaparte Gulf Basin Marine Seismic Survey
Port Keats Area
REFLECTION CROSS SECTION
LINE 3, SHOT POINTS 515-416, 271-216
WITH OBSERVED GRAVITY PROFILE

REFERENCE
OBSERVED GRAVITY PROFILE
TRAVERSE WITH SHOT POINTS



Bonaparte Gulf Basin Marine Seismic Survey
Port Keats Area
 REFLECTION CROSS SECTION
 LINE 1 SHOT POINTS 0-90
 WITH OBSERVED GRAVITY PROFILE

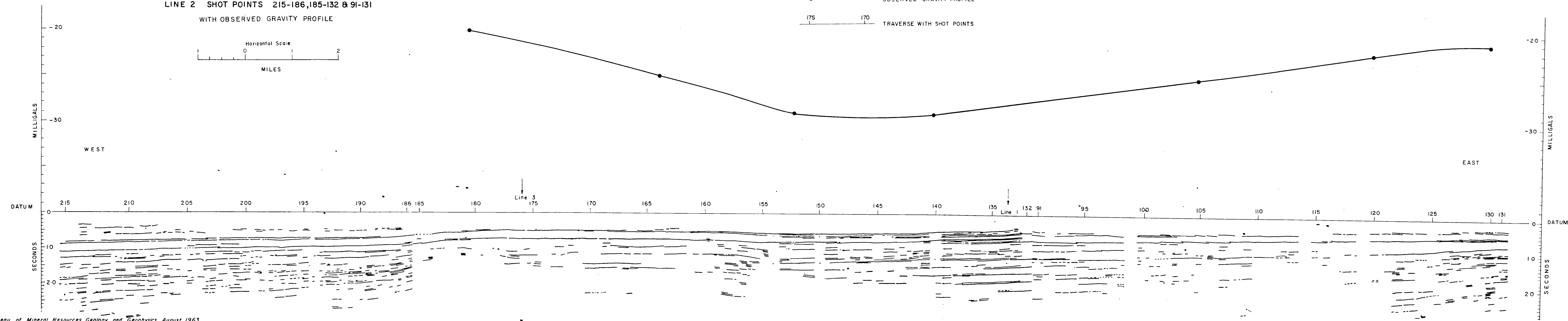
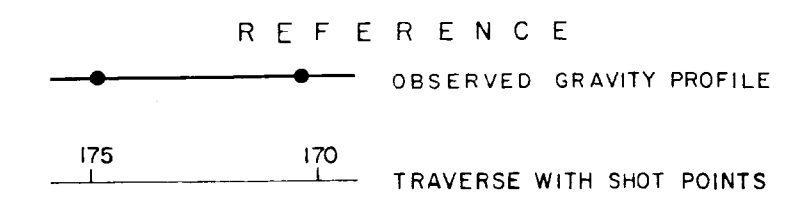
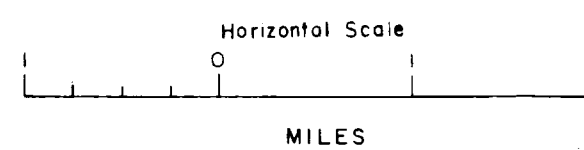


Port Keats Area

REFLECTION CROSS SECTION

LINE 2 SHOT POINTS 215-186, 185-132 & 91-131

WITH OBSERVED GRAVITY PROFILE

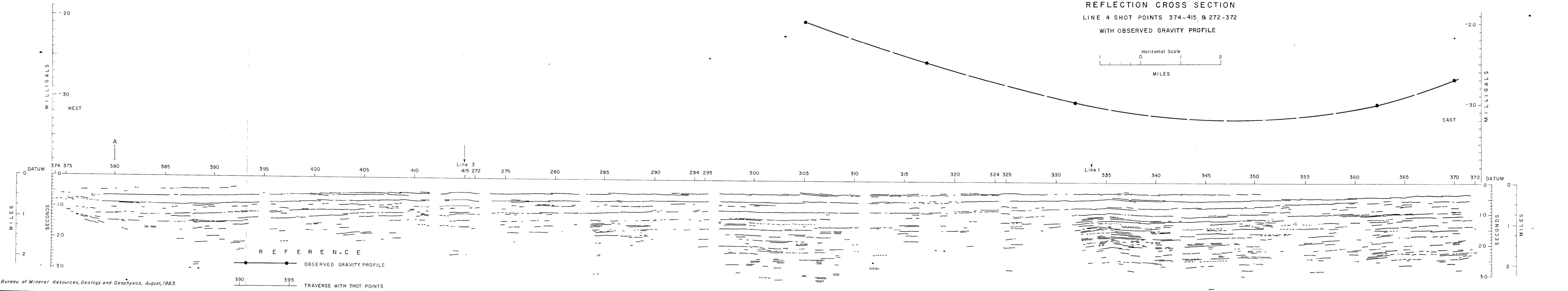
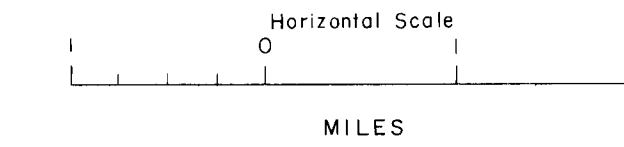


Port Keats Area

REFLECTION CROSS SECTION

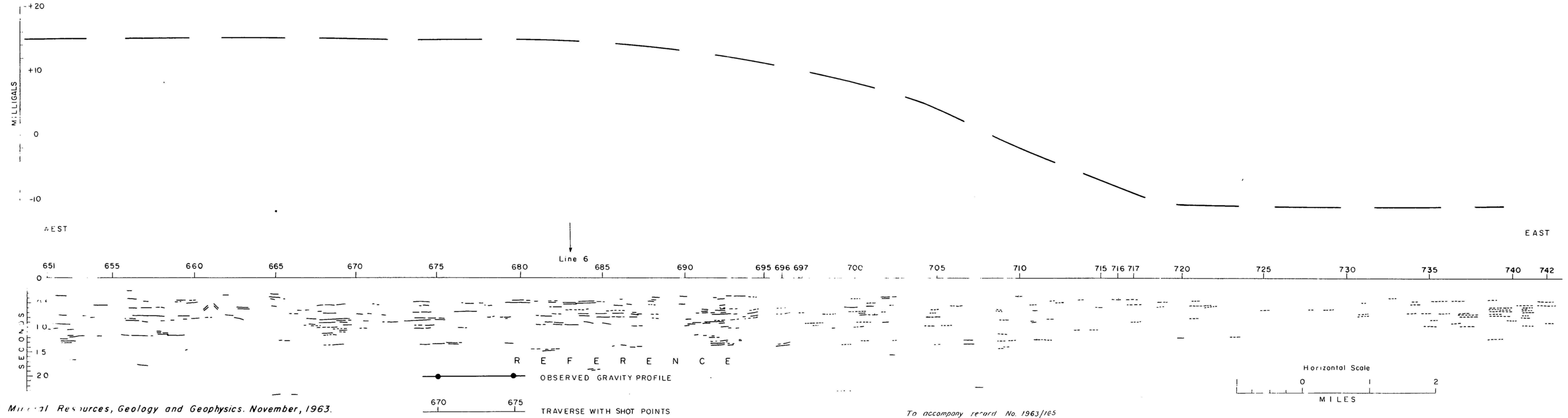
LINE 4 SHOT POINTS 374-415 & 272-372

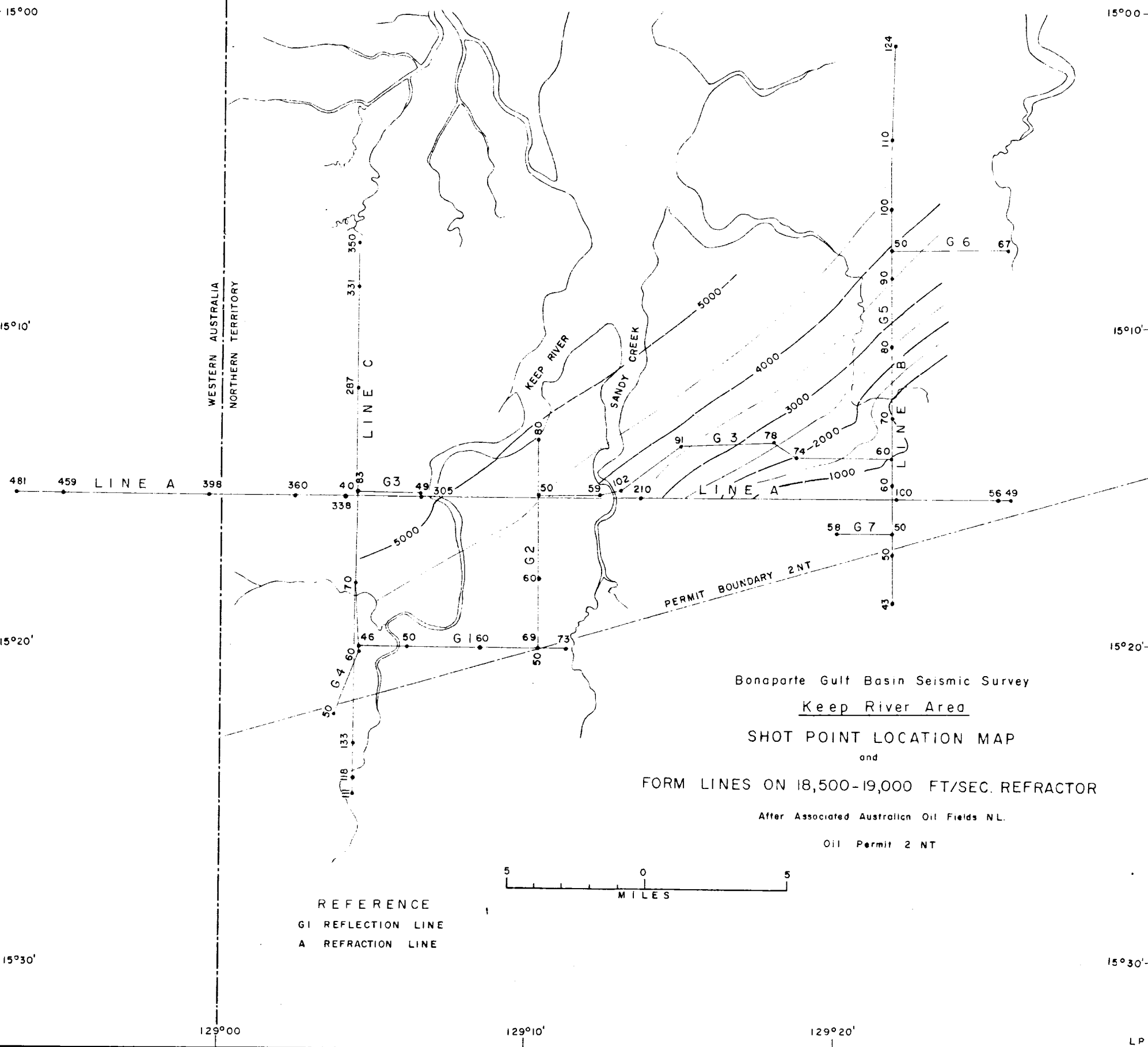
WITH OBSERVED GRAVITY PROFILE

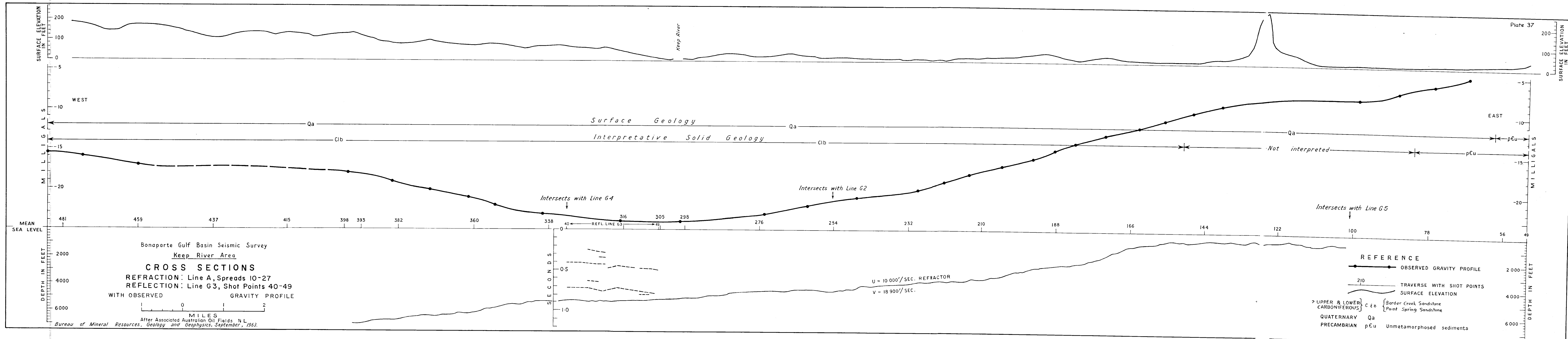


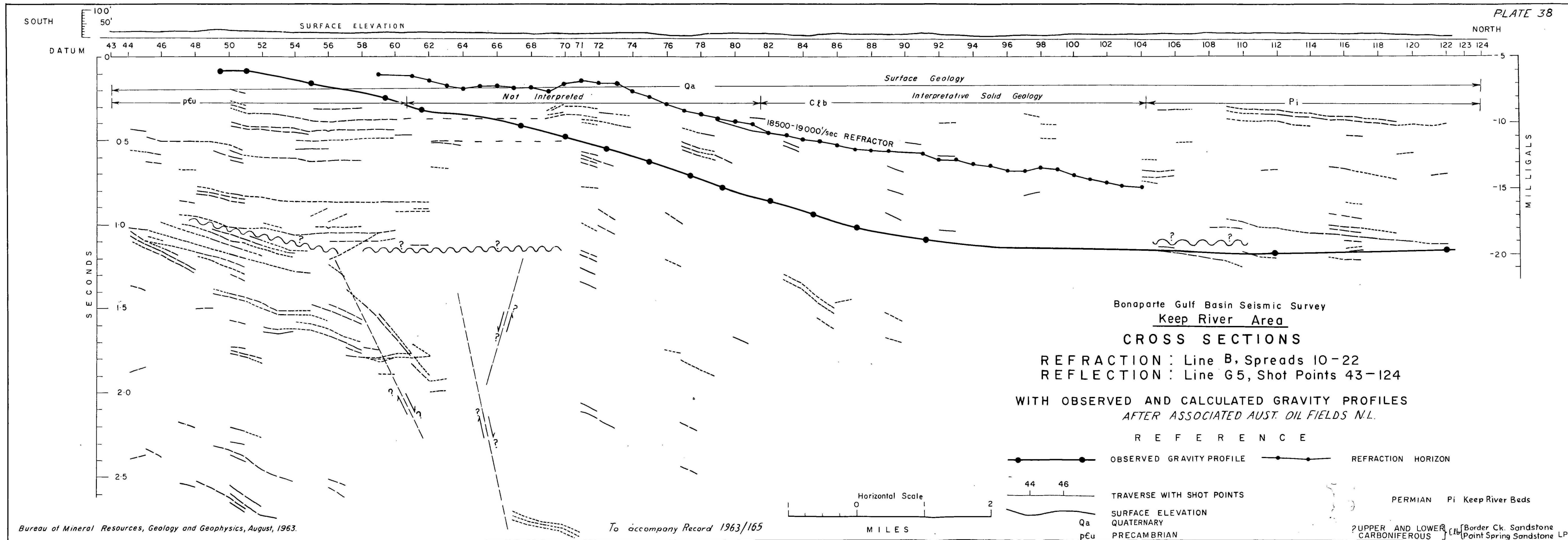
Bonaparte Gulf Basin Marine Seismic Survey
Port Keats Area
REFLECTION CROSS SECTION
LINE 7, SHOT POINTS 651-742

