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T/18P part V*
PRELIMINARY SEISMIC INTERPRETATION

OF THE

CORMORANT AREA

BASS BASIN

T.18P TASMANIA

FOR

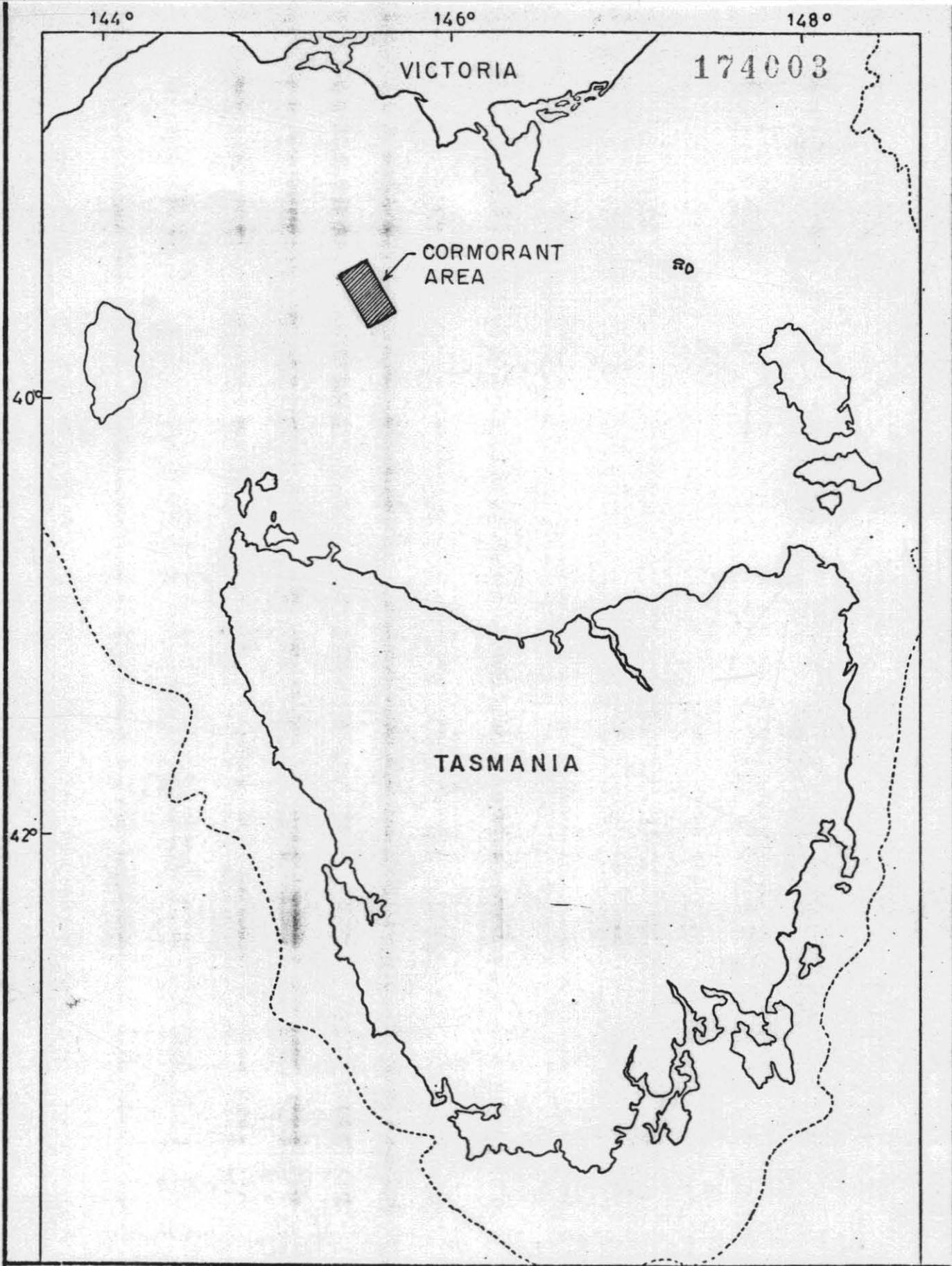
BASS STRAIT OIL & GAS N.L.

Work Order: Bas 708
10th March, 1981

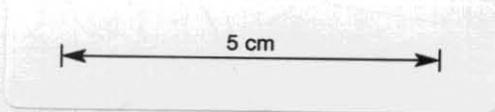
General Geological Services

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Location Map
BASS STRAIT
Australia
1:2 700 000



INTRODUCTION

Esso Exploration and Production Inc. drilled the Cormorant No. 1 well in the Bass Basin to a total depth of 3000 meters (9845 feet) between 11 June, 1970 and 27 July, 1970. A small amount of oil was recovered from the N. Asperus zone at a subsea depth of 1499 to 1501 meters. Several gas shows were recorded below this level at:-

1798 to 1828 meters

2007 to 2009 meters

2271 to 2275 meters

2344 to 2346 meters

Hematite Petroleum Pty. Ltd. continued to explore the area by conducting a detailed marine seismic survey during December, 1977 - the HB77A Seismic Survey of 22 lines totalling approximately 320 kilometers. The survey was shot by GSI using the MV Eugene McDermott with a 23.77 litre airgun source and a 96 group, 2400 meter streamer cable. Records were processed for a 48 fold CDP stack with a deconvolution before and after stack. Record quality was fair to good.

Hematite relinquished the area in September, 1979 and it was taken up by Bass Strait Oil & Gas N.L. as T18P, Tasmania in July, 1980.

Copies of seismic record sections and a shot point location map were obtained from Hematite Petroleum around 15 January, 1981. No interpretation was released by Hematite but an internal communication was found in their Cormorant file which recommended that the HB77A survey should be undertaken. At the time Hematite believed that there was a more favourable anticlinal structure some 6 kilometers east of the Cormorant No. 1 location.

This interpretation was undertaken to allow Bass Strait Oil & Gas N.L. to decide whether the Cormorant area might merit closer study.