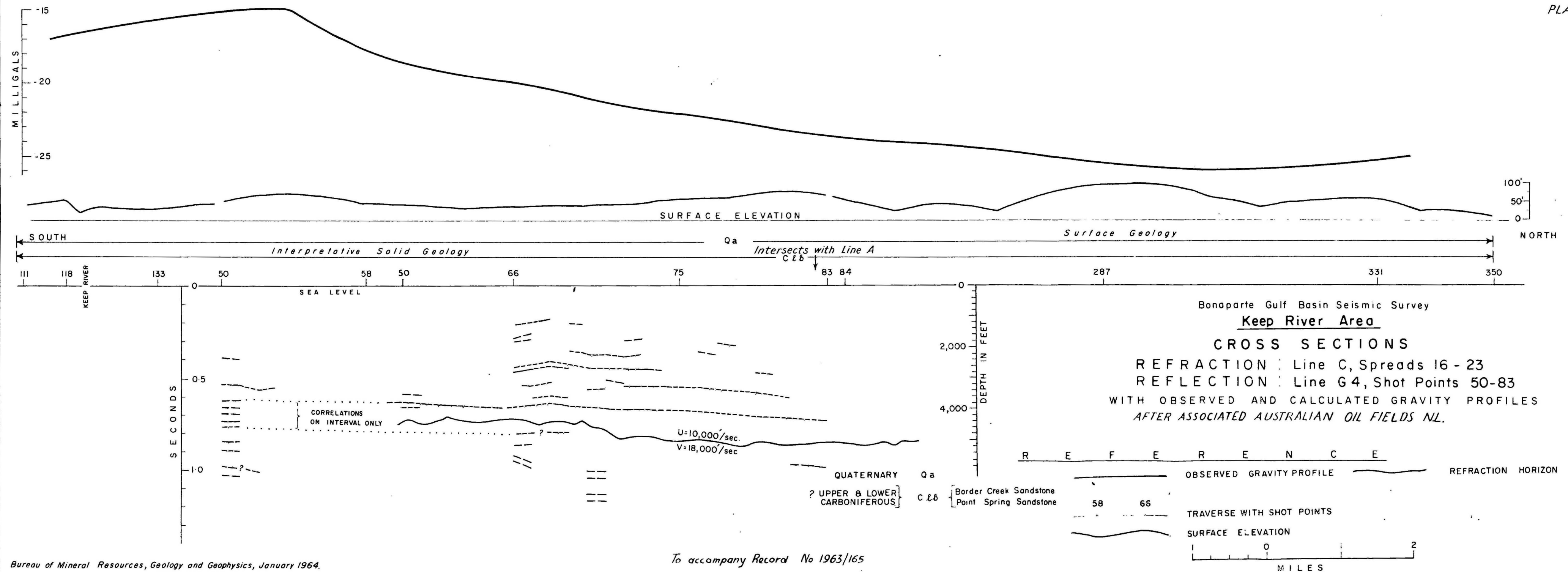
WITH OBSERVED GRAVITY PROFILES







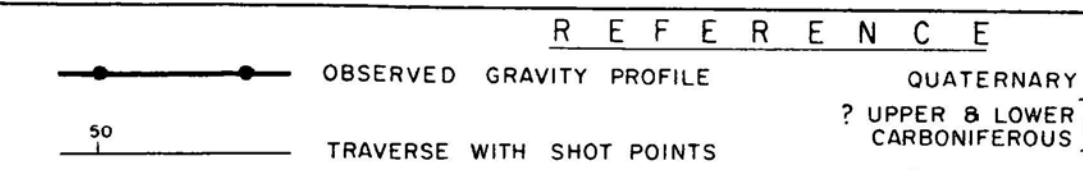




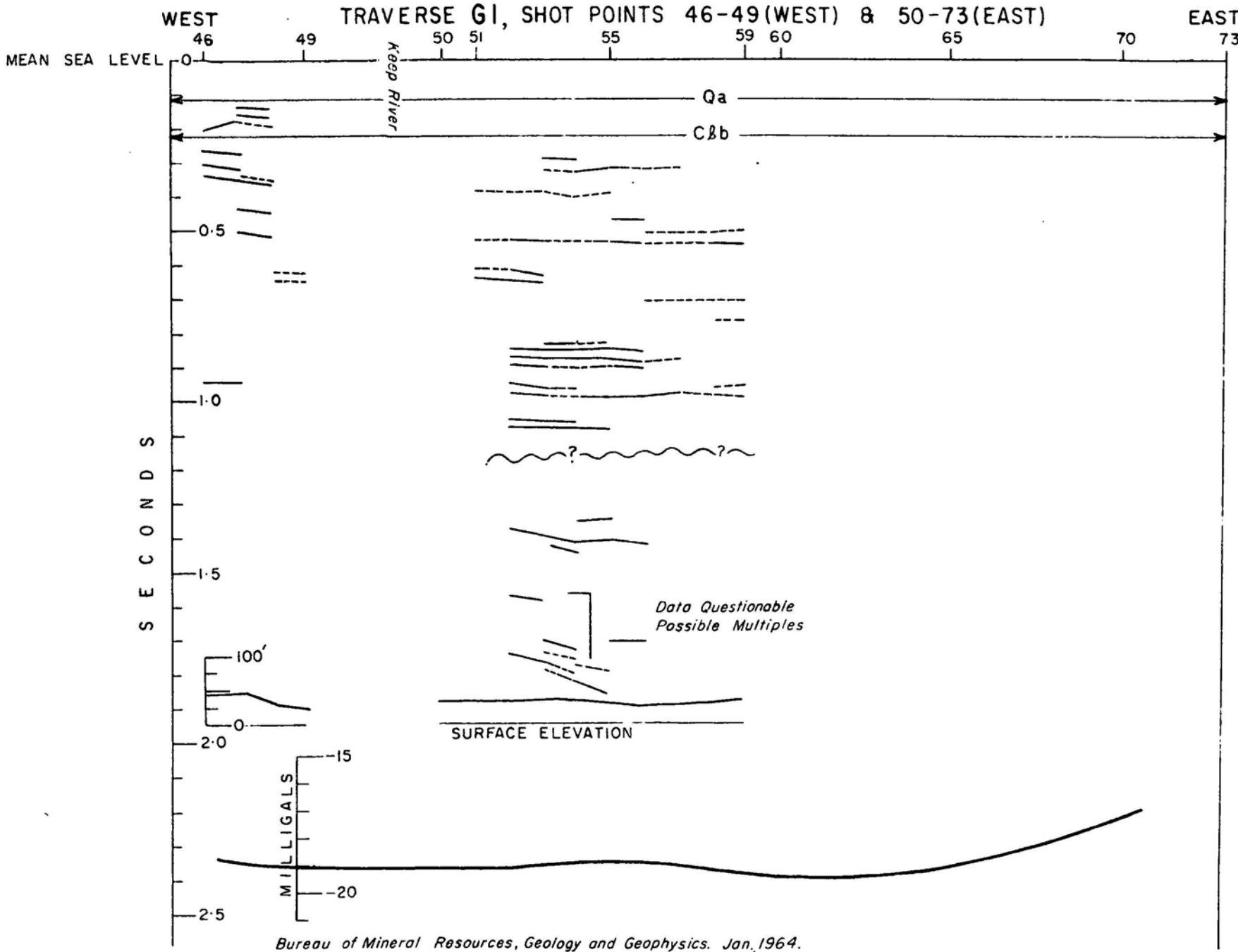
Keep River Area

REFLECTION CROSS SECTIONS

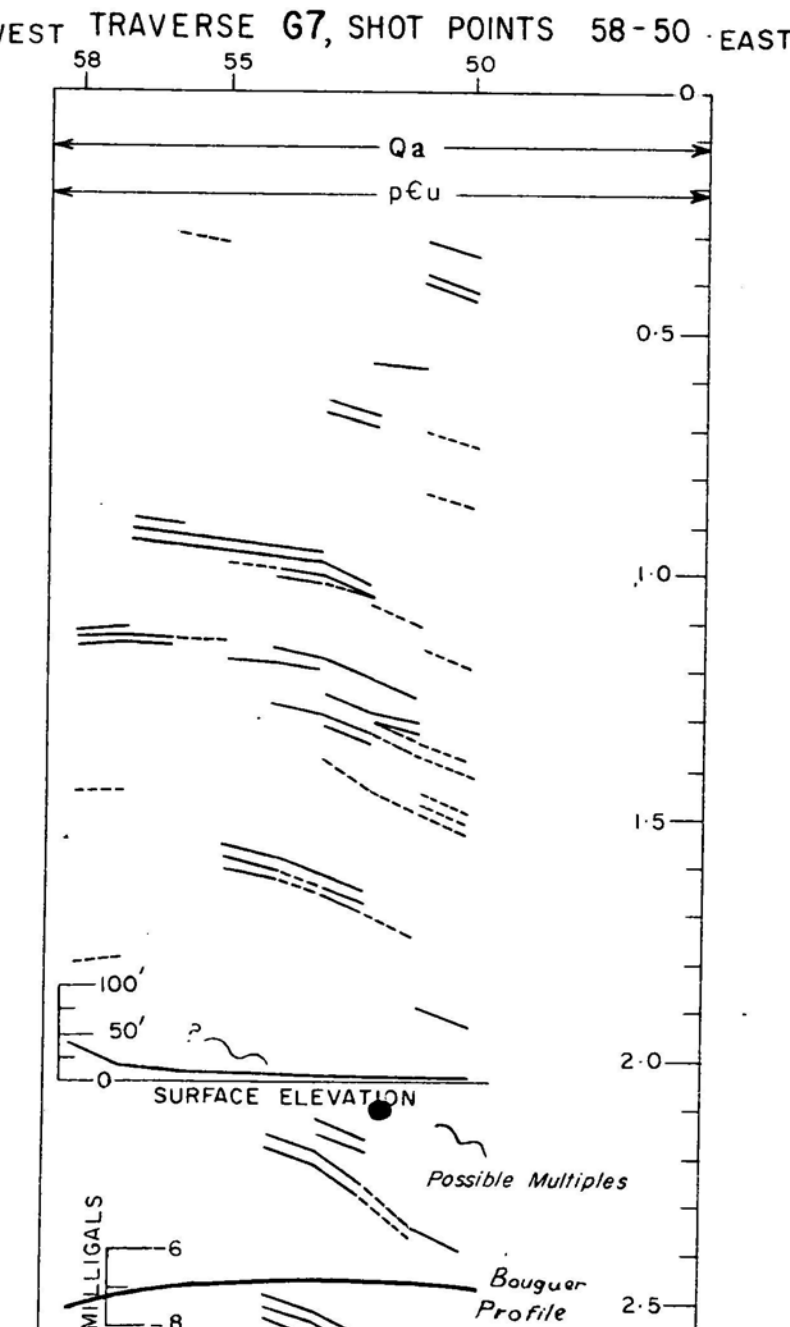
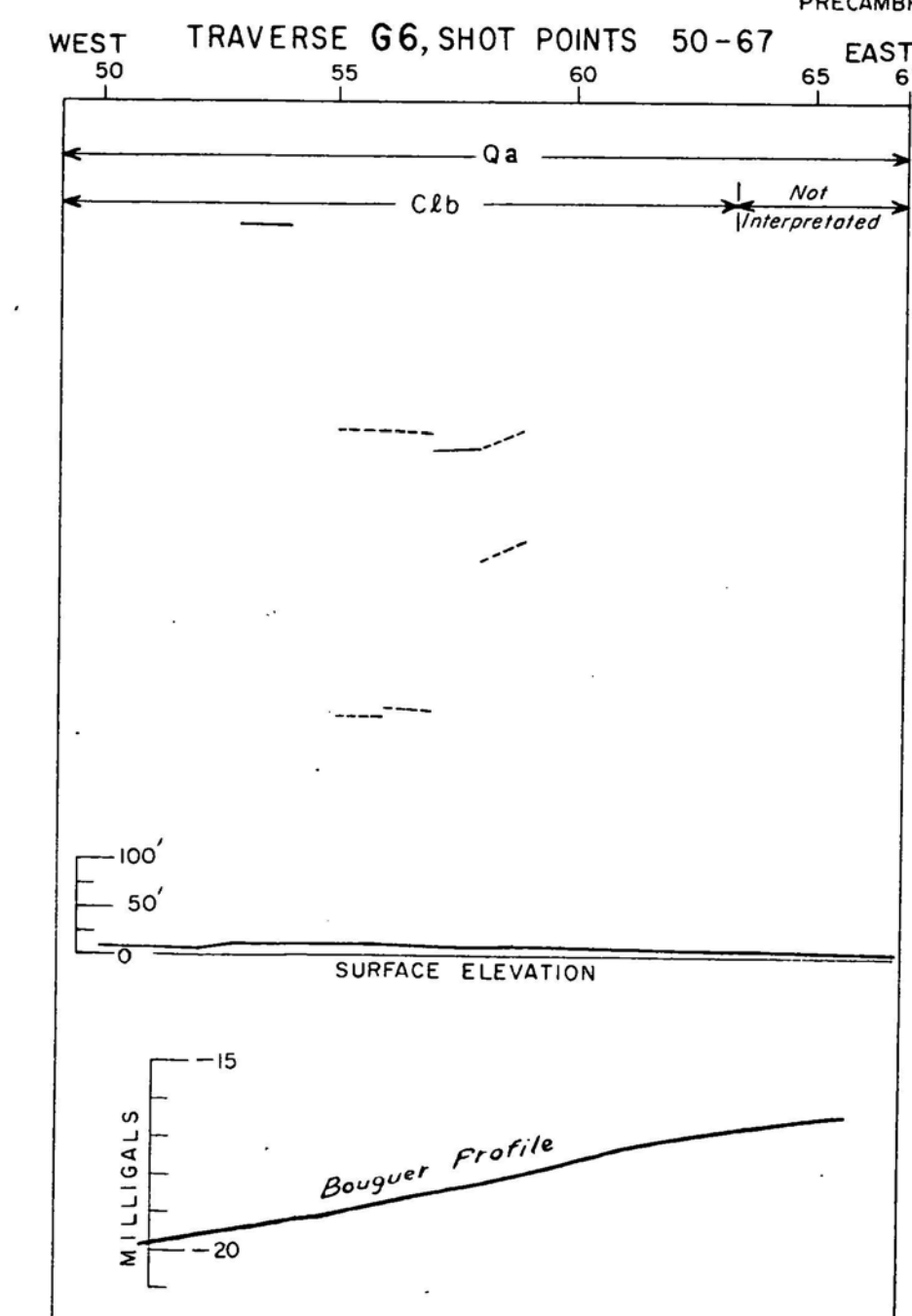
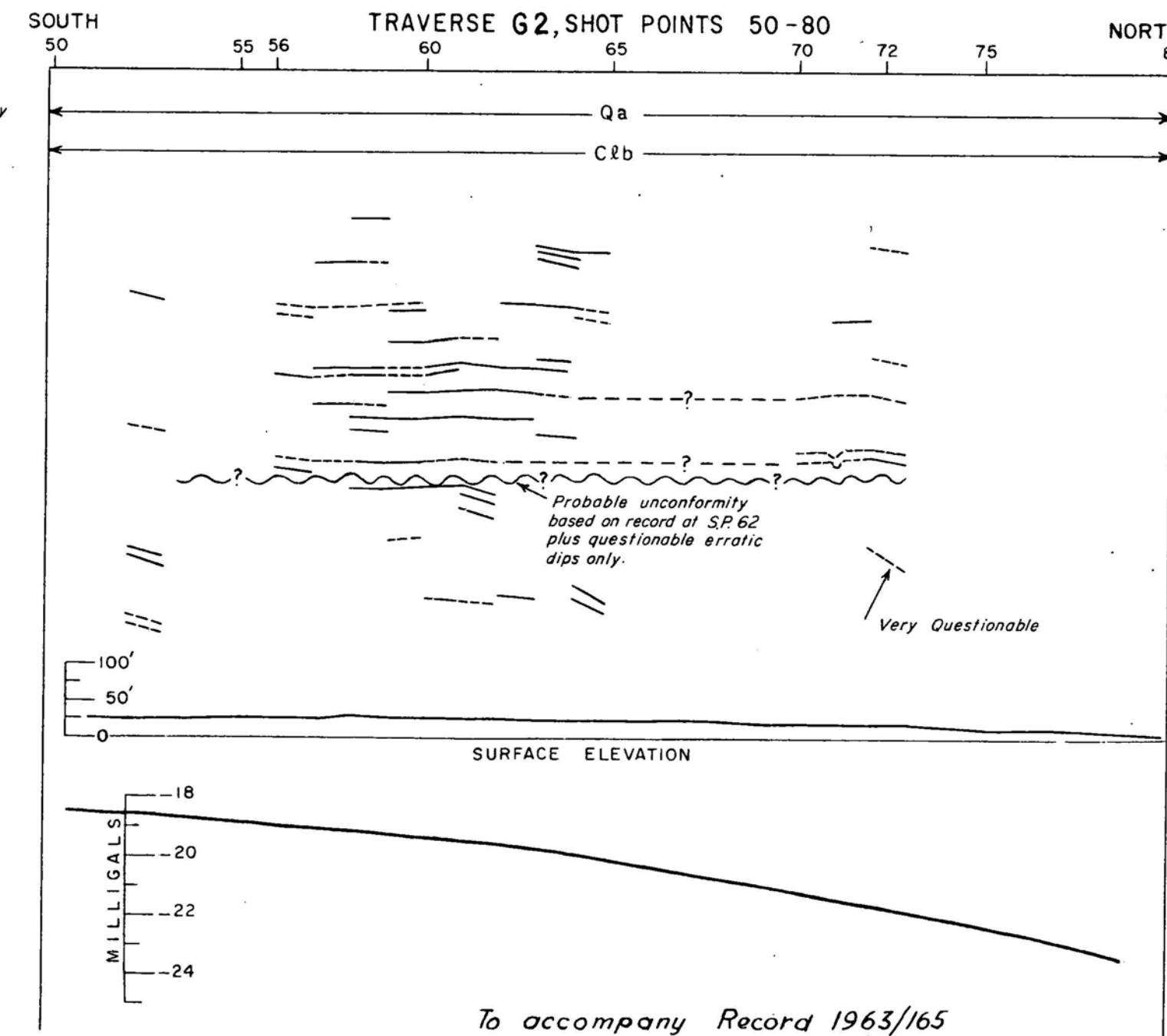
AFTER ASSOCIATED
AUST. OIL FIELDS NL



- Qa
Clb { Border Creek Sandstone
Point Spring Sandstone
pCu Unmetamorphosed sediments



Surface Geology
Interpretative
Solid Geology



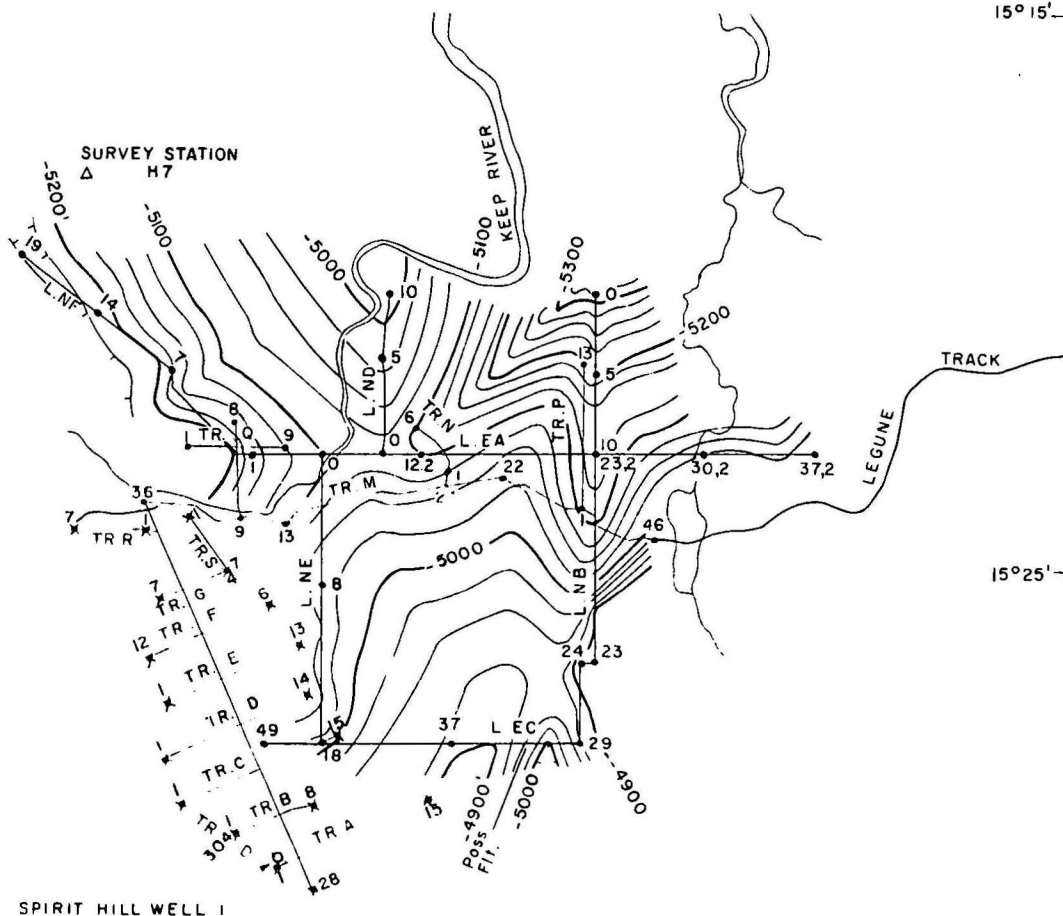
129°00'

129°05'

129°15' PLATE 41

15°15'

15°15'



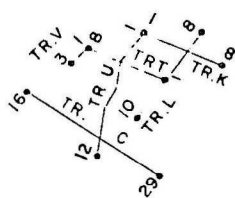
SPIRIT HILL WELL 1

15°25'

15°25'

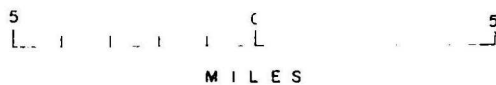
15°35'

15°35'



Spirit Hill Seismic Survey SHOT POINTS LOCATION MAP

& PROPOSED PALAEOZOIC
AFTER OIL DEVELOPMENT NL.