CONCLUSIONS and RECOMMENDATIONS

Three horizons and two isopachs have been mapped in two way reflection time.

- 1) Control for Top of Eastern View
- 2) N. Asperus Oil Horizon
- 3) U. M. Diversus Horizon

Two isopach maps have also been prepared:-

- 1) Top Eastern View to N. Asperus Oil Horizon
- 2) N. Asperus Oil Horizon to U. M. Diversus Horizon

These horizons were chosen at the start of the interpretation because they were among the most prominent reflection events. Identifications were made later when the time-depth curve of the Cormorant No. 1 well velocity survey was received from Esso Exploration, Sydney.

All three horizons show that Cormorant No. 1 (located at the intersection of Lines 307 and 313) was drilled near the highest point of an anticlinal trend which runs from north to south through the HB77A prospect and then turns east so that a third anticline lies between Lines 303 and 301 at the southwest corner of the prospect. A major axial, down to the west fault has been mapped approximately 1.5 kilometers east of the Cormorant well location. Record quality is fair to good and correlations across all faults are considered to be reliable.

The Cormorant well penetrated volcanics at a subsea depth of around 2395 meters. Several isolated diapiric type intrusions were observed - mainly in the northwestern portion of the prospect area - which are believed to be of igneous origin.

A major zone of igneous intrusion seems to lie along the northeastern margin of the prospect area and the lower section is truncated by it near the eastern ends of Lines 320, 318, 316 and 309. Of particular interest is the relationship of this intrusion to the sedimentary section at the eastern end of Line 309. Although record quality is poorer here the N. Asperus Oil Horizon appears to be continuous over the crest of the intrusion whereas the deeper U. M. Diversus Horizon has been truncated.

The closed anticlinal structure mapped at the N. Asperus Horizon lies approximately 7 kilometers east of the Cormorant No. 1 location and is believed to be the feature which was of interest to Hematite Petroleum. However, it seems strange that the HB77A survey was not extended to the east so that it could be completely mapped. The current 1981 survey now being conducted by Bass Strait Oil & Gas N.L. (particularly Lines BBS81 - 5 and BBS81 - 2) may help resolve this anomaly when they become available.

From the Cormorant No. 1 velocity survey the N. Asperus Horizon at the crest of the anticline above the intrusives at the eastern end of Line 309 is 115 meters higher than at the Cormorant No. 1 location.

INTERPRETATION METHODS and RESULTS

General

The contractor's post-plot shot point base map at 1/100,000 was photographically enlarged to a scale of 1/50,000 so that horizon maps could be presented in greater detail. Horizons were picked and timed at every sixteenth shot point - an interval of 375 meters. A tabulation of two way reflection an isopach times is attached as Appendix I of this report.

Water depths ranged between 67 and 75 meters. All variations were gradual and no water depth corrections were applied.

Reflection Identification

Geological data and well survey reflection times available for identification of horizons were:-

Geologic Marker	Z Feet	Two Way Time (Sec.)	
		Well Survey	Seismic Horizon
Demons Bluff	3400	0.998	0.995
Top Eastern View	3985	1.148	1.206
N. Asperus (Oil)	4918	1.355	1.347
U. M. Diversus	5357	1.445	1.567
L. Balmi	7200	1.815	
Top Volcanics	7860	1.935	

All data are referred to Sea Level

Although not mapped the reflector corresponding to the Demons Bluff has been marked in yellow on most of the record sections.

The Top of the Eastern View reflector is two cycles below the reflection time indicated by the velocity survey. A peak pick was used at the N. Asperus Horizon to facilitate correlations.

Below the Eastern View the geological section has been poorly defined and horizons have been named for their fossil spore content. Esso Exploration ran a sonic log in the well and if it can be obtained a synthetic seismogram could be constructed to aid reflection identification.

Time-Depth Conversion

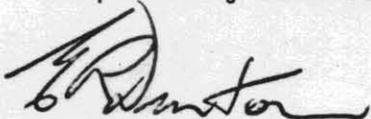
Maps have been presented in two way reflection time. Tabulations of well velocity data, picked from the time-depth curve of the Cormorant No. 1 well, appear in Appendix II.

These data were corrected to sea floor and a plot of one way vertical time versus average velocity is included which is linear below a one way time of 0.589 seconds. A least squares analysis gives the velocity function for the section below a one way reflections time of 0.589 seconds as:-

$$V_i = 1696 + 1815 t_1 \text{ meters/second}$$

A time-depth conversion table was computed from this function for every 10 millisecond interval between two way reflection times of 1.200 and 1.800 seconds. This table is also included in Appendix II. When using this table it should be remembered that reflection times must be referred to the sea floor by subtracting two way time in the water layer.

Respectfully submitted,



E. R. DENTON

APPENDIX ITABULATION OF HORIZON & ISOPACH TIMESLINE 301

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U.M. Diversus
1	72	1387	157	1544	180	1724
16	72	1392	156	1548	178	1726
32	72	1392	144	1536	184	1720
48	72	1391	144	1535	186	1721
64	72	1391	143	1534	188	1722
80	72	1389	145	1534	194	1728
96	72	1390	146	1536	201	1737
112	72	1393	146	1539	205	1744
128	73					
144	73	1350	153	1503	193	1696
160	73	1336	161	1497	202	1699
176	73	1329	163	1492	204	1696
192	73	1323	159	1482	208	1690
208	72	1318	155	1473	210	1683
224	72	1310	155	1465	211	1676
240	72	1308	151	1459	214	1673
256	72	1301	154	1455	211	1666
272	72	1300	156	1456	207	1663
288	71	1299	155	1454	213	1667
304	71	1297	158	1455	209	1664
320	71	1292	162	1454	205	1659
336	71	1292	161	1453	205	1658
352	71	1290	156	1446	210	1656
368	70	1288	156	1444	205	1649
384	70	1284	161	1445	202	1647
400	70	1279	166	1445	196	1641
416	70	1276	162	1438	200	1638
432	70	1273	165	1438	205	1643
448	70	1275	156	1431	207	1638
464	70	1267	157	1424	203	1627
480	70	1261	156	1417	202	1619
496	70	1256	152	1408	204	1612
512	70	1256	147	1403	202	1605

LINE 301 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U.M. Diversus
528	70	1256	141	1397	203	1600
544	70	1252	145	1397	199	1596
560	70	1252	140	1392	191	1583
576	70	1251	132	1383	187	1570
592	70	1262	121	1383	177	1560
608	70	1264	118	1382	166	1548

LINE 302

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73	1240	156	1396	204	1600
16	73	1243	152	1395	206	1601
32	73	1251	155	1406	208	1614
48	73	1259	159	1418	210	1628
64	73	1260	158	1418	204	1622
80	73	1262	155	1417	206	1623
96	73	1262	153	1415	213	1628
112	73	1262	152	1414	210	1624
128	73	1263	150	1413	210	1623
144	73	1263	145	1408	213	1621
160	73	1255	148	1403	217	1620
176	73	1246	151	1397	225	1622
192	74	1251	151	1402	220	1622
208	74	1256	143	1399	222	1621
224	75	1257	155	1412	216	1628
240	75	1252	160	1412	213	1625
256	75	1256	154	1410	218	1628
272	75	1257	161	1418	212	1630
288	75	1261	163	1424	208	1632
304	75	1260	157	1417	211	1628
320	75	1269	157	1426	207	1633
336	75			1439	200	1639
352	75	1315	156	1471	198	1669
368	75	1313	157	1470	195	1665
384	75	1315	156	1471	194	1665
400	75	1322	148	1470	198	1668
416	75	1331	141	1472	197	1669
432	75	1339	142	1481	191	1672

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LINE 303 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U.M. Diversus
576	73	1252	140	1392	188	1580
592	73	1251	140	1391	183	1574
608	73	1251	139	1390	181	1571
624	73	1260	136	1396	179	1575
640	73	1267	130	1397	174	1571
656	73	1278	125	1403	166	1569
672	73	1290	127	1417	158	1575

LINE 304

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U.M. Diversus
1	73	1272	142	1414	188	1602
16	73	1267	140	1407	194	1601
32	73	1257	146	1403	197	1600
48	73	1250	145	1395	201	1596
64	73	1239	148	1387	208	1595
80	73	1232	151	1383	208	1591
96	73	1230	147	1377	203	1580
112	73	1219	144	1363	206	1569
128	73	1217	136	1353	207	1560
144	73	1211	136	1347	208	1555
160	73	1206	139	1345	214	1559
176	73	1199	154	1353	205	1558
192	73	1191	154	1345	212	1557
208	73	1200	159	1359	203	1562
224	73	1211	160	1371	220	1591
240	73	1211	156	1367	223	1590
256	73	1208	156	1364	219	1583
272	73	1213	150	1363	212	1575
288	73	1216	155	1371	216	1587
304	73	1220	157	1377	215	1592
320	73	1226	161	1387	214	1601
336	73	1236	155	1391	208	1599
352	73	1235	159	1394	201	1595
368	73	1243	156	1399	213	1612
384	73	1256	159	1415	217	1632
400	73			1434	222	1656
416	73	1308	167	1475	205	1680
432	73	1319	168	1487	206	1693
448	73	1332	165	1497	200	1697
464	73	1340	162	1502	198	1700

LINE 305

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	74	1314	143	1457	201	1658
16	74	1306	144	1450	200	1650
32	74	1289	147	1436	206	1642
48	73	1276	145	1421	211	1632
64	73	1262	145	1407	208	1615
80	73	1251	143	1394	205	1599
96	73	1236	144	1380	203	1583
112	72			1366	203	1569
128	72	1240	153	1393	212	1605
144	71	1223	155	1378	207	1585
160	71	1214	156	1370	203	1573
176	71	1209	161	1370	207	1577
192	71	1210	158	1368	211	1579
208	72	1209	153	1362	210	1572
224	72	1213	153	1366	218	1584
240	72	1214	160	1374	216	1590
256	72	1210	147	1357	239	1596
272	72	1211	151	1362	219	1581
288	73	1211	154	1365	215	1580
304	73	1215	155	1370	208	1578
320	73	1211	152	1363	209	1572
336	73	1198	154	1352	211	1563
352	73	1202	154	1356	203	1559
368	73	1210	146	1356	208	1564
384	73	1224	144	1368	207	1575
400	73	1241	141	1382	204	1586
416	73	1249	138	1387	198	1585
432	73	1260	136	1396	195	1591
448	73	1264	138	1402	191	1593

LINE 305 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
464	73	1273	134	1407	194	1601
480	73	1283	130	1413	187	1600
496	73	1288	130	1418	187	1605
512	73	1301	131	1432	185	1617
528	72	1313	135	1448	179	1627
544	72	1334	131	1465	174	1639
560	72	1349	133	1482	171	1653
576	72	1350	126	1476	158	1634
592	72	1347	120	1467	151	1618
608	72	1336	122	1458	159	1617
624	72	1328	122	1450	149	1599

LINE 306

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	70	1305	126	1431	176	1607
16	70	1299	123	1422	184	1606
32	70	1299	120	1419	183	1602
48	70	1297	125	1422	182	1604
64	70	1288	132	1420	182	1602
80	70	1282	133	1415	183	1598
96	70	1269	129	1398	188	1586
112	70	1243	138	1381	196	1577
128	70	1225	141	1366	210	1576
144	70	1222	141	1363	213	1576
160	70	1214	137	1351	219	1570
176	70	1215	136	1351	212	1563
192	70	1239				
208	70	1221	143	1364	217	1581
224	70	1206	145	1351	223	1574
240	70	1198	142	1340	234	1575
256	70	1204	136	1340	236	1576
272	70	1206	134	1340	230	1570
288	70	1208	132	1340	220	1560
304	70	1203	129	1332	228	1560
320	70	1207	132	1339	221	1560
336	70	1211	132	1343	222	1565
352	70	1215	135	1350	236	1586
368	70	1217	140	1357	210	1567
384	70	1216	150	1366	211	1577
400	70	1220	156	1376	206	1582
416	70	1226	161	1387	204	1591