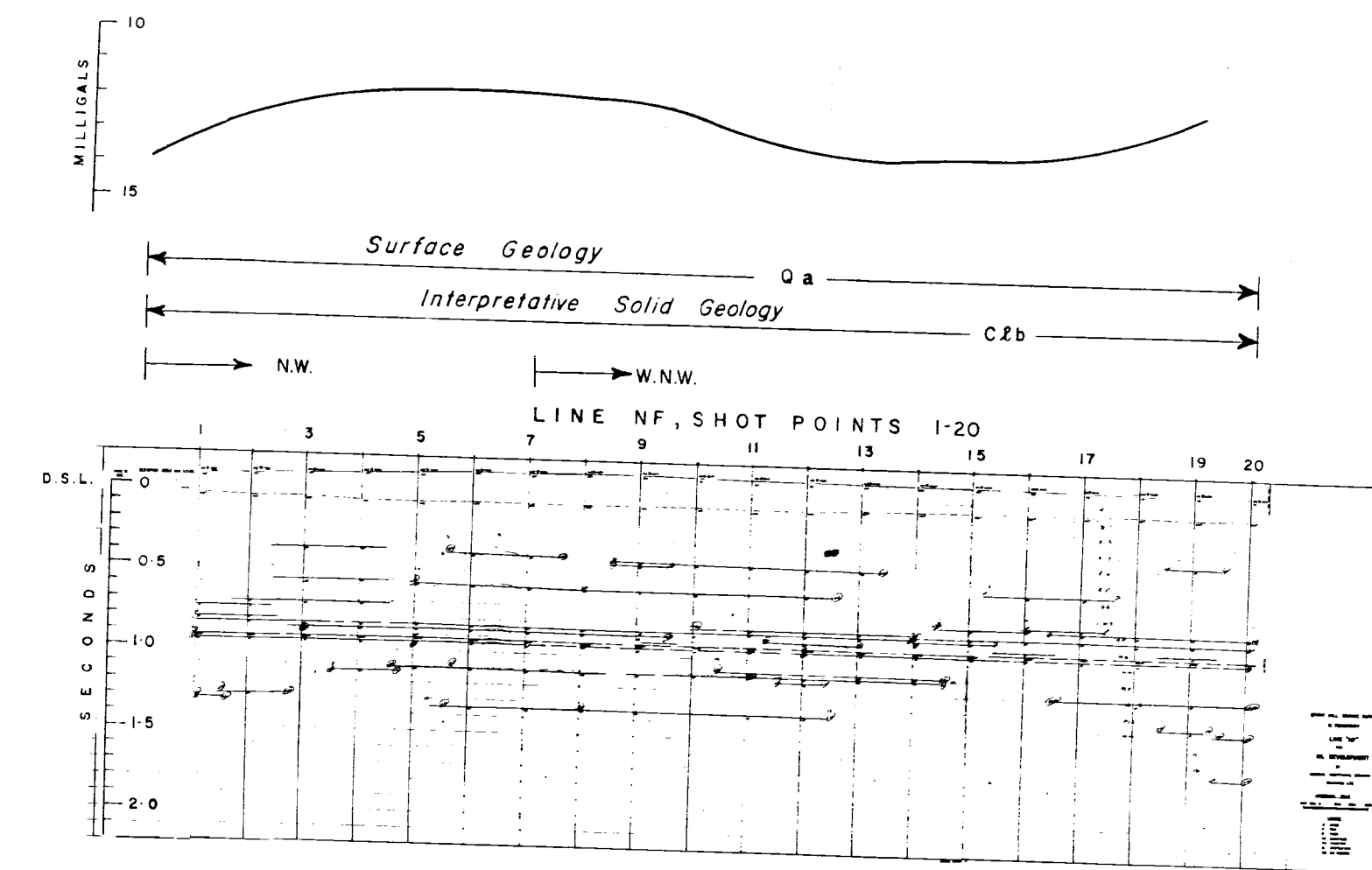
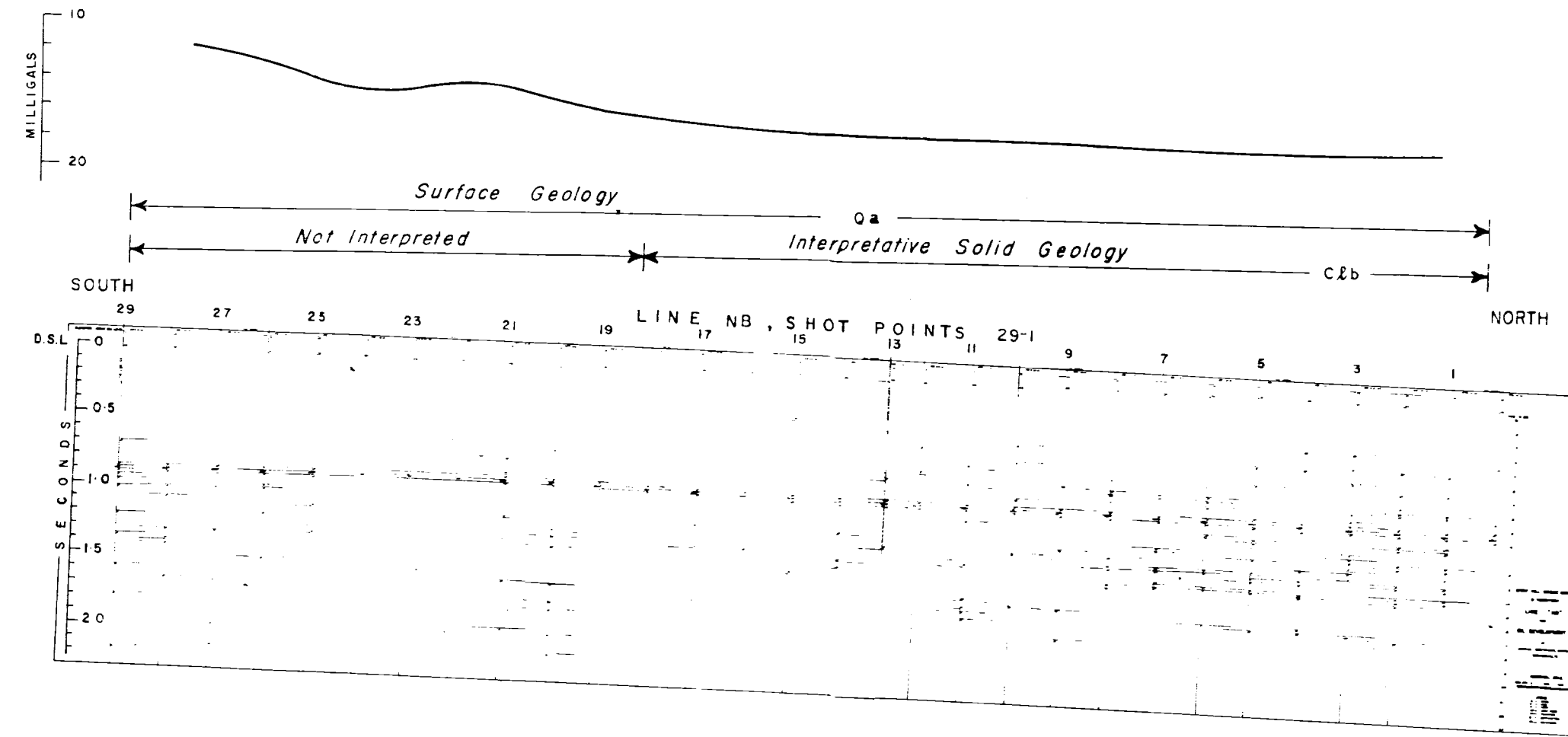
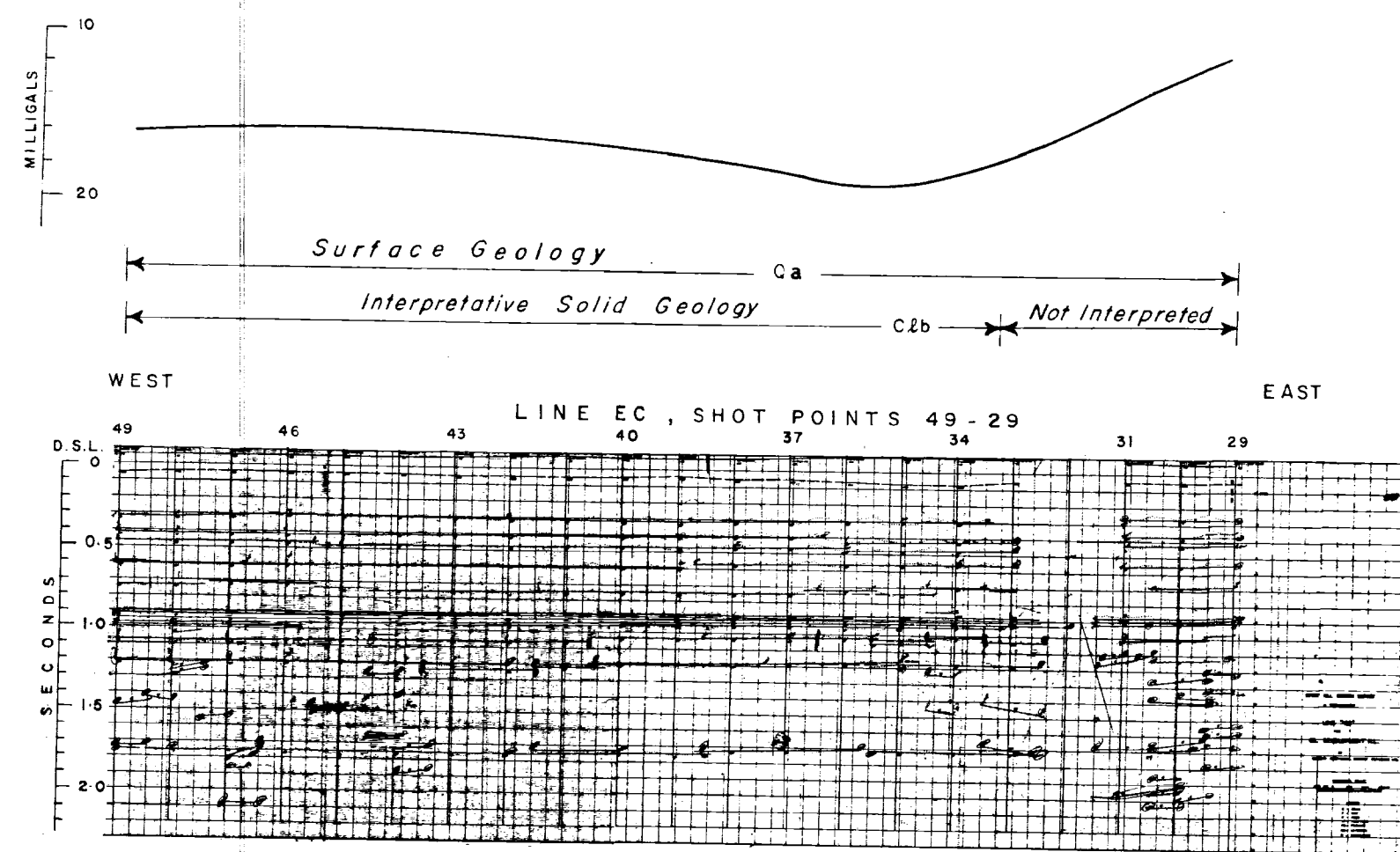
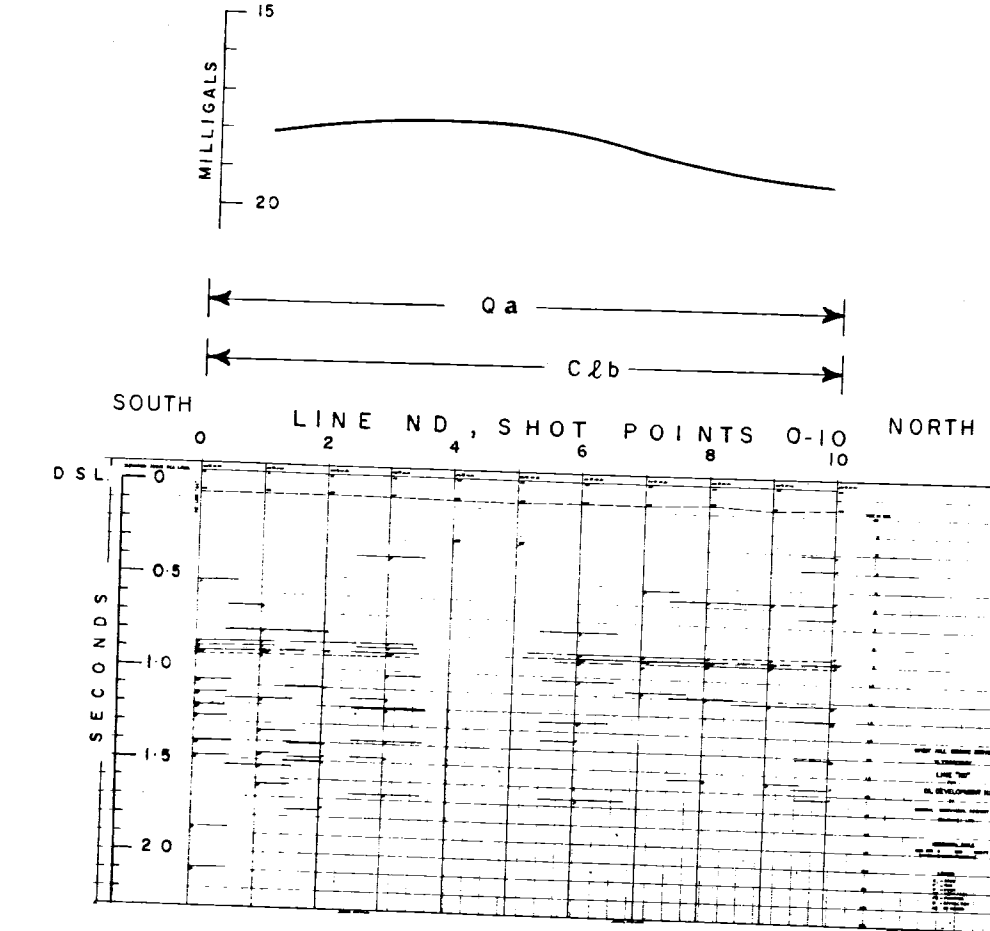
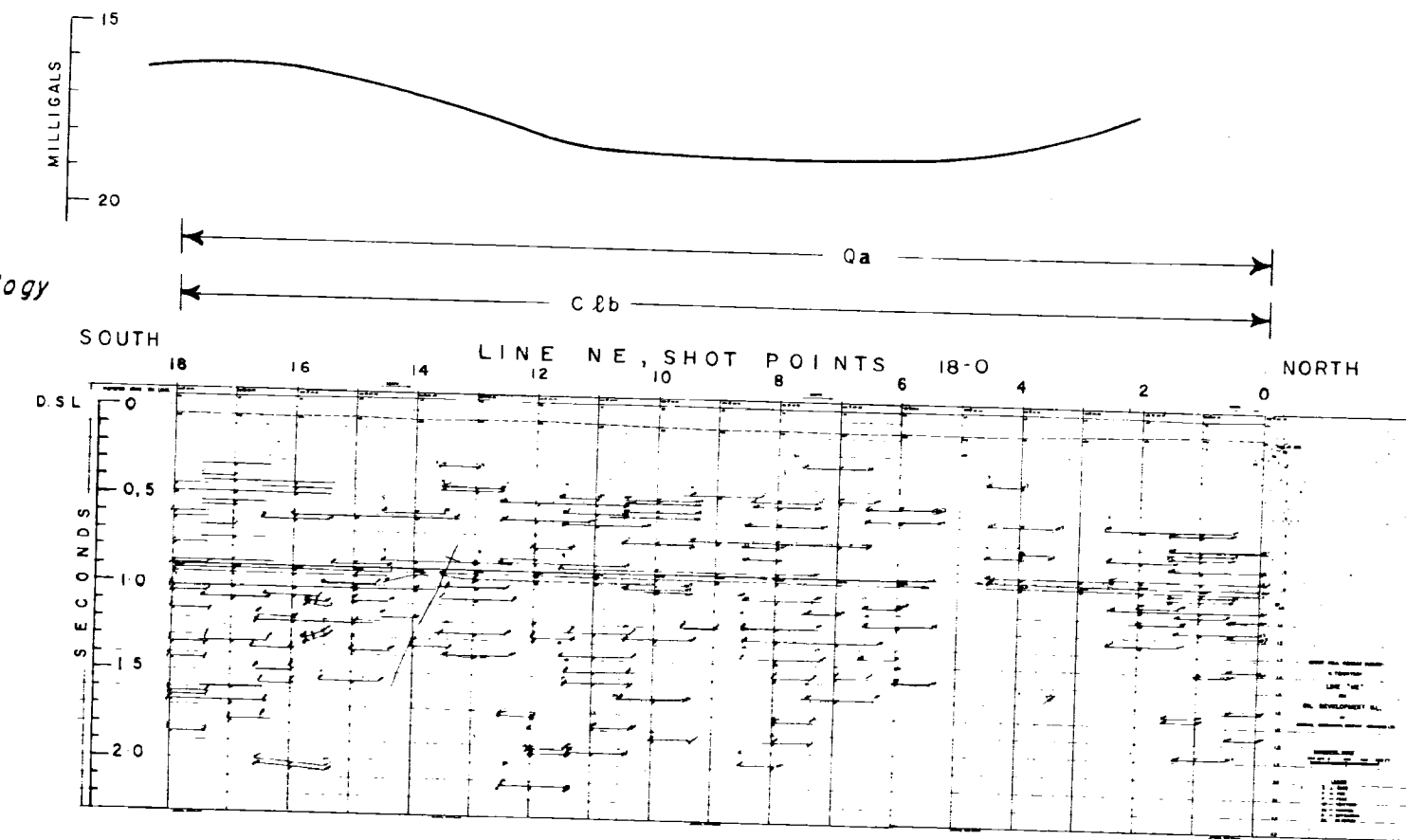
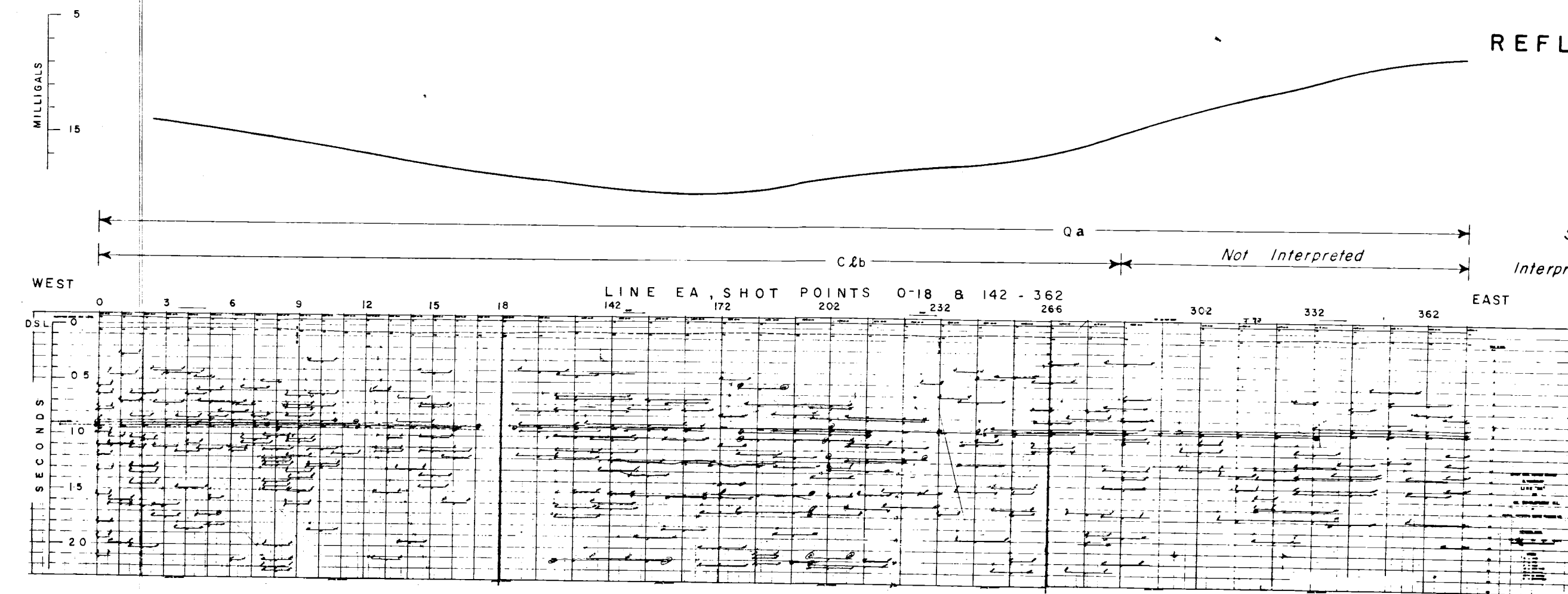


MILES

★ Geoseismic Shot Points

Bonaparte Gulf Seismic Survey
Spirit Hill Area
REFLECTION CROSS SECTIONS
 AFTER OIL DEVELOPMENT NL.