LINE 307

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	70	1341	109	1450	141	1591
16	79	1325	112	1437	153	1590
32	70	1314	115	1429	167	1596
48	70	1305	118	1423	182	1605
64	70	1310	120	1430	180	1610
80	70	1305	120	1425	179	1604
96	70	1302	124	1426	186	1612
112	70	1295	129	1424	184	1608
128	69	1285	133	1418	182	1600
144	69	1264	133	1397	195	1592
160	69	1246	147	1393	193	1586
176	69	1241	135	1376	203	1579
192	68	1235	135	1370	196	1566
208	68	1223	143	1366	206	1572
224	67	1216	142	1358	211	1569
240	67	1218	137	1355	212	1567
256	68	1228	143	1371	214	1585
272	68	1213	148	1361	213	1574
288	69	1208	142	1350	217	1567
304	69	1206	141	1347	218	1565
320	70	1204	141	1345	226	1571
336	70	1205	142	1347	224	1571
352	70	1203	157	1360	205	1565
368	70	1202	160	1362	208	1570
384	70	1200	165	1365	206	1571
400	70	1203	163	1366	207	1573
416	70	1214	155	1369	209	1578
432	70	1226	147	1373	214	1587
448	70	1233	143	1376	201	1577
464	70	1234	148	1382	208	1590
480	70	1247	147	1394	206	1600
496	70	1260	147	1407	200	1607
512	70	1272	145	1417	201	1618
528	70	1287	142	1429	200	1629
544	70	1298	146	1444	197	1641
560	70	1308	147	1455	203	1658

LINE 308

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	68	1260	158	1419	193	1612
16	68	1250	163	1413	195	1608
32	68	1242	157	1399	196	1595
48	68	1235	154	1389	200	1589
64	68	1231	165	1396	197	1593
80	68	1225	163	1388	200	1588
96	68	1219	162	1381	204	1585
112	68	1212	163	1375	204	1579
128	69	1210	157	1367	210	1577
144	69	1209	152	1361	218	1579
160	69	1210	151	1361	216	1577
176	69	1219	142	1361	217	1578
192	69	1220	147	1367	209	1576
208	70	1233	141	1374	207	1581
224	70	1245	142	1387	208	1595
240	70	1261	142	1403	215	1618
256	70	1240	126	1366	204	1570
272	70	1237	132	1369	207	1576
288	70	1247	134	1381	199	1580
304	70	1250	136	1386	199	1585
320	70	1259	131	1390	194	1584
336	70	1265	128	1393	195	1588
252	70	1272	127	1399	192	1591
368	70	1276	131	1407	183	1590
384	70	1273	135	1408	178	1586
400	70	1272	131	1403		
416	70	1269	124	1393	167	1560
432	70	1261	114	1375	174	1549
448	70	1246	107	1353	166	1519
464	70	1235	109	1344	151	1495

LINE 309

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	68	1259	152	1411	188	1599
16	68	1252	149	1401	188	1589
32	68	1247	145	1392	186	1578
48	68	1246				
64	68	1250	158	1408	192	1600
80	68	1247	156	1403	196	1599
96	68	1246	150	1396	195	1591
112	68	1241	151	1392	200	1592
128	68	1240	149	1389	201	1590
144	68	1241	145	1386	198	1584
160	68	1246	137	1383	197	1580
176	68	1260	137	1397	185	1582
192	68	1273	135	1408	174	1582
208	68	1272	124	1396	195	1591
224	68	1273	134	1407	199	1606
240	68	1283	135	1418	207	1625
256	68			1397	194	1591
272	69	1268	130	1398	202	1600
288	69	1272	132	1404	200	1604
304	70	1276	131	1407	199	1606
320	70	1281	127	1408	197	1605
336	70	1282	126	1408	193	1601
352	70	1282	120	1402	189	1591
368	70	1275	117	1392	183	1575
384	70	1266	114	1380	174	1554
400	70	1258	117	1375	176	1551
416	70			1350	179	1529
432	70			1311		
448	70			1276		
464	70			1267		

LINE 310

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	71					
16	71	1258	129	1387	168	1555
32	71	1258	122	1380	181	1561
48	70	1257	123	1380	185	1565
64	70	1257	136	1393	166	1559
80	70	1261	138	1399	167	1566
96	70	1263	139	1402	170	1572
112	70	1282	120	1402	178	1580
128	70	1294	122	1416	180	1596
144	70	1304	119	1423	183	1606
160	70	1307	122	1429	184	1613
176	70	1309	122	1431	181	1612
192	70	1298	125	1423	179	1602
208	70	1300	121	1421	180	1601
224	70	1297	127	1424	182	1606
240	70	1293	128	1421	182	1603
256	70	1288	129	1417	185	1602
272	71	1283	132	1415	186	1601
288	71	1281	131	1412	190	1602
304	71	1277	135	1412	193	1606
320	71	1273	135	1408	198	1606
336	71	1269	139	1408	193	1601
352	71	1268	145	1413	194	1607
368	71	1271	141	1412	195	1607
384	71	1267	143	1410	194	1604
400	71	1266	143	1409	198	1607
416	71	1261	147	1408	204	1612
432	71	1259	157	1416	199	1615
448	71	1260	157	1417	202	1619
464	71	1262	161	1423	200	1623
480	71	1268	160	1428	198	1626
496	71	1277	161	1438	198	1636
512	72	1283	163	1446	198	1644
528	72	1295	160	1455	198	1653
544	72	1304	162	1466	198	1664
560	72	1313	164	1477	196	1673
576	72	1326	162	1488	198	1686

LINE 310 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
592	72	1339	161	1500	203	1703
608	72	1345	163	1508	203	1711
624		1355	165	1520	201	1721

LINE 311

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73	1273	133	1406	199	1605
16	73	1276	131	1407	199	1606
32	73	1270	130	1400	199	1599
48	73	1264	131	1395	197	1592
64	73	1257	132	1389	200	1589
80	73	1251	134	1385	199	1584
96	73	1244	132	1376	204	1580
112	72	1242	130	1372	204	1576
128	72	1231	133	1364	200	1564
144	71	1234	133	1367	201	1568
160	71	1233	147	1380	198	1578
176	71	1229	145	1374	205	1579
192	71	1227	142	1369	205	1574
208	71	1222	147	1369	200	1569
224	71	1220	151	1371	199	1570
240	71	1220	154	1374	201	1575
256	71	1229	142	1371	208	1579
272	72	1225	146	1371	207	1578
288	72					
304	73	1219	136	1355		
320	73	1219	142	1361	207	1568
336	73	1215	150	1365	214	1579
352	73	1211	149	1360	221	1581
368	72	1207	145	1352	225	1577
384	72	1209	141	1350	231	1581
400	72	1214	146	1360	234	1594
416	72	1230	154	1384	222	1606
432	72	1245	147	1392	224	1616
448	73	1257	146	1403	223	1626
464	73	1268	148	1416	219	1635
480	73	1282	146	1428	217	1645
496	73	1292	153	1445	210	1655
512	73	1303	161	1464	208	1670

LINE 311 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
528	73	1317	162	1479	207	1686
544	73	1330	164	1494	210	1704
560	73	1346	161	1507	210	1717
576	73	1363	155	1518	206	1724
592	73	1376	157	1533	207	1740
608	73	1392	156	1548	208	1756

LINE 312

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	71	1394	155	1549	205	1754
16	71	1376	155	1531	211	1742
32	71	1357	159	1516	207	1723
48	70	1338	157	1495	212	1707
64	70	1319	156	1475	214	1689
80	70	1302	153	1455	217	1672
96	70	1288	150	1438	219	1657
112	70	1273	148	1421	222	1643
128	70	1261	154	1415	217	1632
144	70	1256	153	1409	212	1621
160	70	1244	158	1402	206	1608
176	70	1232	165	1397	203	1600
192	70	1220	160	1380	204	1584
208	70	1211	157	1368	203	1571
224	70	1210	151	1361	200	1561
240	70	1207	149	1356	203	1559
256	70	1200	154	1354	208	1562
272	70	1200	162	1362	188	1550
288	69	1197	151	1348	214	1562
304	69	1198	157	1355	210	1564
320	69	1200	159	1359	206	1565
336	69	1204	151	1355	209	1564
352	68	1208	140	1348	210	1558
368	68	1209	135	1344	212	1556
384	67	1211	132	1343	210	1553
400	67	1212	131	1343	210	1553
416	67	1213	132	1345	208	1553
432	68	1215	136	1350	210	1560
448	68	1216	139	1355	211	1566
464	69	1216	139	1355	204	1559
480	69	1221	136	1357	205	1562
496	69	1235	125	1360	200	1560
512	69	1246	123	1369	195	1564
528	69	1262	124	1386	186	1572
544	70	1292	126	1418	165	1583
560	70	1288	132	1420	211	1631

LINE 312 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
576	70	1284	134	1418	204	1622
592	70	1283	126	1409	211	1620
608	70	1286	122	1408	203	1611
624	70	1282	126	1408	200	1608
640	70	1276	131	1407	196	1603
656	70	1278	128	1406	194	1600
672	70	1277	126	1403	197	1600
688	70	1278	123	1401	198	1599
704	70	1278	125	1403	196	1599
720	70	1281	125	1406	193	1599
736	70	1285	122	1407	187	1594
752	70	1286	126	1412	188	1600
768	70	1290	127	1417	188	1605
784	70	1291	127	1418	186	1604
800	70	1295	126	1421	182	1603
816	70	1298	127	1425	175	1600
832	70	1292	121	1413	174	1587
848	70					
864	70					
880	70					
896	70	1302	115	1417	162	1579
912	70	1302	105	1407	162	1569
928	70	1295	105	1400	164	1564
944	70	1295	101	1396	156	1552
960	70	1282	107	1388	148	1536
976	70	1281	103	1384	143	1527
992	70	1277	112	1389	141	1530
1008	70	1282	110	1392	135	1527
1024	70	1281				
1040	70					
1056	70			1400	138	1538
1072	70	1300	111	1411	129	1539
1088	70	1302	116	1418	134	1552
1104	70	1309	114	1423	130	1553
1120	70	1313	115	1428	127	1555

LINE 313

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73	1413	156	1569	201	1770
16	73	1401	158	1559	200	1759
32	73	1386	160	1546	201	1747
48	73	1366	167	1533	203	1736
64	73	1344	163	1507	208	1715
80	73	1321	161	1482	209	1691
96	73	1303	159	1462	206	1668
112	73	1284	160	1444	209	1653
128	72	1266	160	1426	211	1637
144	72	1251	162	1413	209	1622
160	72	1235	155	1390	214	1604
176	72	1224	146	1370	225	1595
192	72	1215	156	1371	222	1593
208	72	1214	159	1373	223	1596
224	72	1220	155	1375	221	1596
240	72	1219	153	1372	219	1591
256	72	1213	157	1370	222	1592
272	71	1211	150	1361	230	1591
288	71	1208	151	1359	230	1589
304	70	1209	153	1362	225	1587
320	70	1210	149	1359	226	1585
336	70	1208	141	1349	227	1576
352	70	1206	137	1343	236	1579
368	70	1204	139	1343	231	1574
384	70	1202	141	1343	231	1574
400	70	1201	142	1343	229	1572
416	70	1199	144	1343	226	1569
432	70	1203	148	1351	220	1571
448	70	1207	151	1358	214	1572
464	70	1210	152	1362	212	1574
480	70	1214	151	1365	204	1569
496	70	1219	150	1369	209	1578
512	70	1222	144	1366	210	1576
528	70	1230	141	1371	205	1576
544	70	1241	135	1376	201	1577