PLATE 42

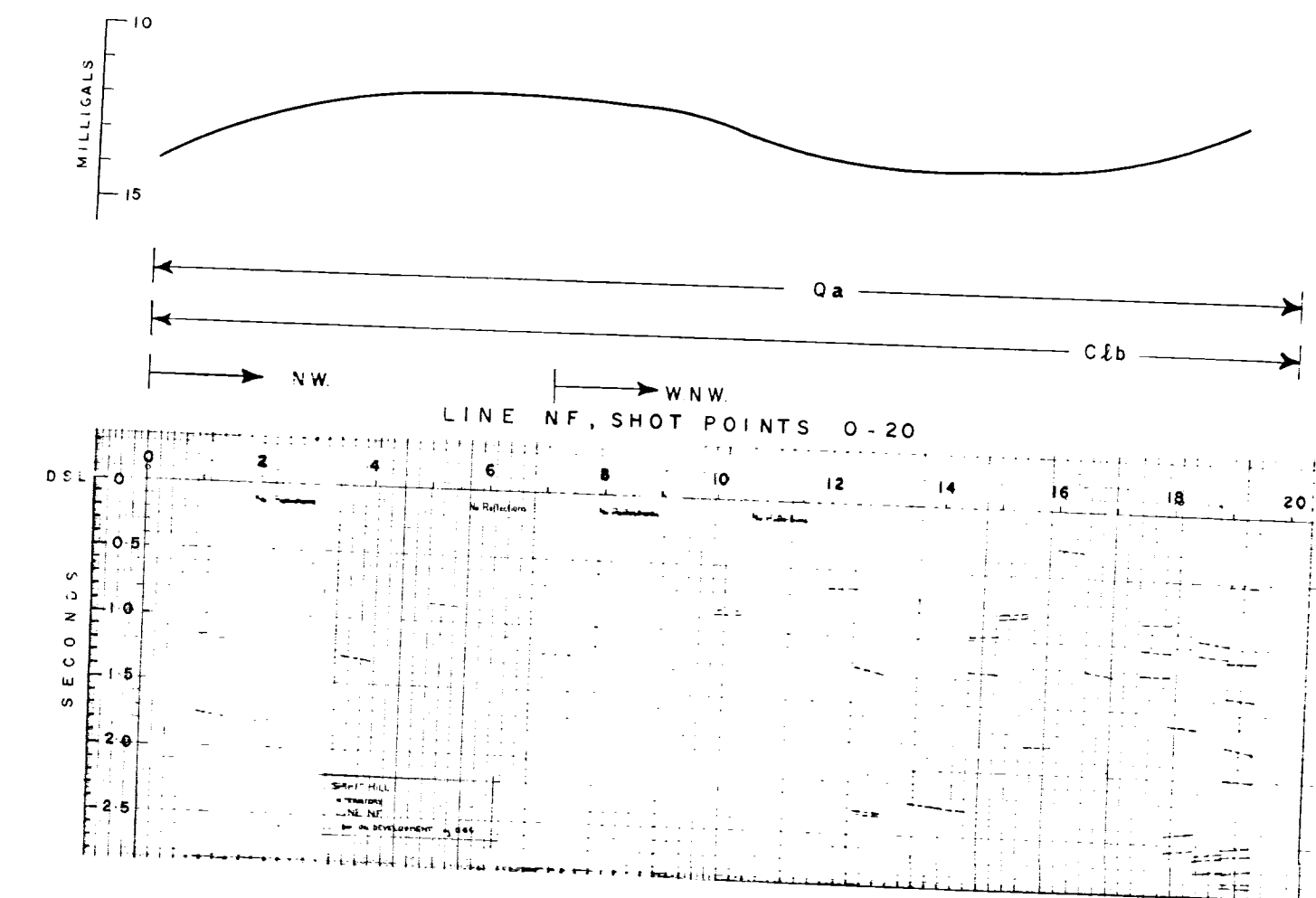
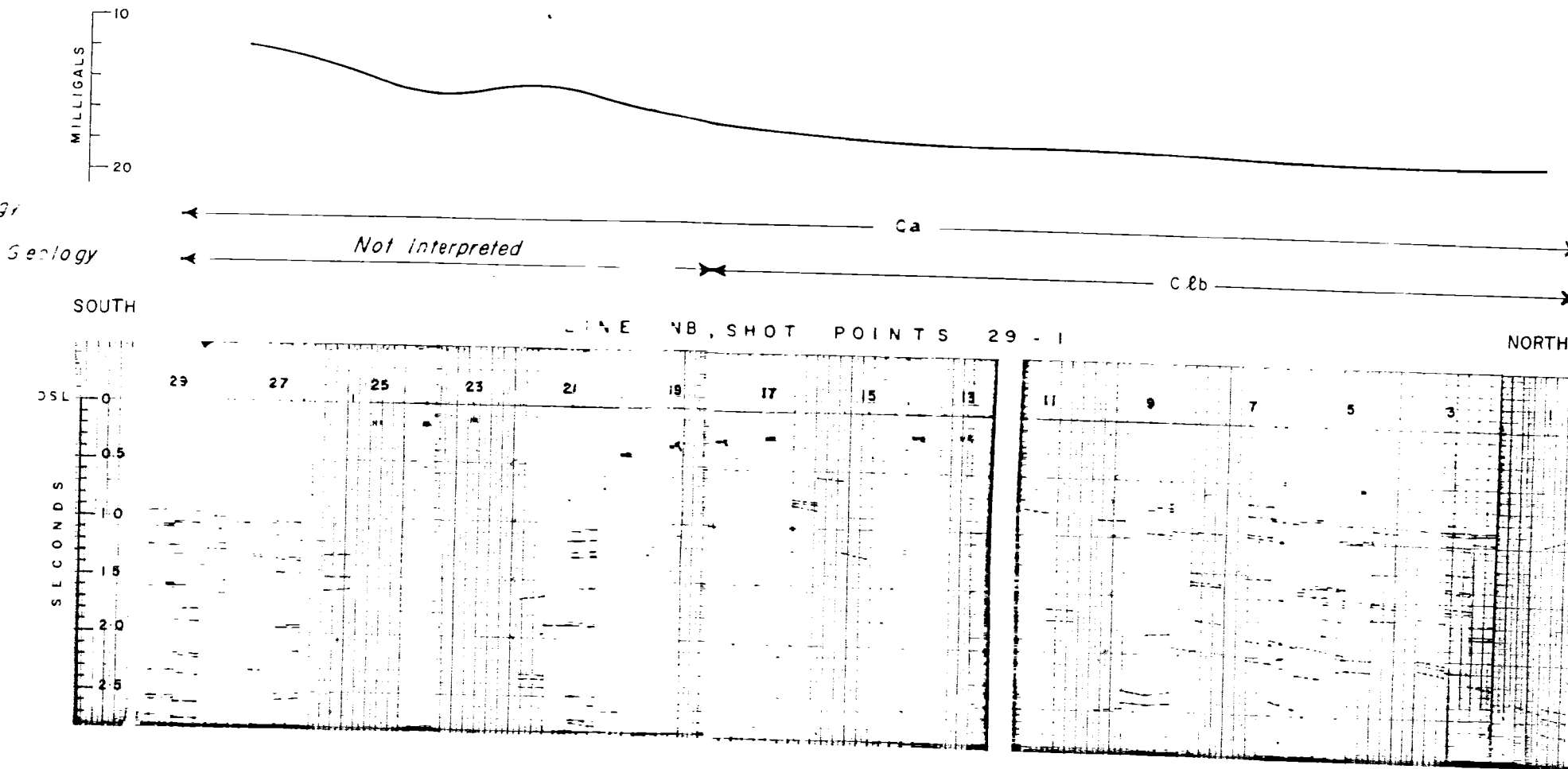
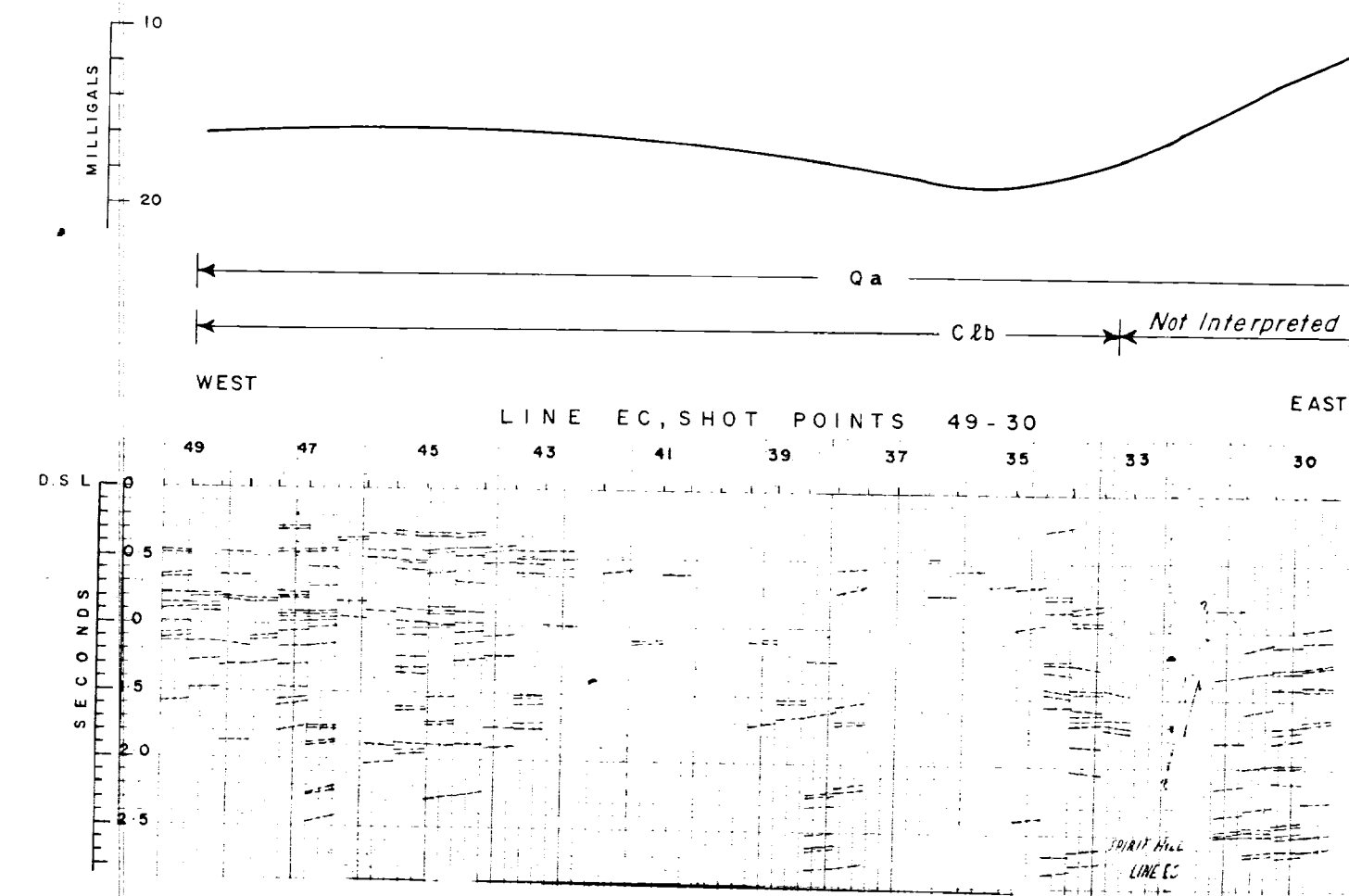
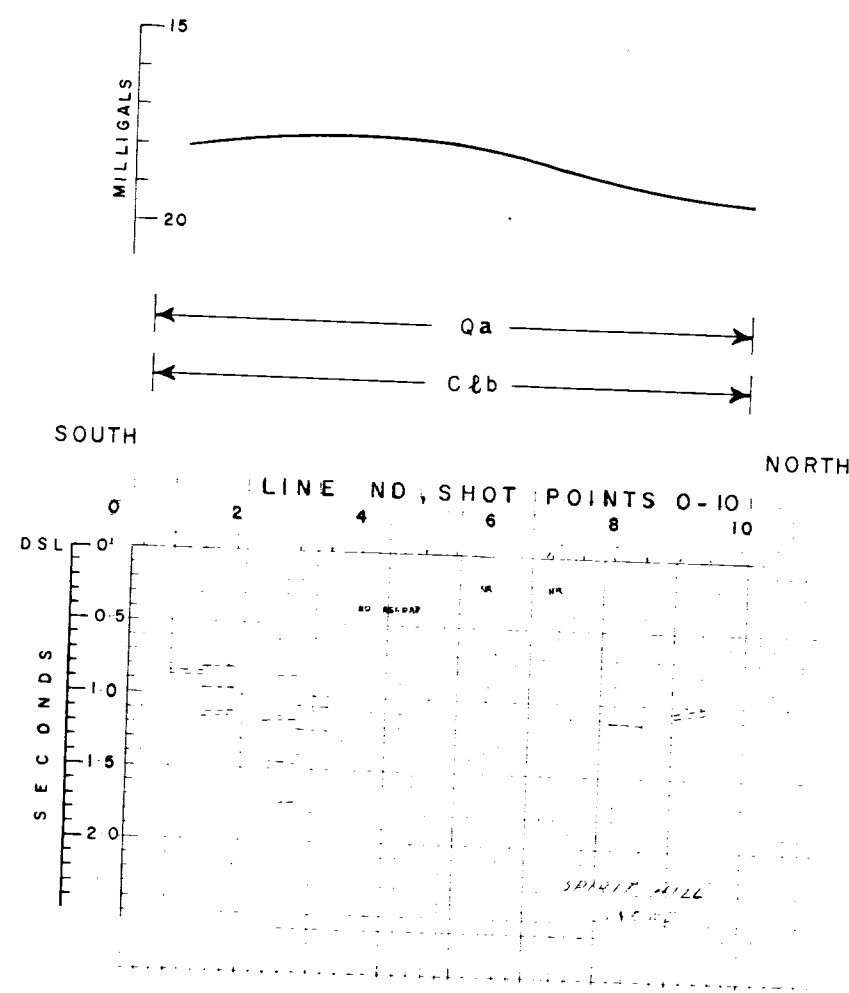
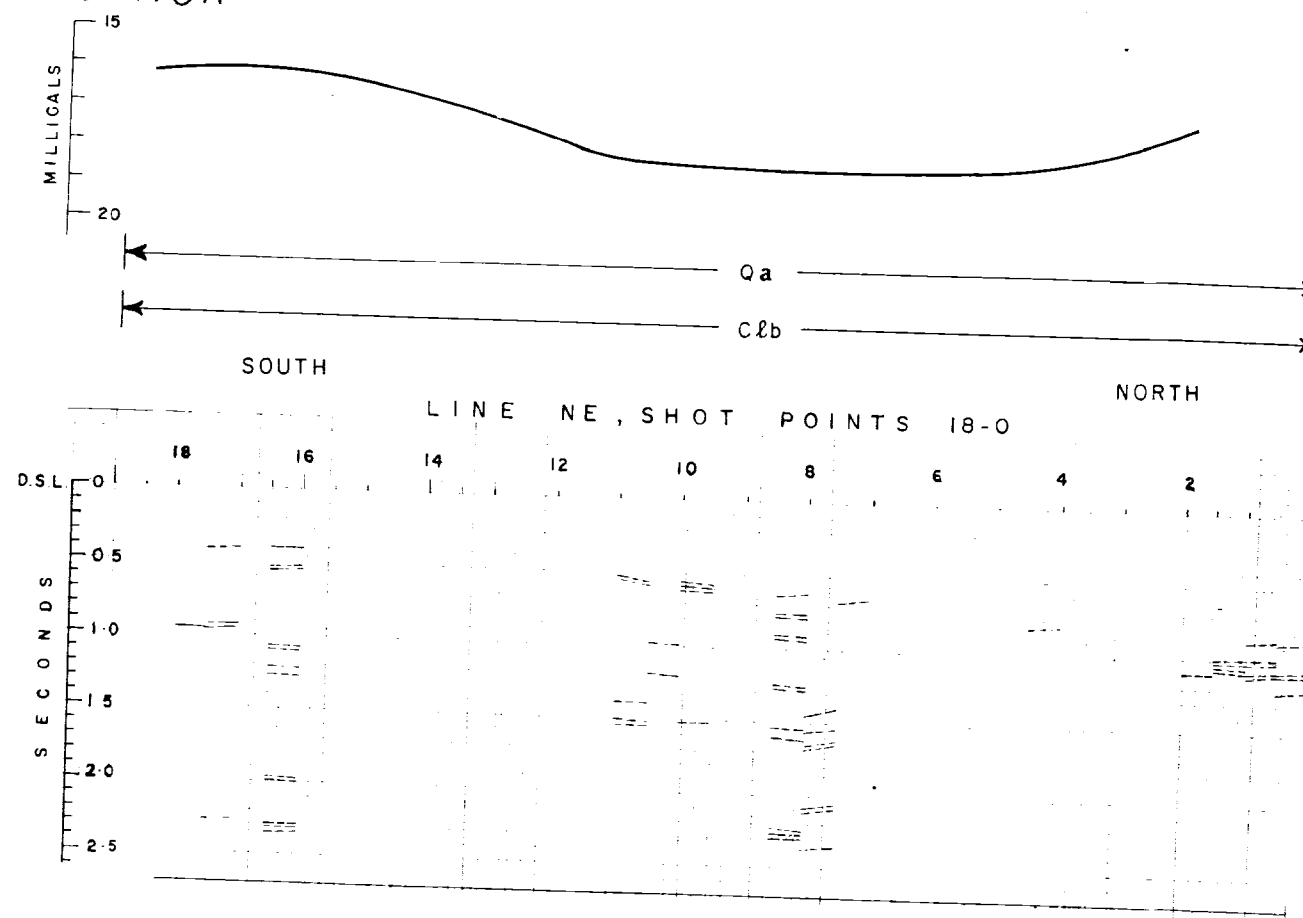
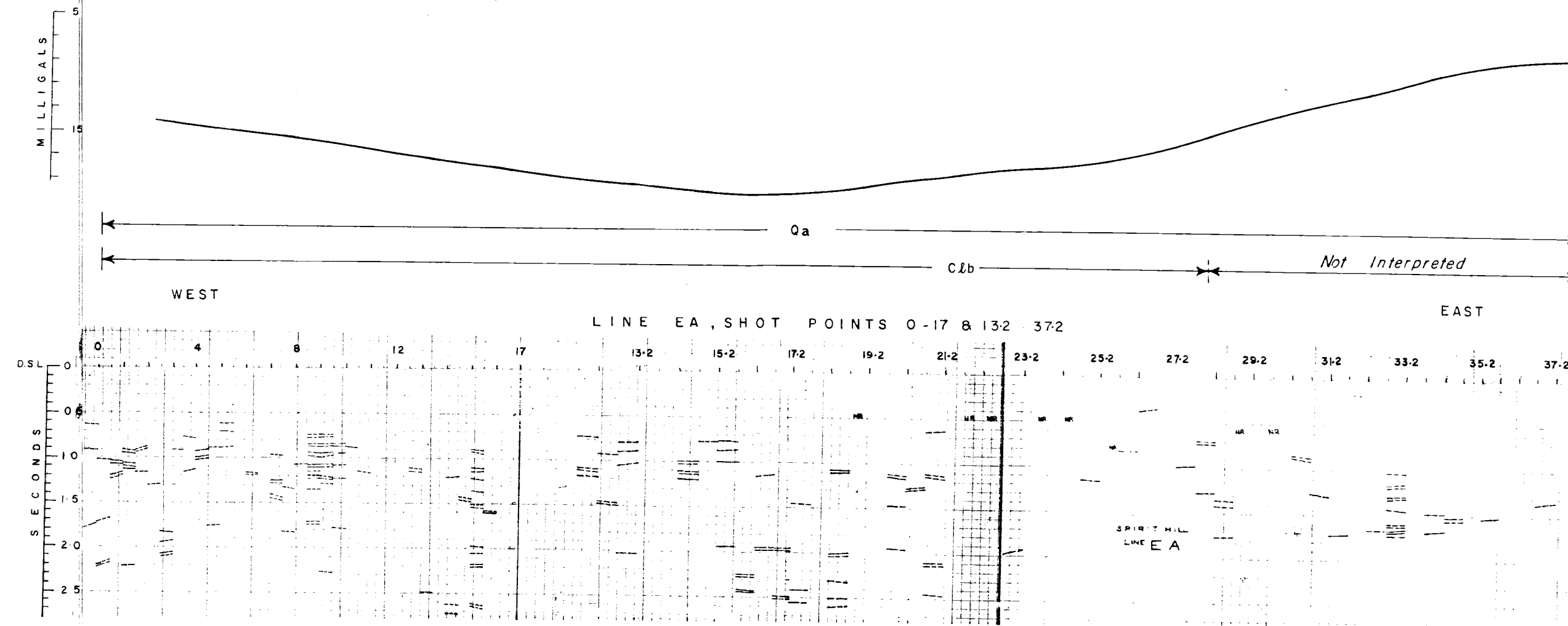


REFERENCE
 QUATERNARY Qa
 ? UPPER & LOWER CARBONIFEROUS C2b Border Creek Sandstone & Point Spring Sandstone
 OBSERVED GRAVITY PROFILE 1 3 TRAVERSE WITH SHOT POINTS

0 1 2
 MILES

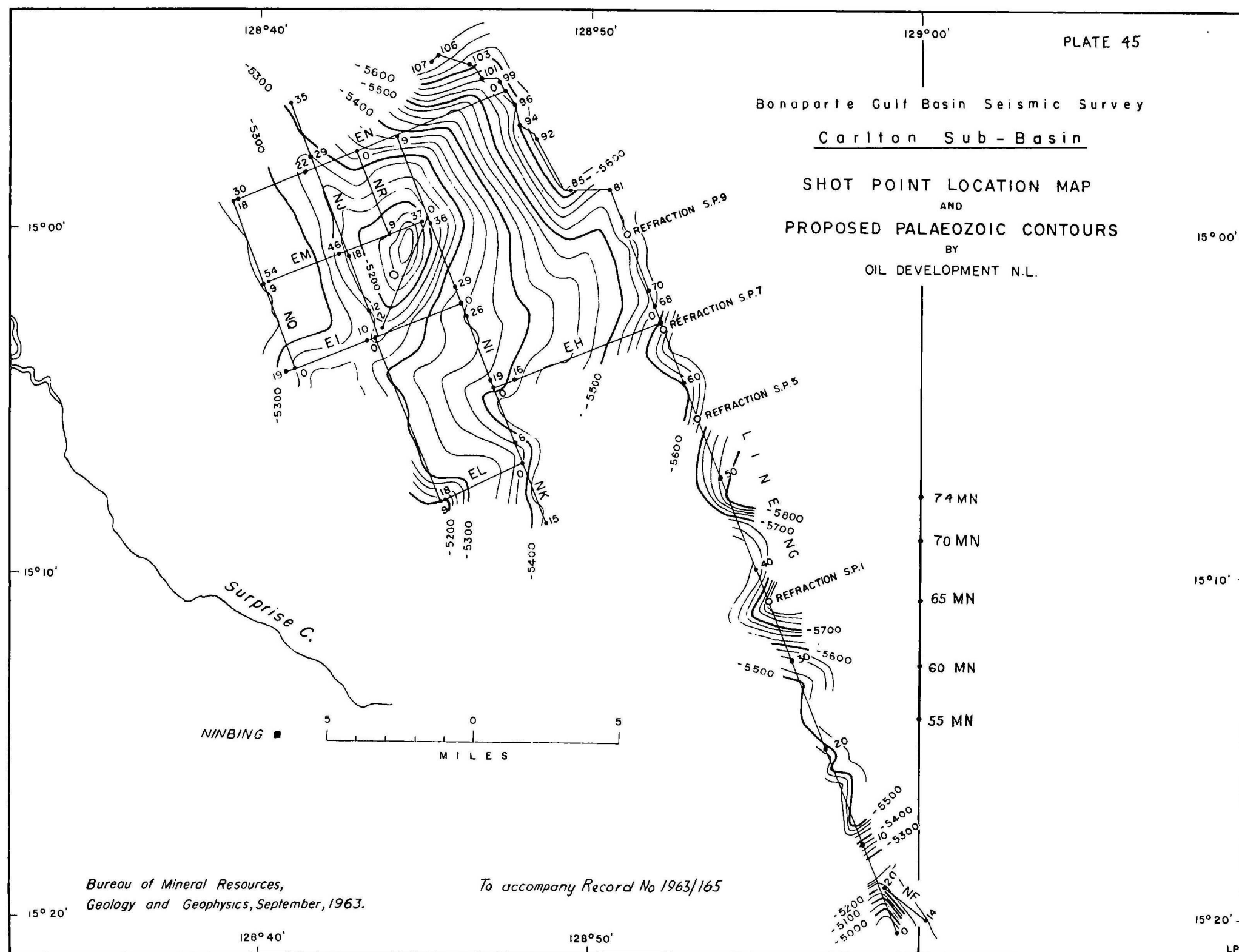
Bonaparte Gulf Seismic Survey
Spirit Hill Area
REFLECTION CROSS SECTIONS
 INTERPRETATION BY THE AUTHOR

PLATE 43



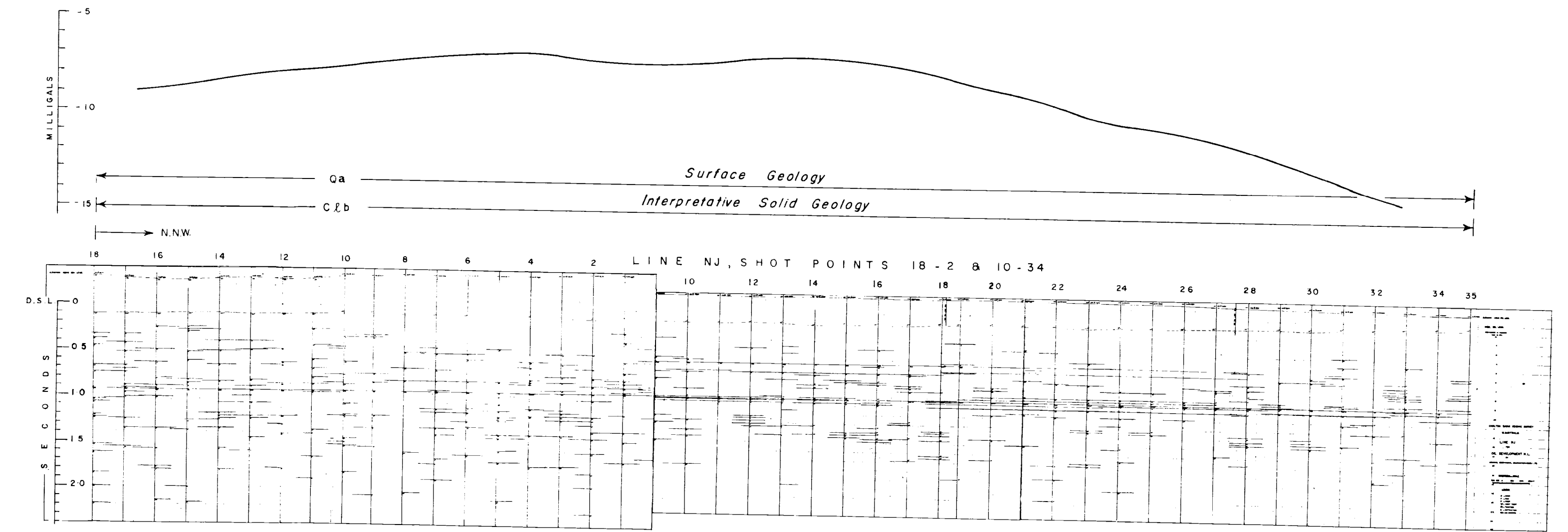
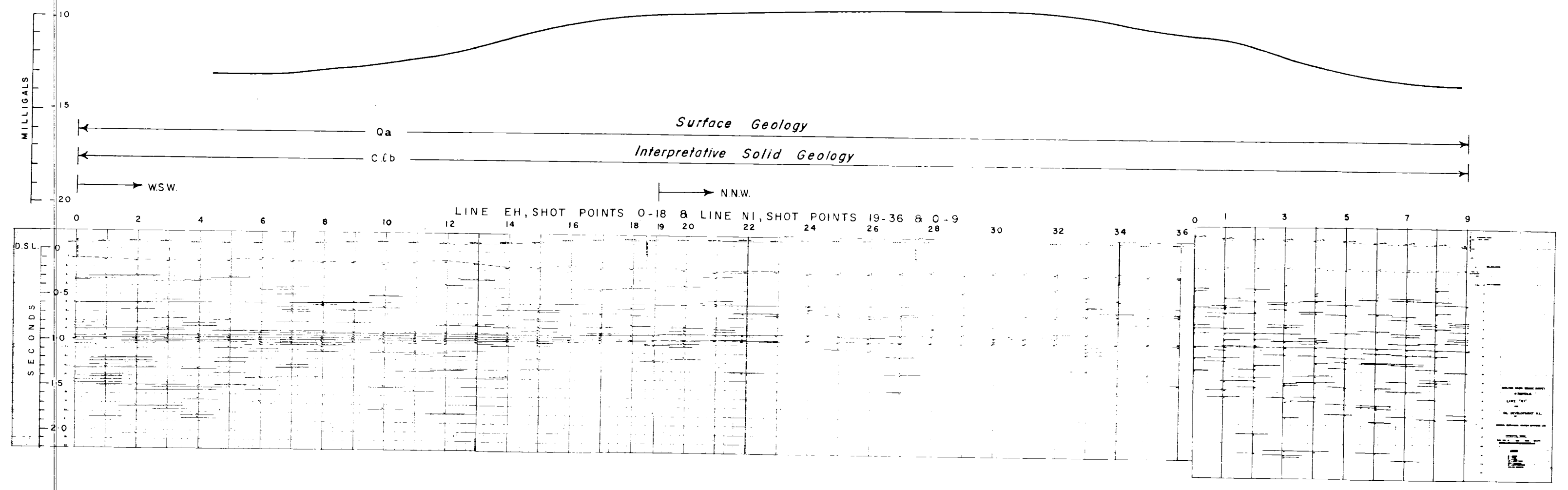
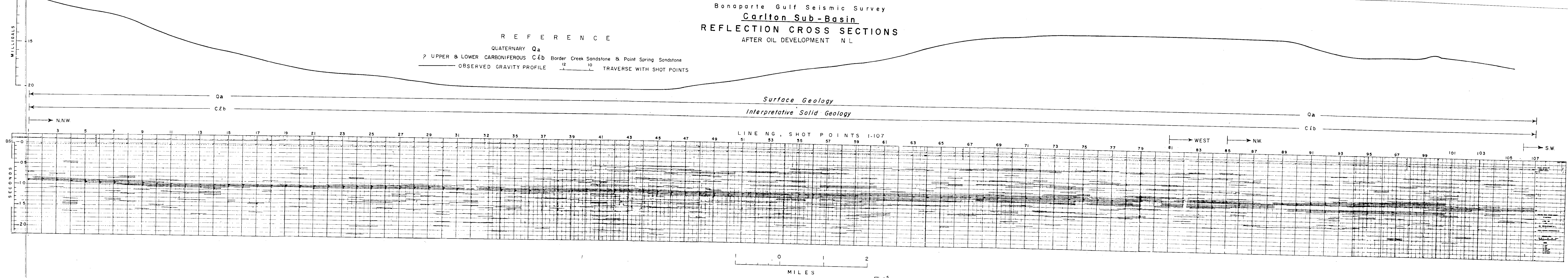
REFERENCE
 QUATERNARY Qa
 ? UPPER & LOWER CARBONIFEROUS C2b Border Creek Sandstone & Point Spring Sandstone
 OBSERVED GRAVITY PROFILE 19 17 TRAVERSE WITH SHOT POINTS