LINE 313 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
560	70	1255	137	1392	191	1583
576	70	1266	143	1409	181	1590
592	70	1276	139	1415	185	1600
608	70	1276	138	1414	186	1600
624	70	1276	137	1413	187	1600
640	70	1279	133	1412	188	1600
656	70	1282	129	1411	189	1600
672	70	1284	130	1414	186	1600
688	70	1281	136	1417	183	1600

LINE 314

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	71	1319	111	1430	129	1559
16	71	1310	113	1423	127	1550
32	71	1308	110	1418	126	1544
48	71	1305	108	1413	135	1548
64	71	1299	113	1412	138	1550
80	71	1299	108	1407	144	1551
96	71	1293	109	1402	152	1554
112	71	1290	113	1403	151	1554
128	71	1287	120	1407	149	1556
144	71	1282	119	1401	159	1560
160	71	1283	117	1400	165	1565
176	71	1280	120	1400	161	1561
192	71	1282	118	1400	163	1563
208	71	1282	118	1400	169	1569
224	71	1286	114	1400	175	1575
240	71	1290				
256	71	1296				
272	71	1298	120	1418	172	1590
288	71	1303	123	1426	172	1598
304	71	1307	122	1429	177	1606
320	71	1305	128	1433	178	1611
336	71	1302	127	1429	185	1614
352	71	1299	129	1428	187	1615
368	71					
384	71	1301	124	1425	195	1620
400	71	1292	133	1425	192	1617
416	71	1287	133	1420	192	1612
432	71	1284	132	1416	191	1607
448	71	1277	138	1415	191	1606
464	71	1268	146	1414	190	1604
480	71	1257	145	1402	199	1601
496	71	1252	144	1396	205	1601
512	71	1245	142	1387	208	1595
528	71	1235	141	1376	210	1586
544	70	1224	147	1371	208	1579

LINE 314 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
560	70	1213	152	1365	212	1577
576	70	1208	158	1366	208	1574
592	70	1204	165	1369	204	1573
608	70	1203	165	1368	206	1574
624	70	1204	159	1363	209	1572
640	70	1203	148	1351	214	1565
656	70	1204	133	1337	223	1560
672	70	1204	128	1332	226	1558
688	70	1203	133	1336	219	1555
704	70	1202	138	1340	224	1564
720	70	1202	149	1351	219	1570
736	70	1205	141	1346	228	1574
752	71	1211	151	1362	217	1579
768	71	1213	155	1368	216	1584
784	71	1220	150	1370	216	1586
800	71	1220	155	1375	212	1587
826	72	1219	157	1376	214	1590
832	71	1218	157	1375	215	1590
848	72	1220	152	1372	218	1590
864	73	1230	152	1382	213	1595
880	73	1245	157	1402	204	1606
896	73	1263	158	1421	200	1621
912	73	1284	154	1438	194	1632
928	73	1308	157	1465	190	1655
944	73	1335	154	1489		
960	73	1358				
976	73					1684
992	73			1518	187	1705
1008	72			1532	194	1726
1024	72	1399	146	1545	196	1741
1040	72	1409	143	1552	205	1757
1056	72	1421	146	1567	199	1766
1072	72	1434	147	1581	192	1773
1088	72	1448	148	1596	185	1781
1104	72	1459	147	1606	183	1789

LINE 315

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	72	1222	153	1375	211	1586
16	72	1219	154	1373	204	1577
32	72	1222	142	1364	208	1572
48	71	1221	134	1355	224	1579
74	71	1222	144	1366 ?	234	1600
80	71	1215	139	1354	232	1586
96	71	1208	146	1354	221	1575
112	71	1206	149	1355	209	1564
128	70	1214	151	1365	203	1568
144	70	1219	156	1375	204	1579
160	70	1219	158	1377	209	1586
176	70	1225	153	1378	211	1589
192	70	1234	155	1389	205	1594
208	70	1240	161	1401	197	1598
224	70	1248	154	1402	199	1601
240	70	1252	154	1406	200	1606
256	71	1256	151	1407	202	1609
272	71	1266	141	1407	198	1605
288	72	1271	136	1407	188	1595
304	72	1270	137	1407	187	1594
320	73	1267	140	1407	184	1591
336	73	1271	141	1412	183	1595
352	73	1275	140	1415	184	1599
368	72	1277	141	1418	182	1600
384	72	1286	137	1423	177	1600
400	72	1292	136	1428	183	1611
416	72	1299	134	1433	181	1614
432	72	1308	130	1438	178	1616
448	73	1312	127	1439	177	1616
464	73	1313	130	1443	172	1615
480	73	1316	122	1438	170	1608
496	73	1317	122	1439 ?	171	1610
512	73	1318	115	1433 ?	167	1600
528	73	1317	115	1432 ?		
544	73	1317	117	1434		

LINE 315 (cont'd)

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
560	73	1322	110	1432		
576	73	1323	110	1433		
592	73	1324	110	1434	139	1573
608	73	1323	110	1433	142	1575
624	73	1320	113	1433		
640	73	1318	107	1425	147	1572
656	73	1317	106	1423	153	1576
672	73	1322	110	1432		
688	73	1326	111	1437		
704	73	1334	109	1443	142	1585
720	73	1335	120	1455	135	1590
736	73	1329	125	1454	134	1588
752	73	1325	129	1454	136	1590
768	73	1334	116	1450	147	1597
784	73	1333	115	1448	138	1586

LINE 316

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73					
16	73					
32	73					
48	73	1283	163	1446	131	1577
64	73	1291	147	1438	145	1583
80	73	1297	148	1445	145	1590
96	73	1303	143	1446	154	1600
112	73	1309	134	1443	162	1605
128	73	1307	131	1438	176	1614
144	73	1307	127	1434	180	1614
160	73	1306	127	1433	178	1611
176	73	1307	122	1429	183	1612
192	73	1303	126	1426	182	1608
208	73	1296	123	1419	181	1600
224	73	1294	124	1418	182	1600
240	73	1292	123	1415	189	1604
256	73	1288	125	1413	191	1604
272	73	1286	127	1413	189	1602
288	73	1283	125	1408	193	1601
304	73	1288	125	1413	187	1600
320	73	1289	129	1418	178	1596
336	73	1292	127	1419	183	1601
352	73	1295	123	1418	178	1596
368	73	1292	121	1413	180	1593
384	73	1302	115	1417	170	1587
400	73	1311	112	1423	163	1586
416	73	1320	107	1427	159	1586
432	73	1338	100	1438	147	1585
448	73	1334	098	1432	143	1575
464	73	1314	104	1418	141	1559
480	73	1297	104	1401	145	1546
496	73	1279	103	1382	143	1525
512	73	1257	106	1363	138	1501
528	73					
544	73					