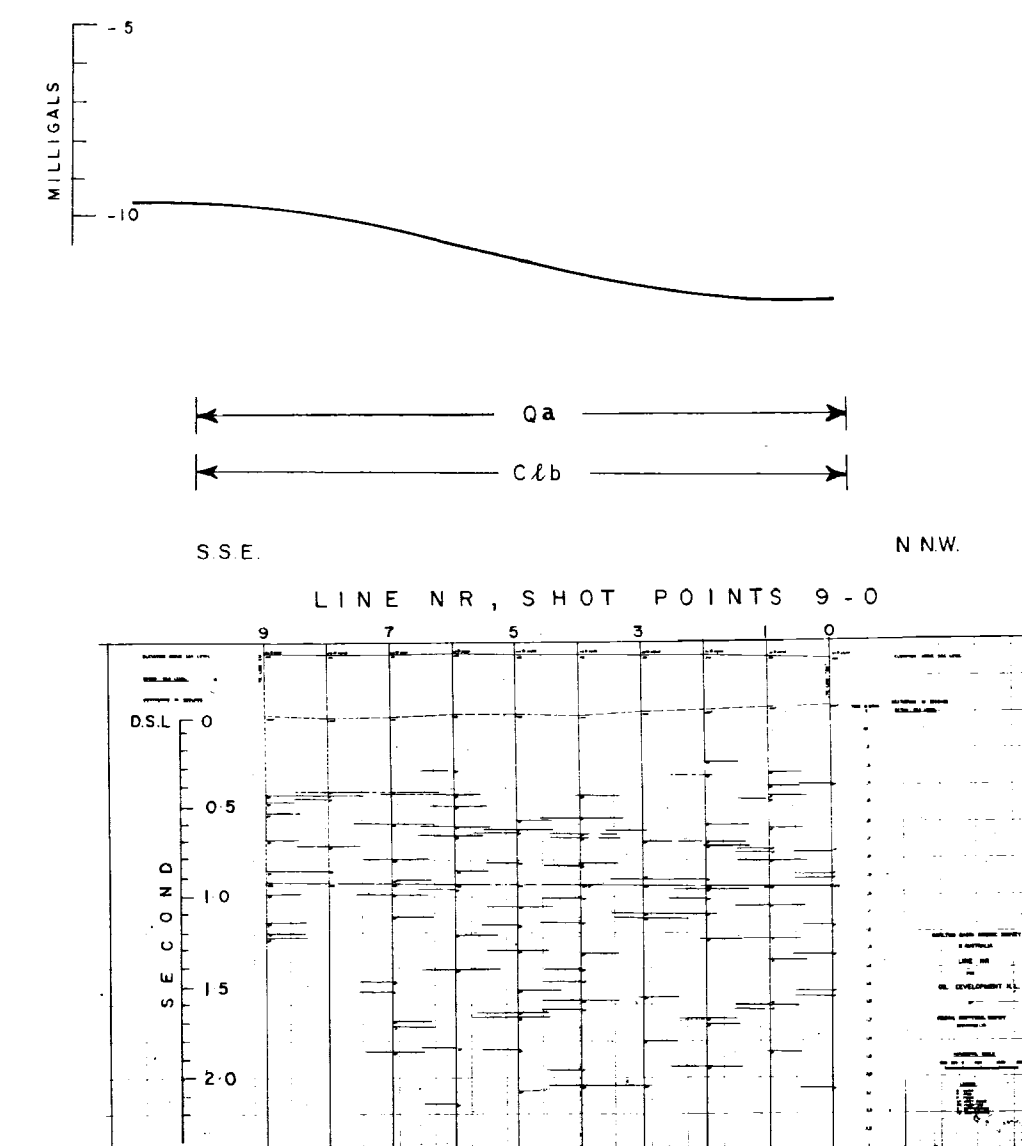
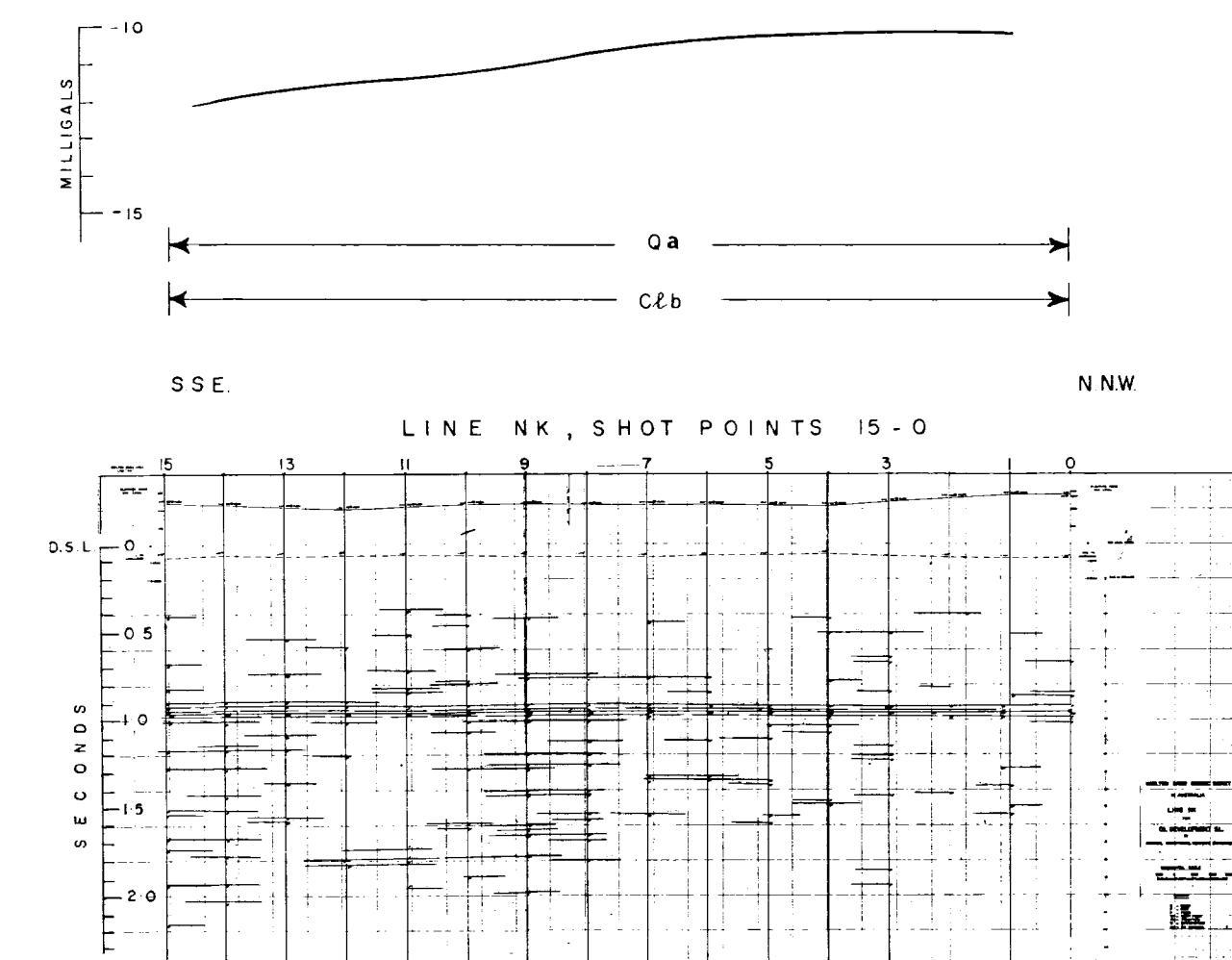
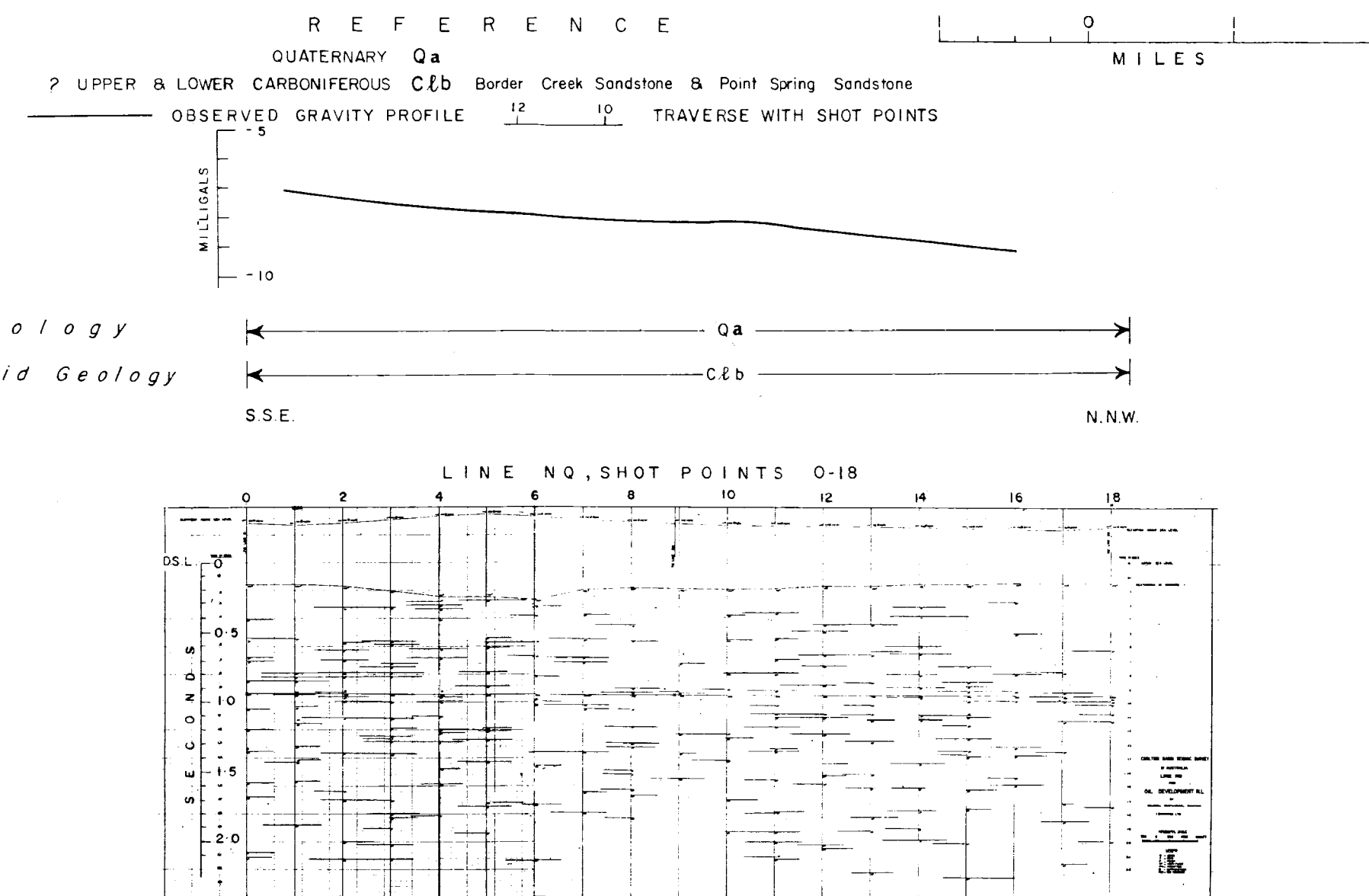
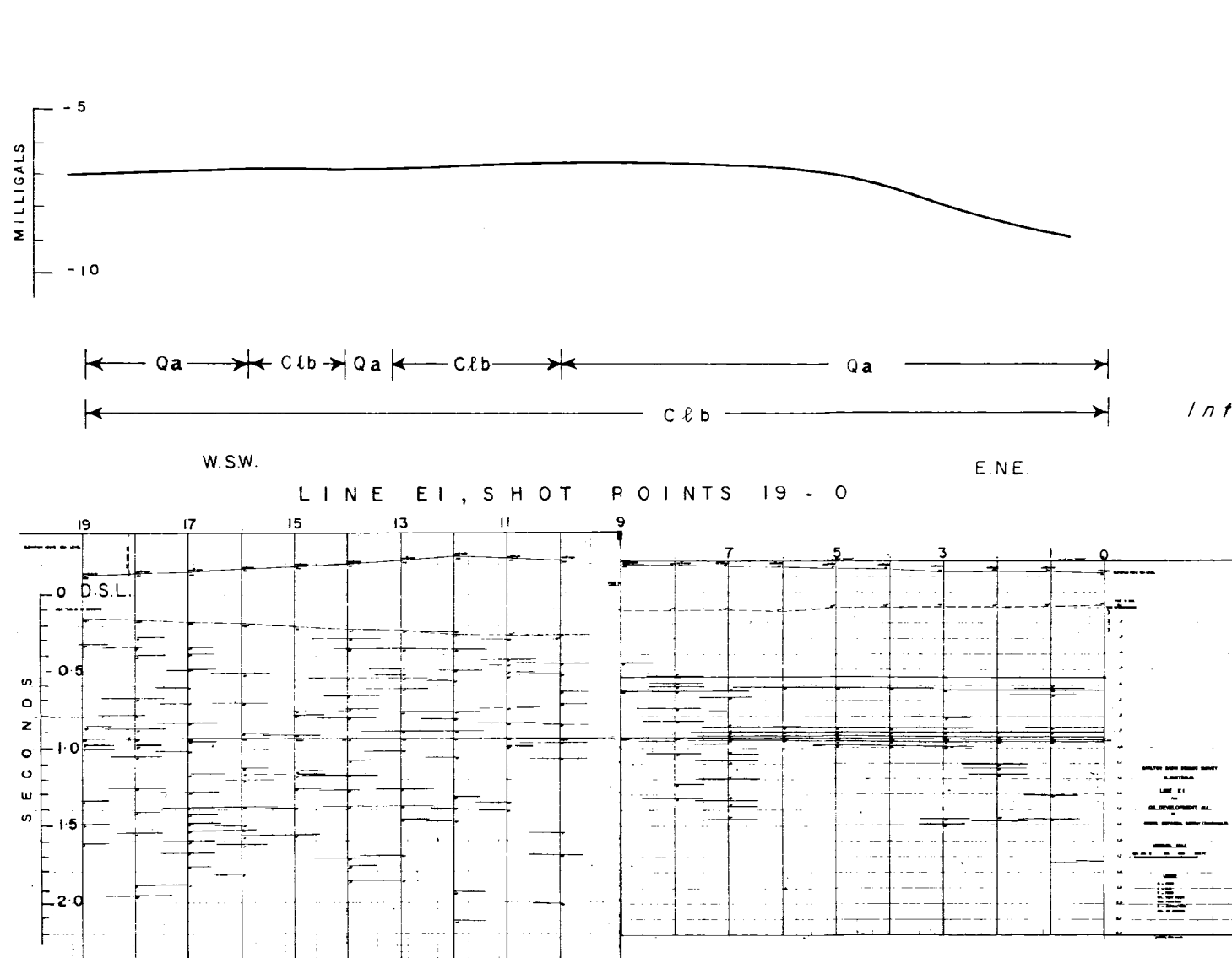
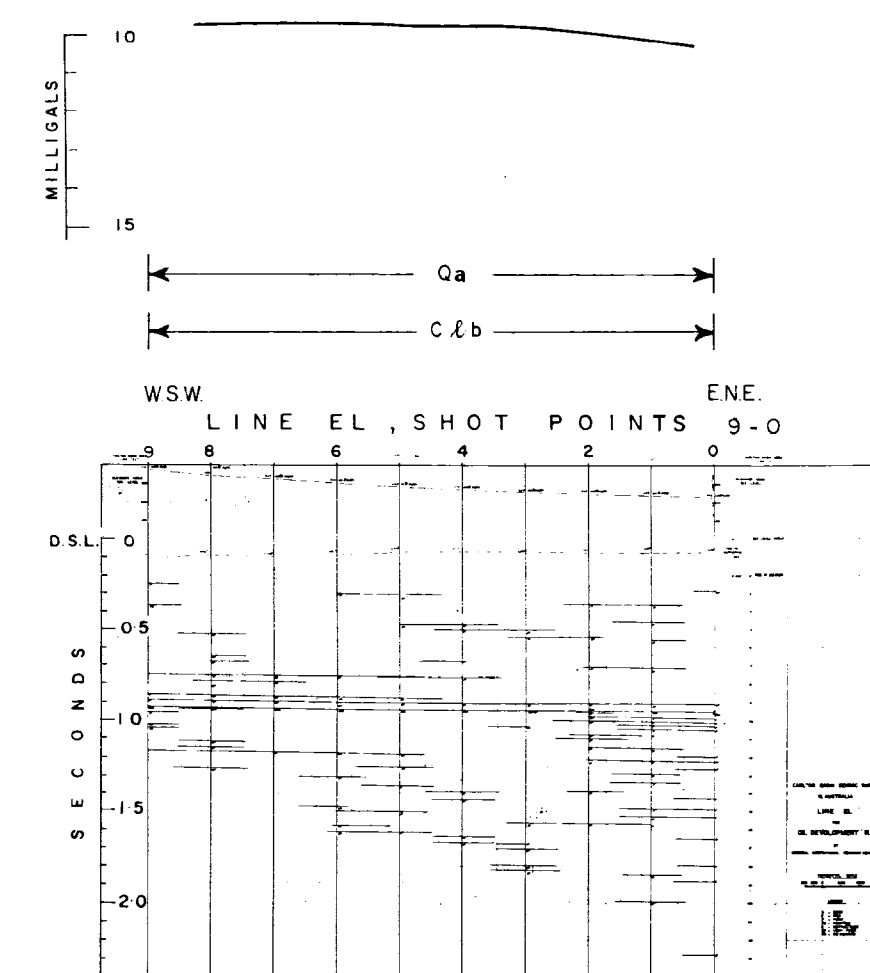
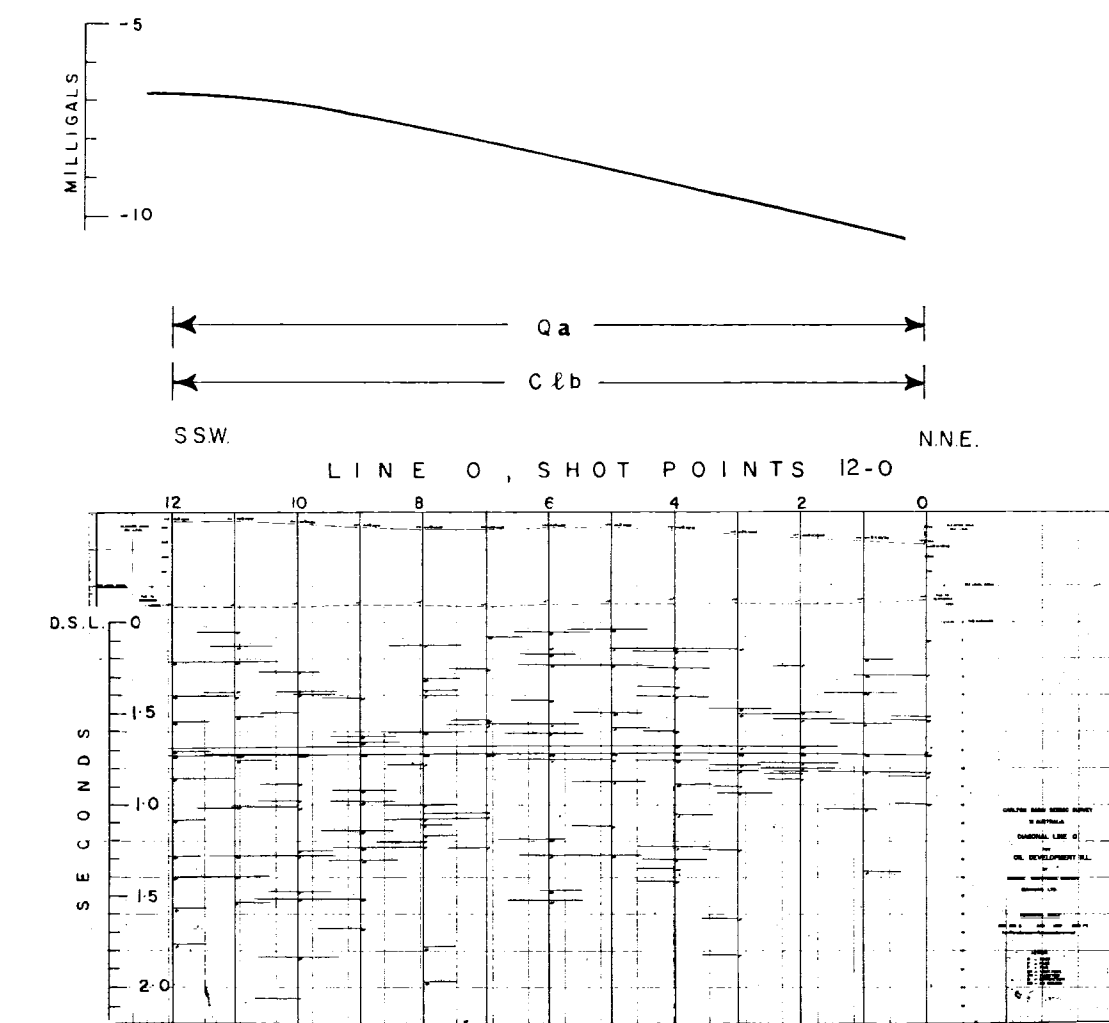
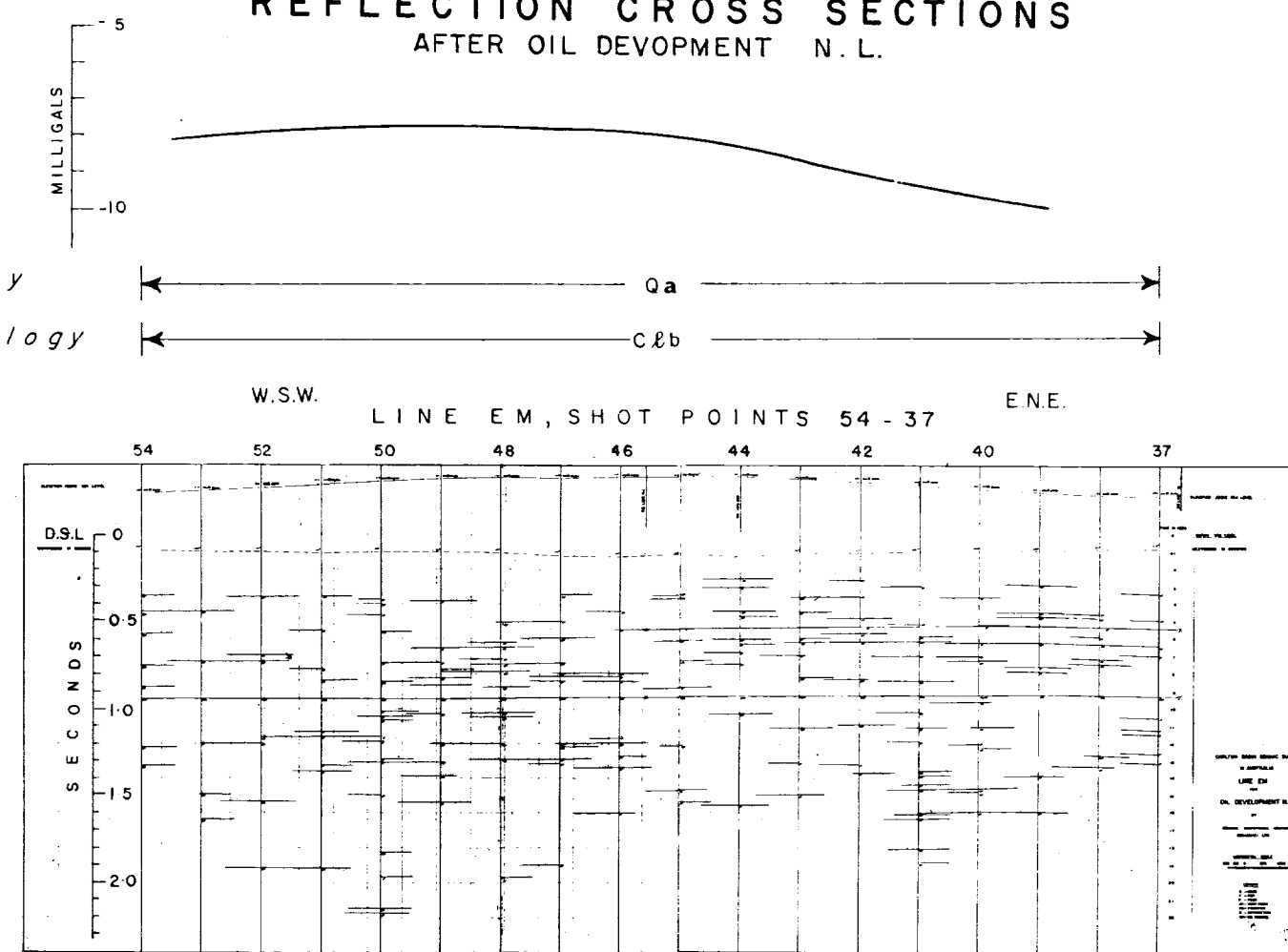
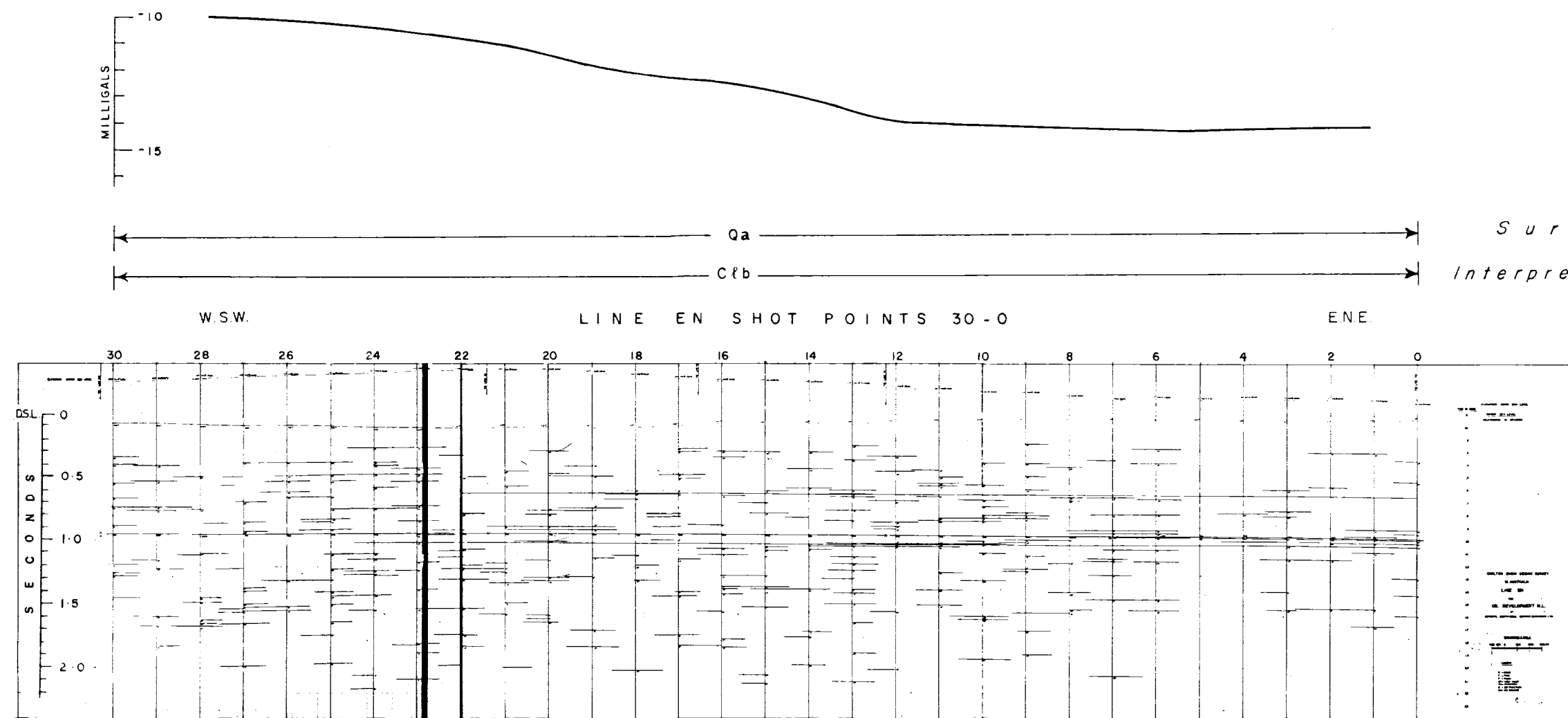
Bonaparte Gulf Seismic Survey
Carlton Sub-Basin
REFLECTION CROSS SECTIONS
AFTER OIL DEVELOPMENT N L

REFERENCE
QUATERNARY Qa
? UPPER & LOWER CARBONIFEROUS Clb
OBSERVED GRAVITY PROFILE
Border Creek Sandstone & Point Spring Sandstone
TRAVERSE WITH SHOT POINTS



To accompany Record. N° 1963/165

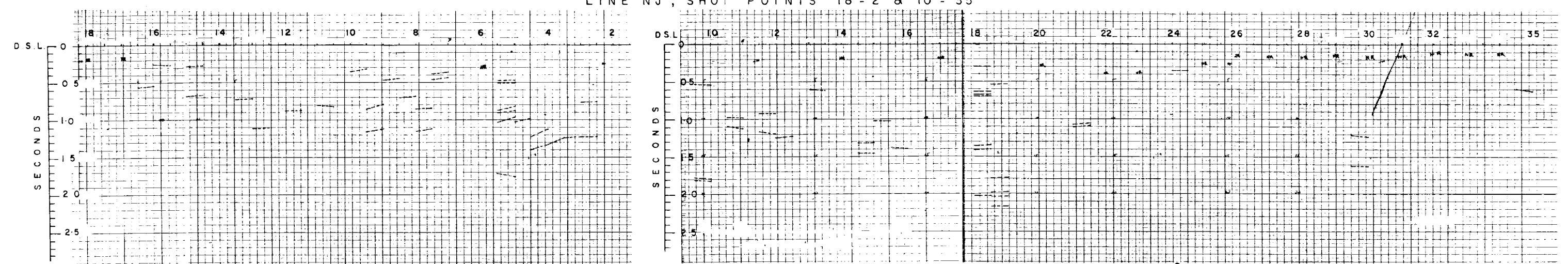
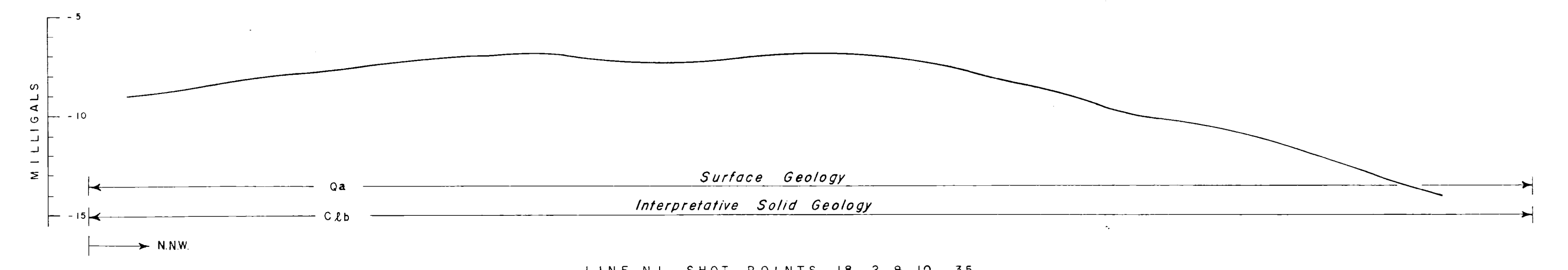
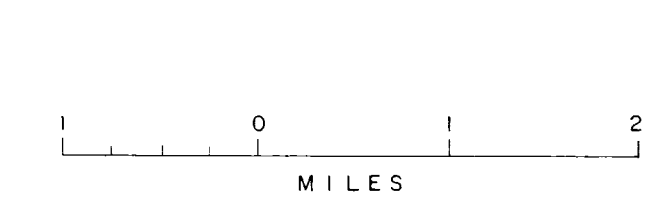
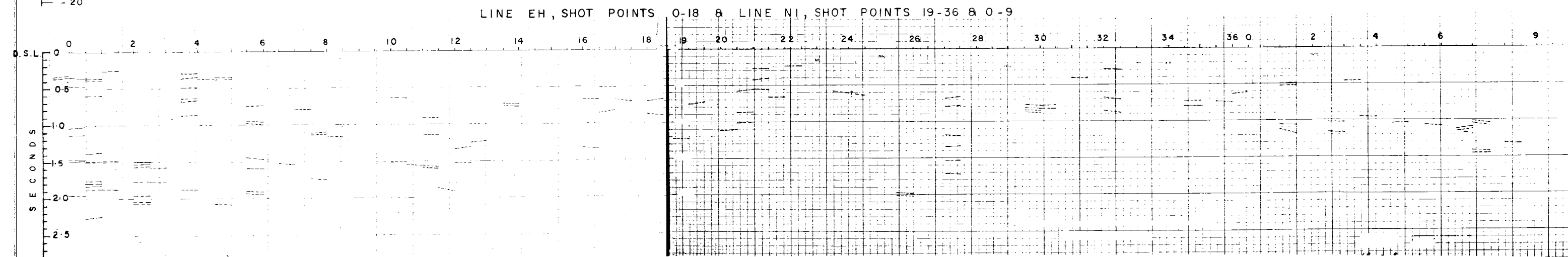
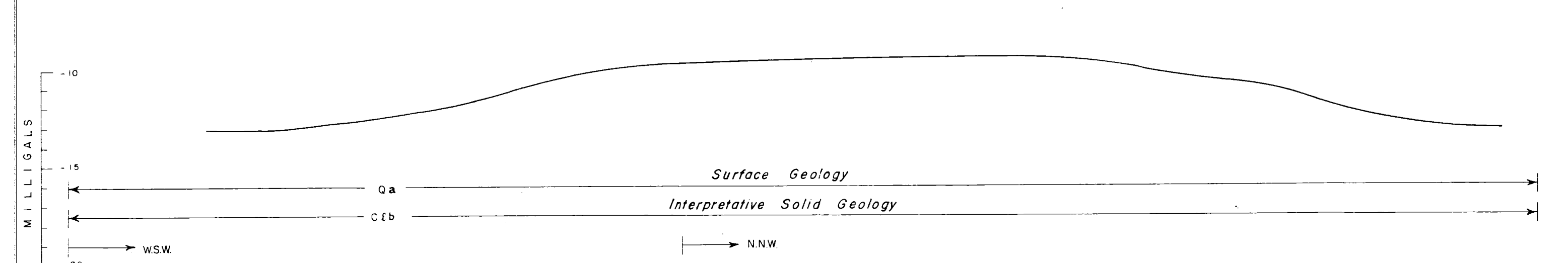
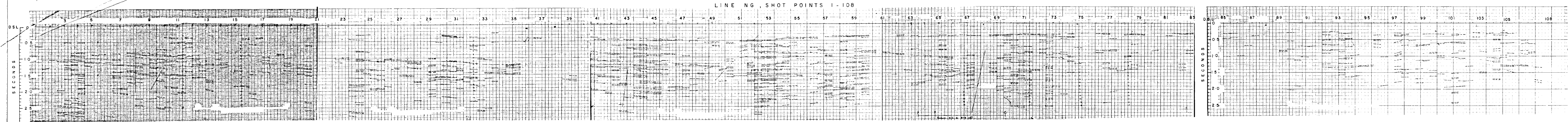
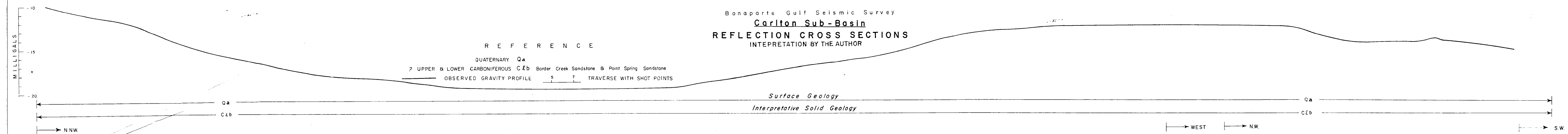
Bonaparte Gulf Seismic Survey
Carlton Sub-Basin
REFLECTION CROSS SECTIONS
 AFTER OIL DEVELOPMENT N.L.



REFERENCE
 QUATERNARY Qa
 2 UPPER & LOWER CARBONIFEROUS Clb
 OBSERVED GRAVITY PROFILE
 TRVERSE WITH SHOT POINTS

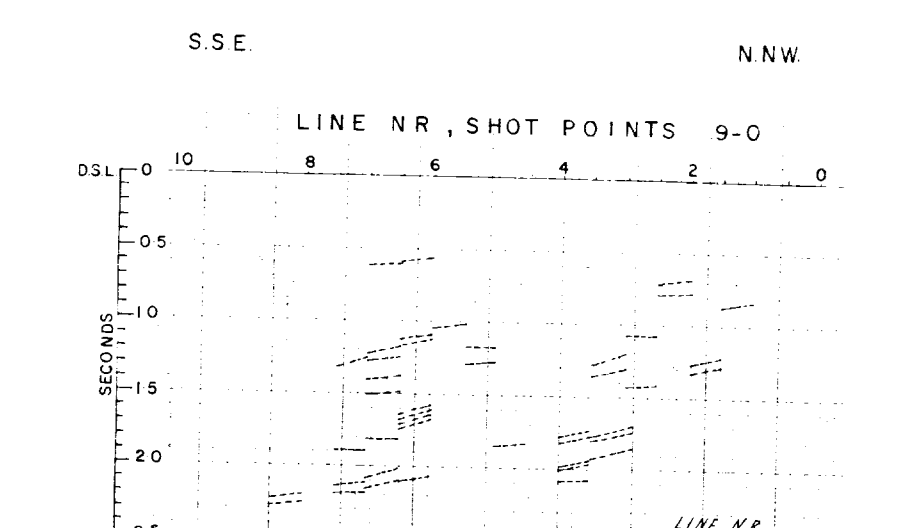
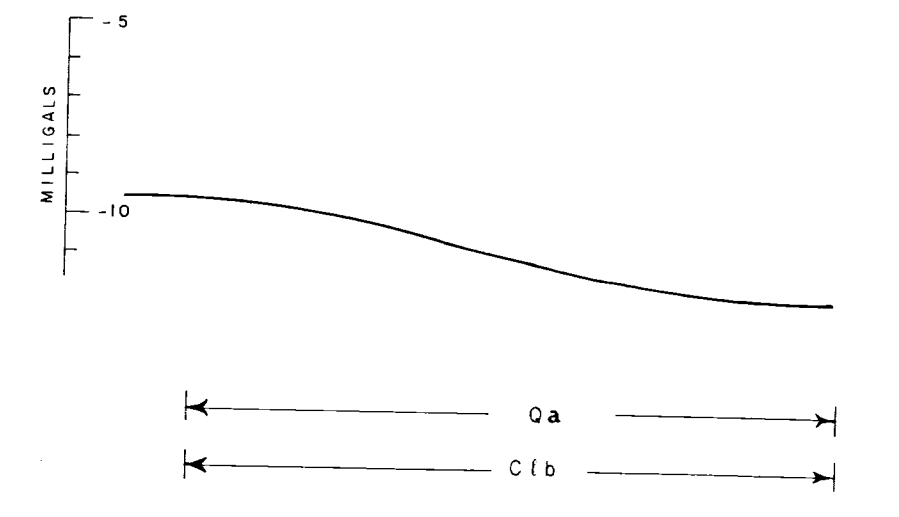
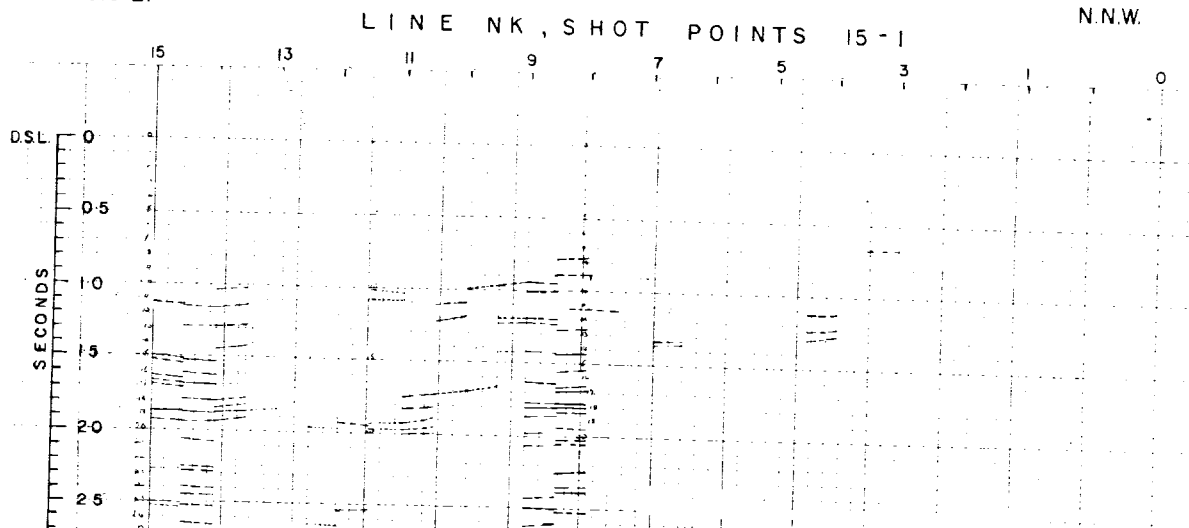
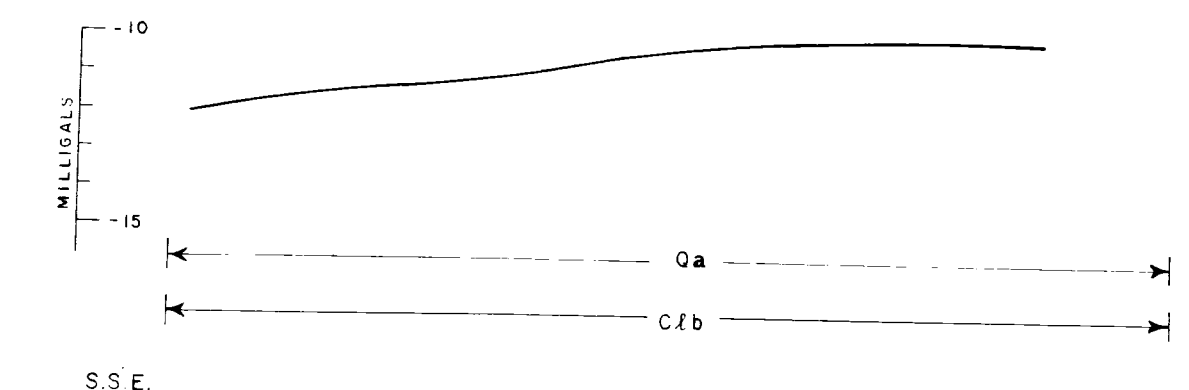
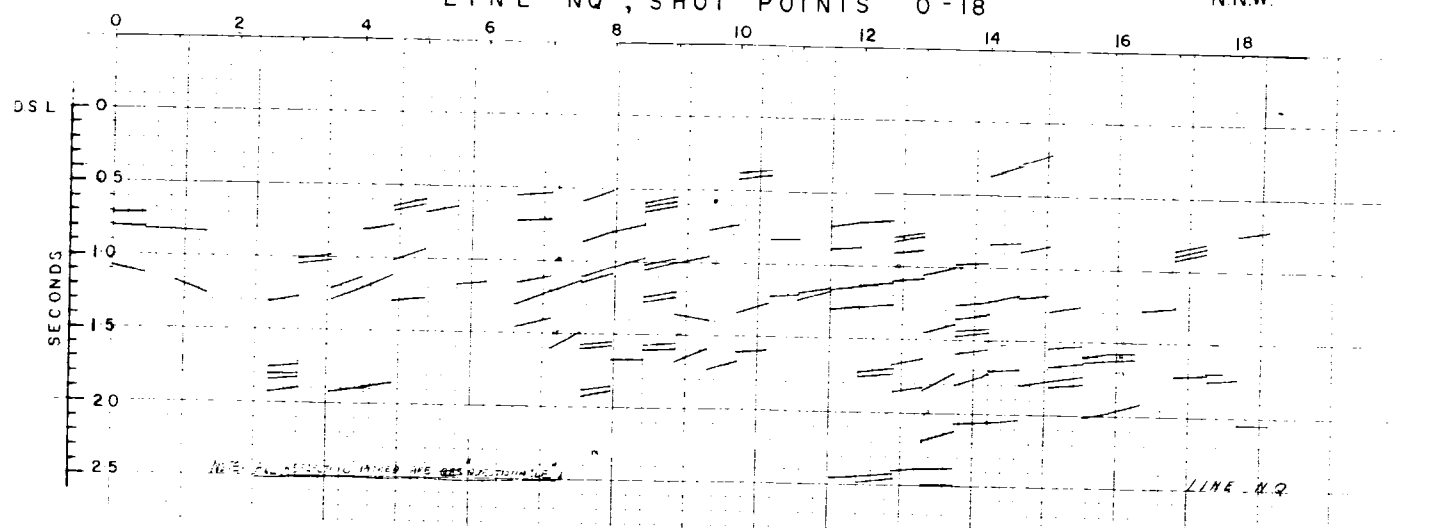
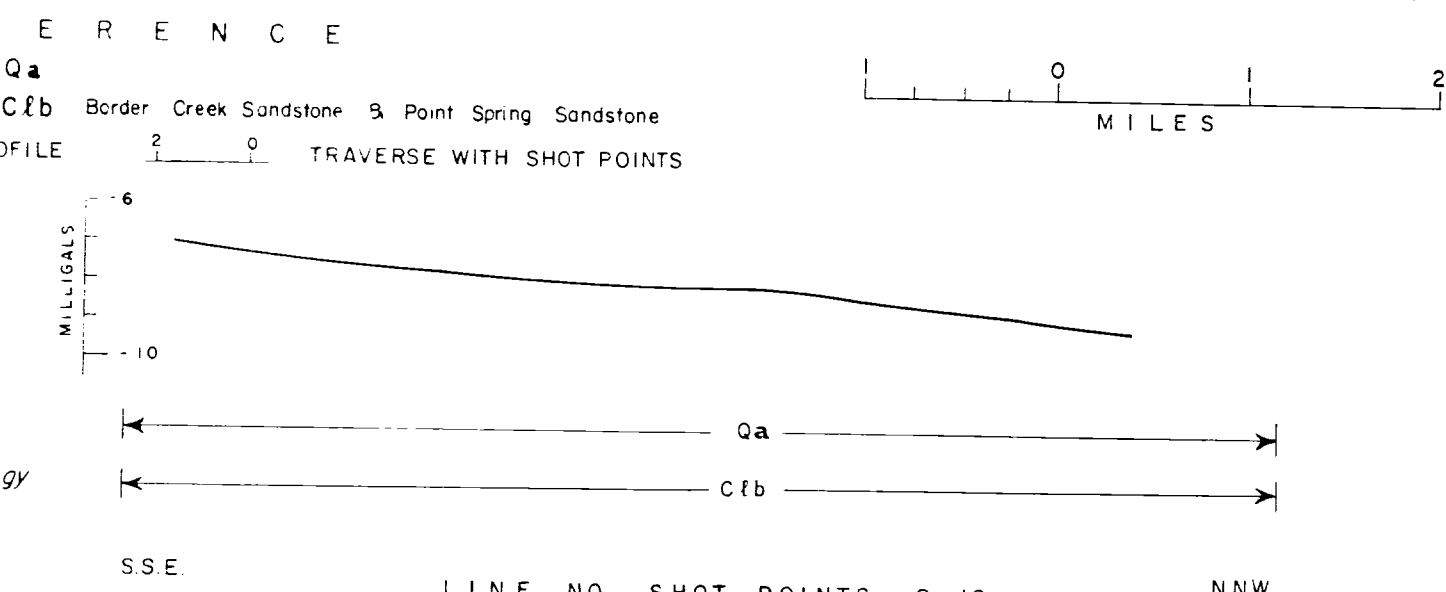
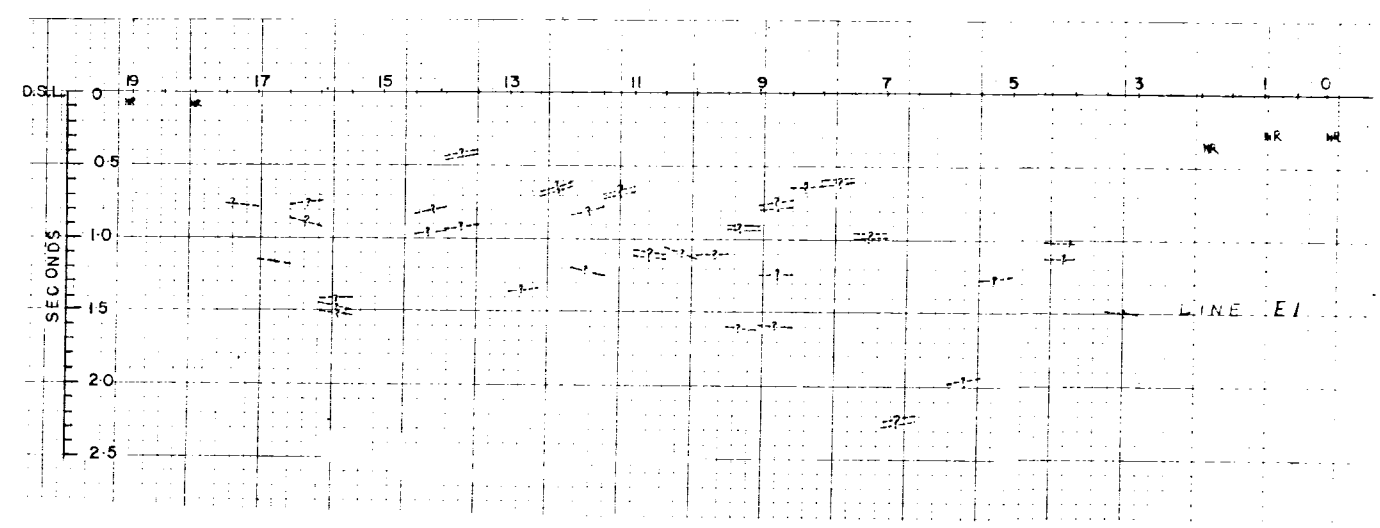
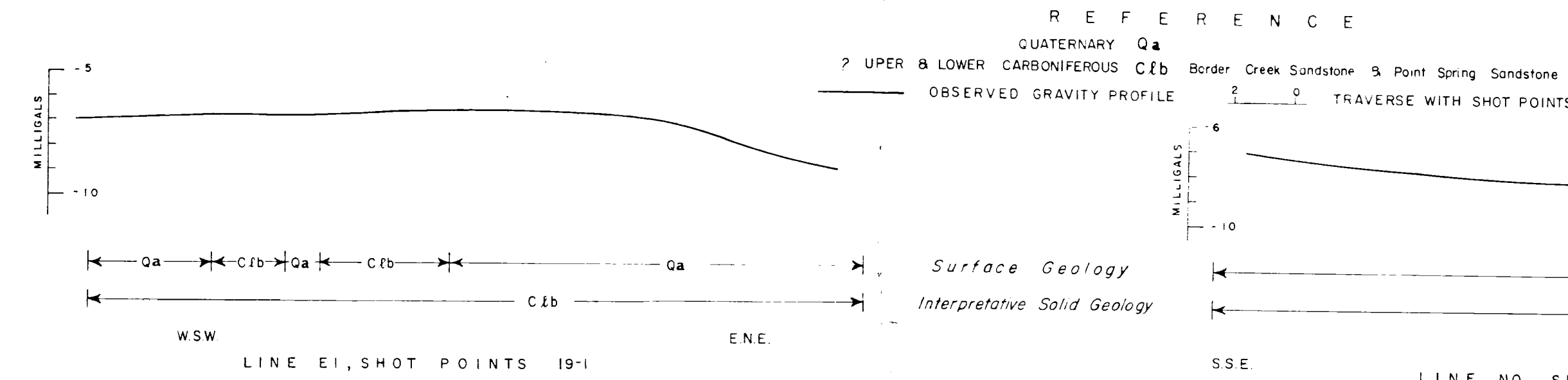
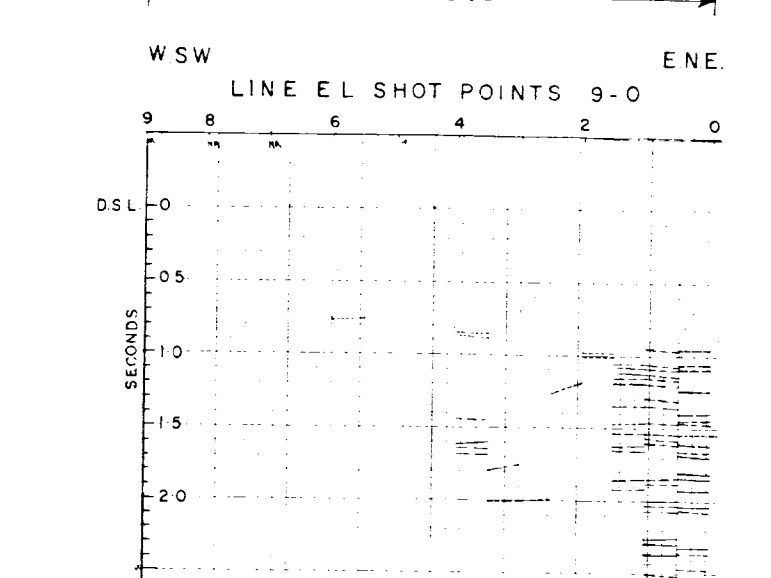
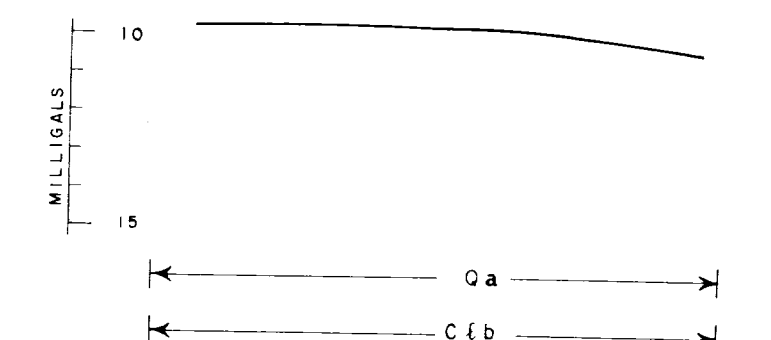
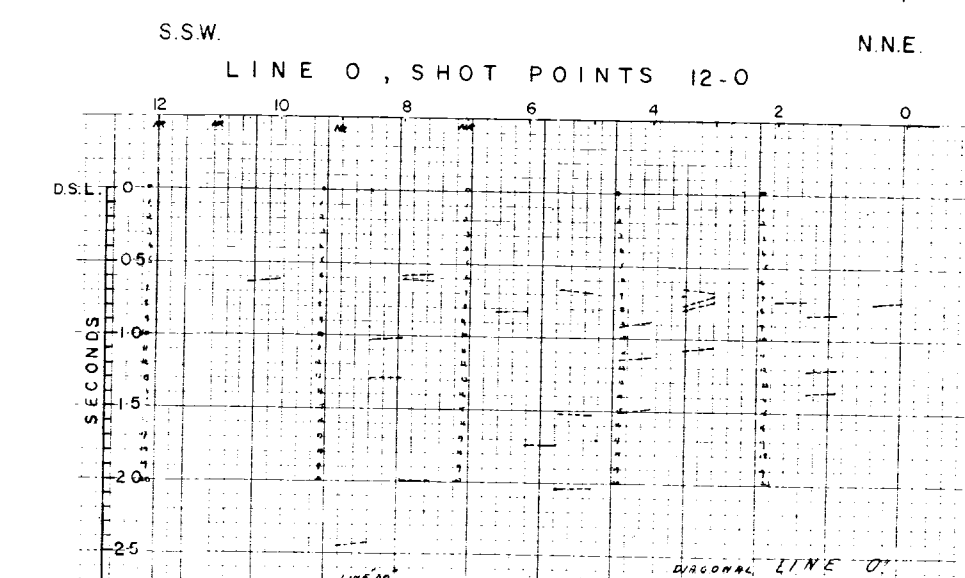
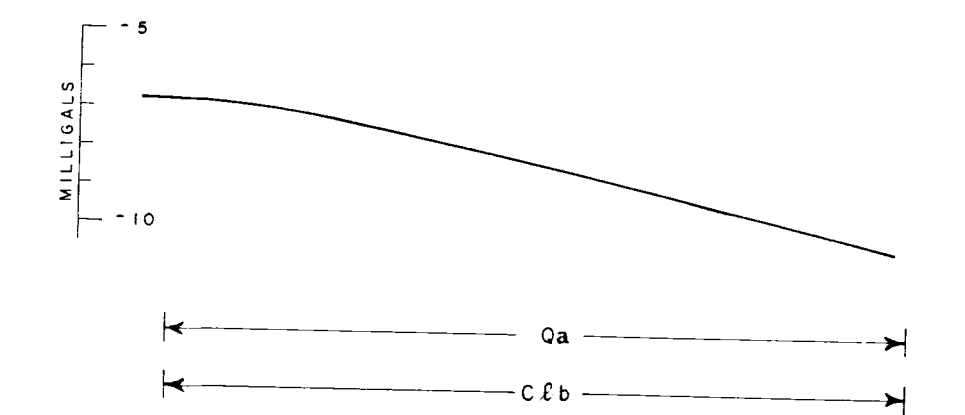
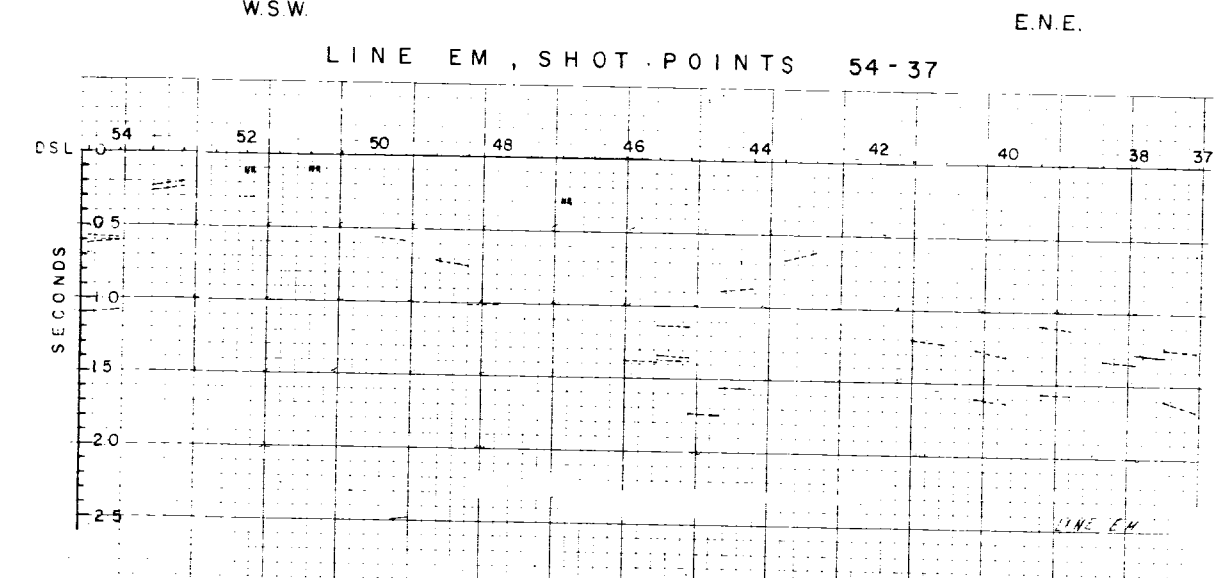
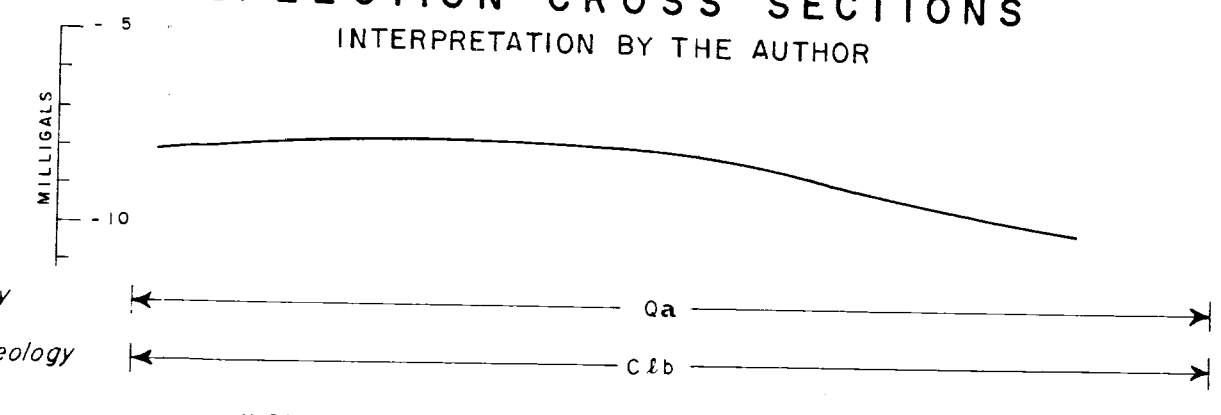
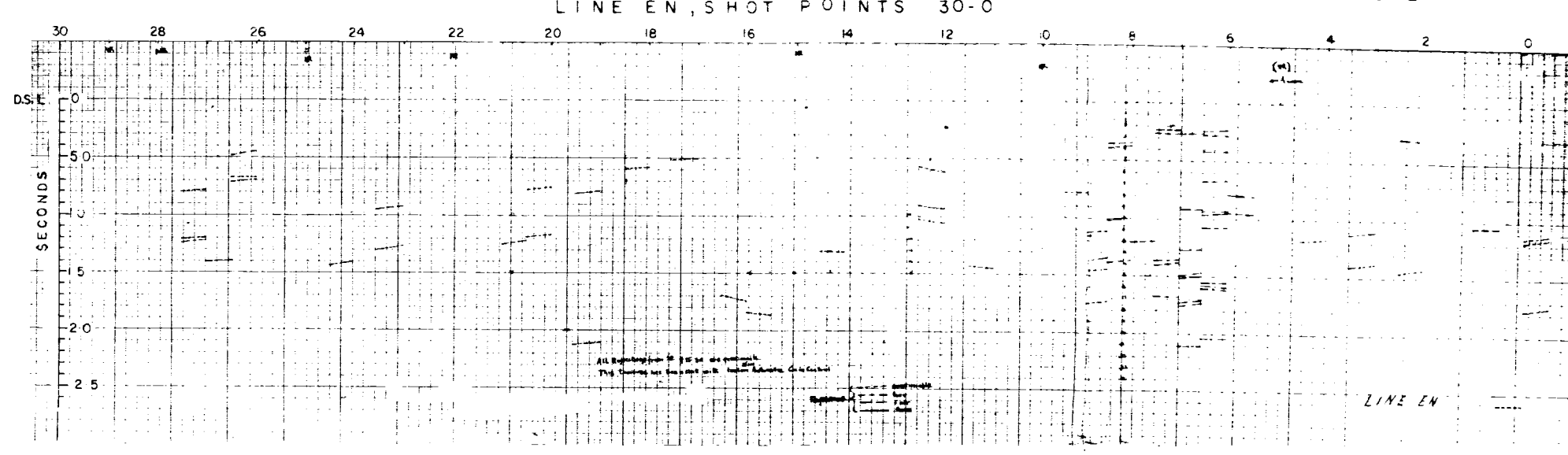
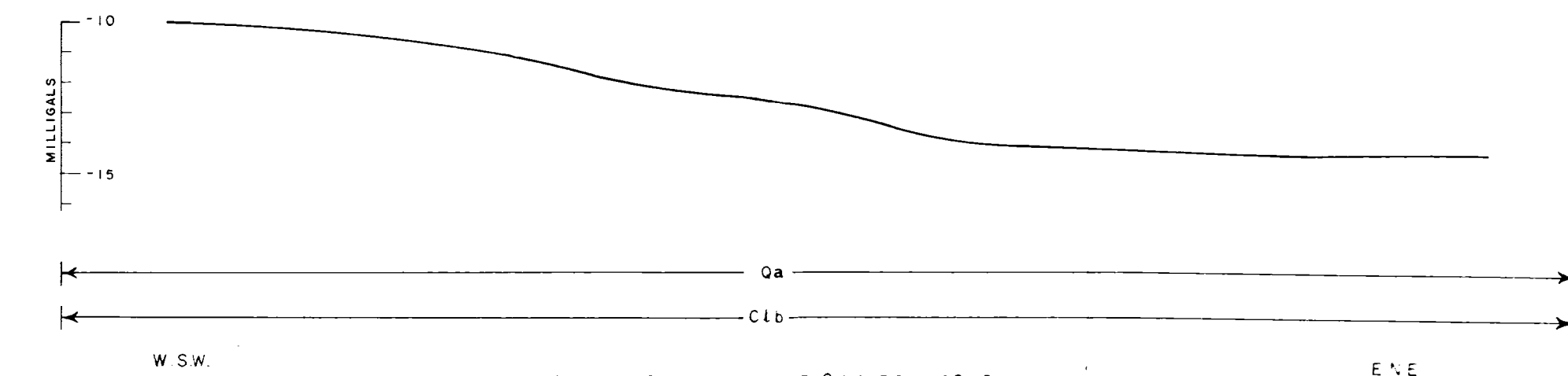