LINE 317

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	70	1305	122	1427	175	1602
16	70	1301	122	1423	177	1600
32	70	1299	122	1421	179	1600
48	69	1293	125	1418	181	1599
64	69	1292	125	1417	182	1599
80	69	1292	123	1415	176	1591
96	69	1291	119	1410	177	1587
112	69	1288	119	1407	177	1584
128	69	1284	123	1407	179	1586
144	69	1288	122	1410	184	1594
160	69	1291	123	1413	177	1590
176	69	1296	119	1415	175	1590
192	69	1308	113	1421	169	1590
208	70	1313	120	1433	166	1599
224	70	1312	126	1438	164	1602
240	70	1313	127	1440	161	1601
256	70	1313	126	1439	159	1598
272	70	1314	125	1439	157	1596
288	70	1314	125	1439	155	1594
304	70	1314	125	1439	150	1589
320	70	1315	138	1453	138	1591
336	70			1454	142	1596
352	70					
368	70					
384	70					1591
400	70					1595
416	70	1308	125	1433	161	1594
432	70	1312	127	1439	160	1599

LINE 318

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73	1332	101	1433		
16	73	1334	110	1444		
32	73	1330	112	1442		
48	73	1326	118	1444	114	1558
64	73	1326	120	1446	113	1559
80	73	1319	114	1433	131	1564
96	73	1309	113	1422	146	1568
112	73	1299	113	1412	154	1566
128	73	1290	111	1401	165	1566
144	73	1280	112	1392	175	1567
160	73	1270	117	1387	178	1565
176	73	1267	116	1383	178	1561
192	73	1265	118	1383	179	1562
208	73	1268	117	1385	173	1558
224	73	1287	110	1397	162	1559
240	73	1297	114	1411	152	1563
256	73	1305	114	1419	156	1575
272	73					
288	73	1292	109	1401	183	1584
304	73	1293	105	1398	179	1577
320	73	1292	118	1410	166	1576
336	73	1298	117	1415	164	1579
352	73	1300	122	1422	158	1580
368	74	1300	124	1424	153	1577
384	74	1299	121	1420	148	1568
400	74	1294	119	1413	141	1554
416	74	1284	108	1392	145	1537
432	74	1262	097	1359	148	1507
448	75	1218	080	1298	147	1445
464	75	1192	074	1266	117	1383
480	75	1169				
496	75	1154				
512	75	1137				

LINE 319

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73					
16	73	1318	106	1424		
32	73	1311	108	1419	149	1568
48	72	1303	112	1415	150	1565
64	72	1290	105	1395	155	1550
80	72	1283	103	1386	158	1545
96	72	1273	110	1383	165	1548
112	72	1268	115	1383	167	1550
128	73	1271	112	1383	171	1554
144	73	1268	119	1387	162	1549
160	73	1271	116	1387	163	1550
176	73	1277	119	1396	159	1555
192	74	1286	115	1401	158	1559
208	74	1289	115	1404	153	1557
224	75	1304	111	1415	146	1561
240	75	1321	112	1433	140	1573
256	75	1330	106	1436	140	1576
272	74	1330				1589
288	74					
304	73	1320	114	1434	168	1602

LINE 320

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	73					
16	73					
32	73	1314	119	1423	136	1559
48	72	1303	111	1414	133	1547
64	72	1292	111	1403	133	1536
80	72	1287	104	1391	137	1528
96	72	1277	110	1387	139	1526
112	72	1274	110	1384	140	1524
128	73	1270	111	1381		
144	73	1267	115	1382	148	1530
160	73	1266	115	1381		
176	73	1267	114	1381	155	1536
192	73	1276	109	1385	152	1537
208	74	1283	108	1391	150	1541
224	74	1292	111	1403	143	1546
240	74	1302	112	1414	135	1549
256	74	1310	109	1419	136	1555
272	74	1318	109	1427	138	1565
288	74	1323	112	1435	138	1573
304	73	1329	102	1431	159	1590
320	73	1321	108	1429	166	1595
336	73	1323	106	1429	167	1596
352	73	1326	109	1435	167	1602

LINE 321

SP	Water Depth (m)	Eastern View	Isopach	N. Asperus	Isopach	U. M. Diversus
1	75	1325	113	1438	154	1592
16	75	1326	108	1434	162	1596
32	74	1324	110	1434	166	1600
48	74	1329	117	1446	141	1587
64	73	1331	113	1444	135	1579
80	73	1323	112	1435	136	1571
96	73	1313	110	1423	134	1557
112	73	1302	112	1414	134	1548
128	73	1293	114	1407	125	1532
144	73	1291	112	1403	134	1537
160	73	1284	115	1399	126	1525
176	73	1280	117	1397	120	1517
192	73	1279				
208	72	1281				
224	72	1286				1508
240	72	1294				1518
256	72	1304	115	1419	119	1538
272	72	1312	109	1421	139	1560
288	73	1315	105	1420	140	1560
304	73	1323	101	1424	136	1560
320	73	1325	104	1429	136	1565
336	73	1319	102	1421	129	1550
352	73	1313	97	1410	123	1533
368	73	1293	90	1383	123	1506

APPENDIX IIVELOCITY SURVEY

CORMORANT NO. 1 WELL
BASS BASIN, TASMANIA. T18P

9 March 1981

CO-ORDINATES:

39⁰ 34' 22.8" S. Lat.
145⁰ 31' 35.7" E. Long.