Bonaparte Gulf Seismic Survey
Carlton Sub-Basin
REFLECTION CROSS SECTIONS
INTERPRETATION BY THE AUTHOR



To accompany Record N° 1963/165

Bonaparte Gulf Seismic Survey
Carlton Sub-Basin
REFLECTION CROSS SECTIONS
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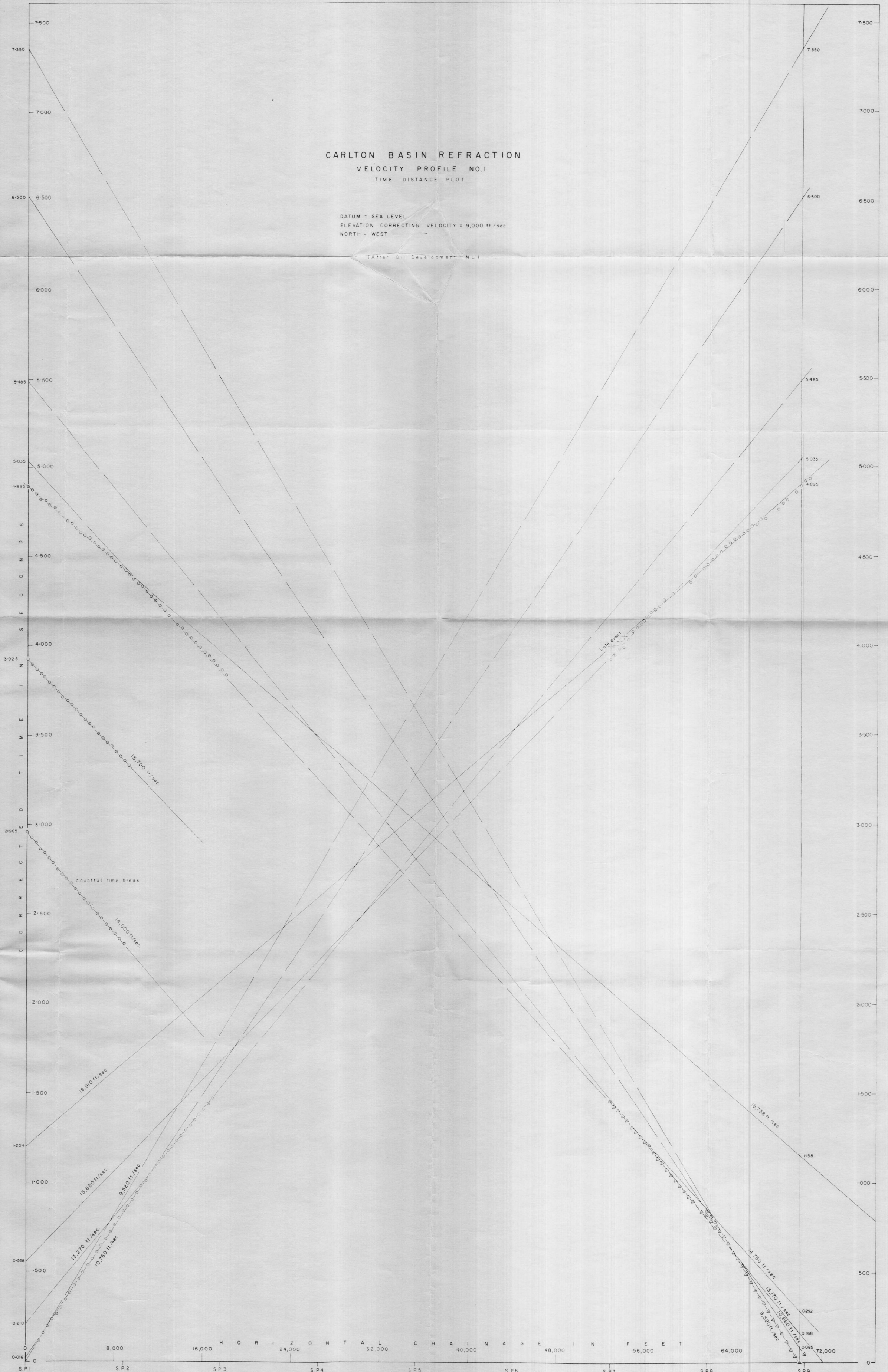
REFERENCE
QUATERNARY Qa
? UPPER & LOWER CARBONIFEROUS Clb
Border Creek Sandstone & Point Spring Sandstone
OBSERVED GRAVITY PROFILE
TRAVERSE WITH SHOT POINTS

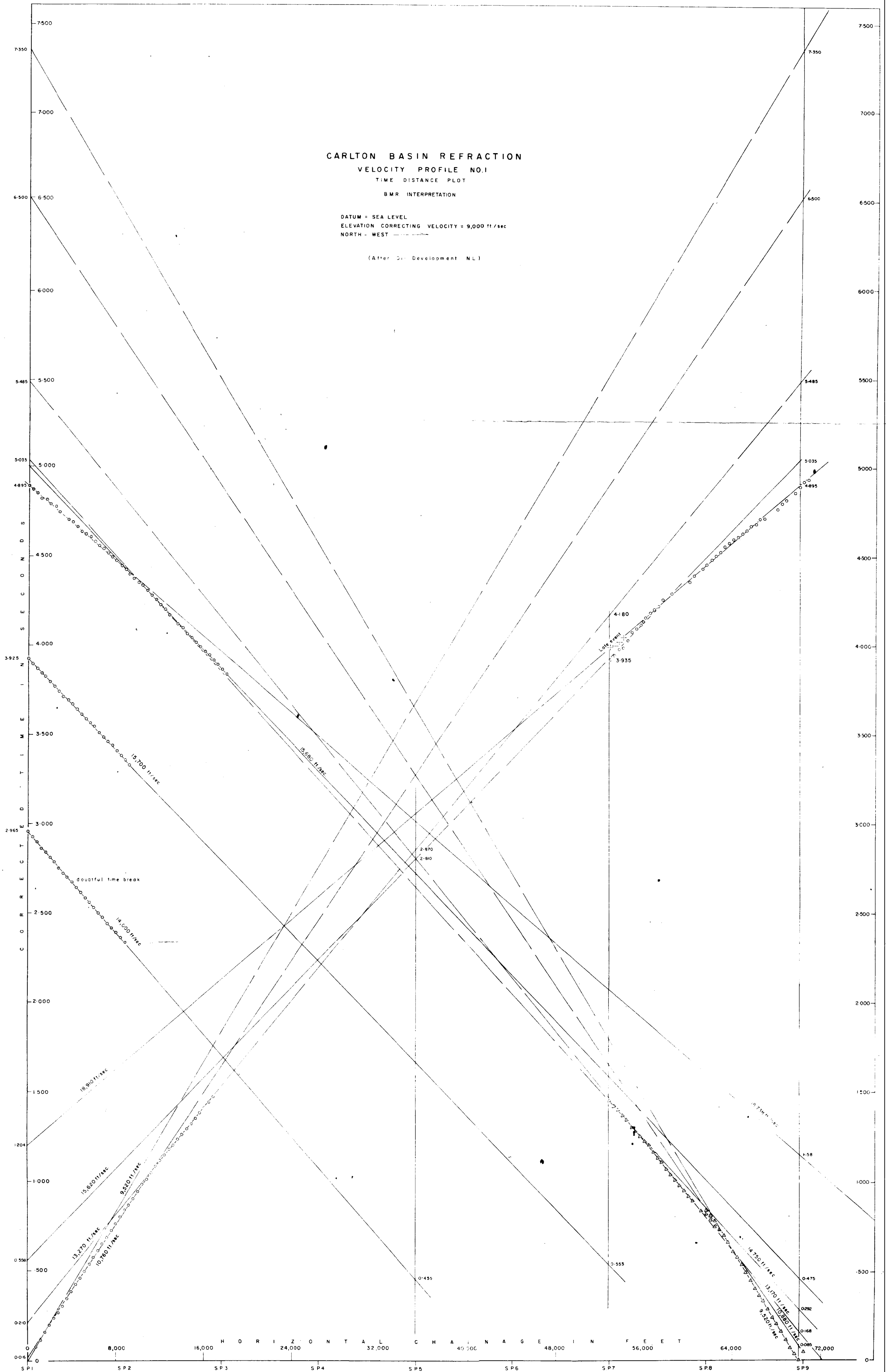


CARLTON BASIN REFRACTION
VELOCITY PROFILE NO.1
TIME DISTANCE PLOT

DATUM = SEA LEVEL
ELEVATION CORRECTING VELOCITY = 9,000 ft/sec
NORTH - WEST

(After Oil Development N.L.)





To accompany Record 1963/165