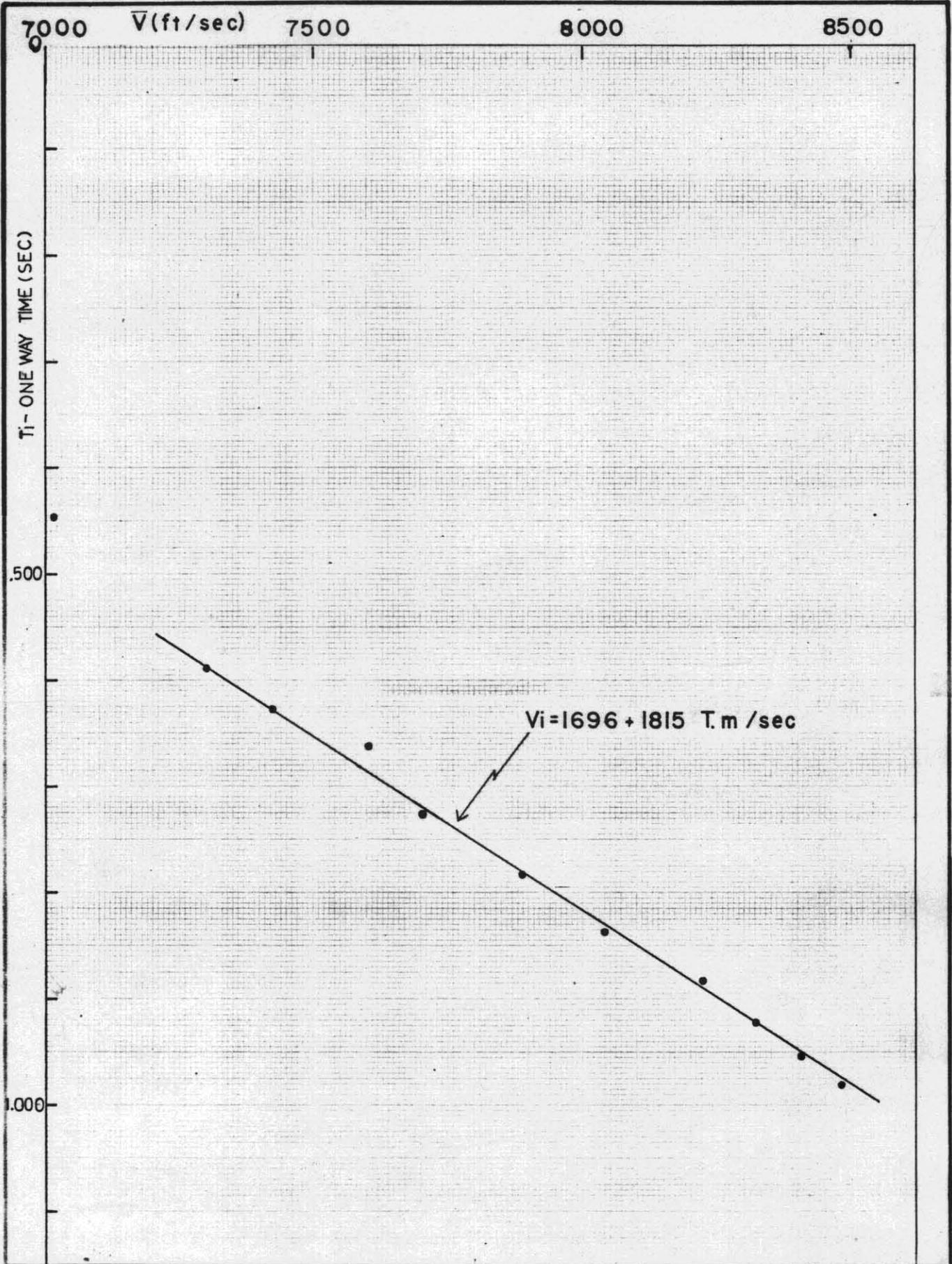
Water Depth : 240 feet, 73.2 meters
KB Elevation : 99 feet, 30.2 meters
Datum : Sea Level

Depth SL (ft)	T SL (sec)	Depth WB (ft)	T WB (sec)	\bar{V} (ft/sec)	\bar{V} CAL (ft/sec)	E (ft/sec)
3390	0.498	3150	0.449	7016		
4540	0.638	4300	0.589	7301	7319	18
4900	0.677	4660	0.628	7420	7435	15
5280	0.712	5040	0.663	7602	7539	-63
5850	0.777	5610	0.728	7706	7732	26
6400	0.830	6160	0.781	7887	7891	4
6975	0.887	6735	0.838	8037	8060	23
7500	0.932	7260	0.883	8222	8194	-28
7920	0.972	7680	0.923	8321	8314	-7
8250	1.002	8010	0.953	8405	8403	-2
8575	1.032	8335	0.983	8479	8492	13

Where \bar{V}_{CAL} is average velocity computed from the function:-

$V_i = 5565 + 5956T_1$ ft/sec and E is the error
between \bar{V}_{CAL} and \bar{V} , the average velocity from the survey.

174038



Velocity Survey
CORMORANT - I
Bass Basin
Datum: Sea Floor, WD 73.2m

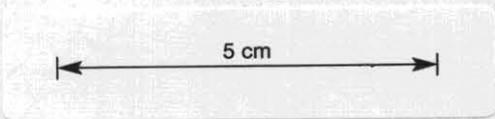


PLATE 2

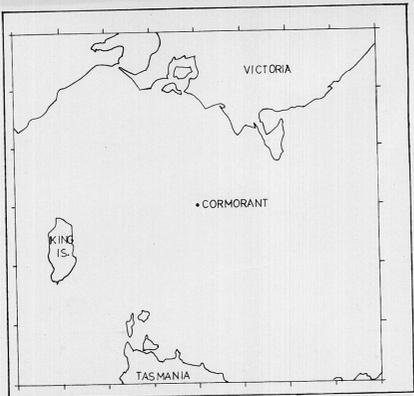
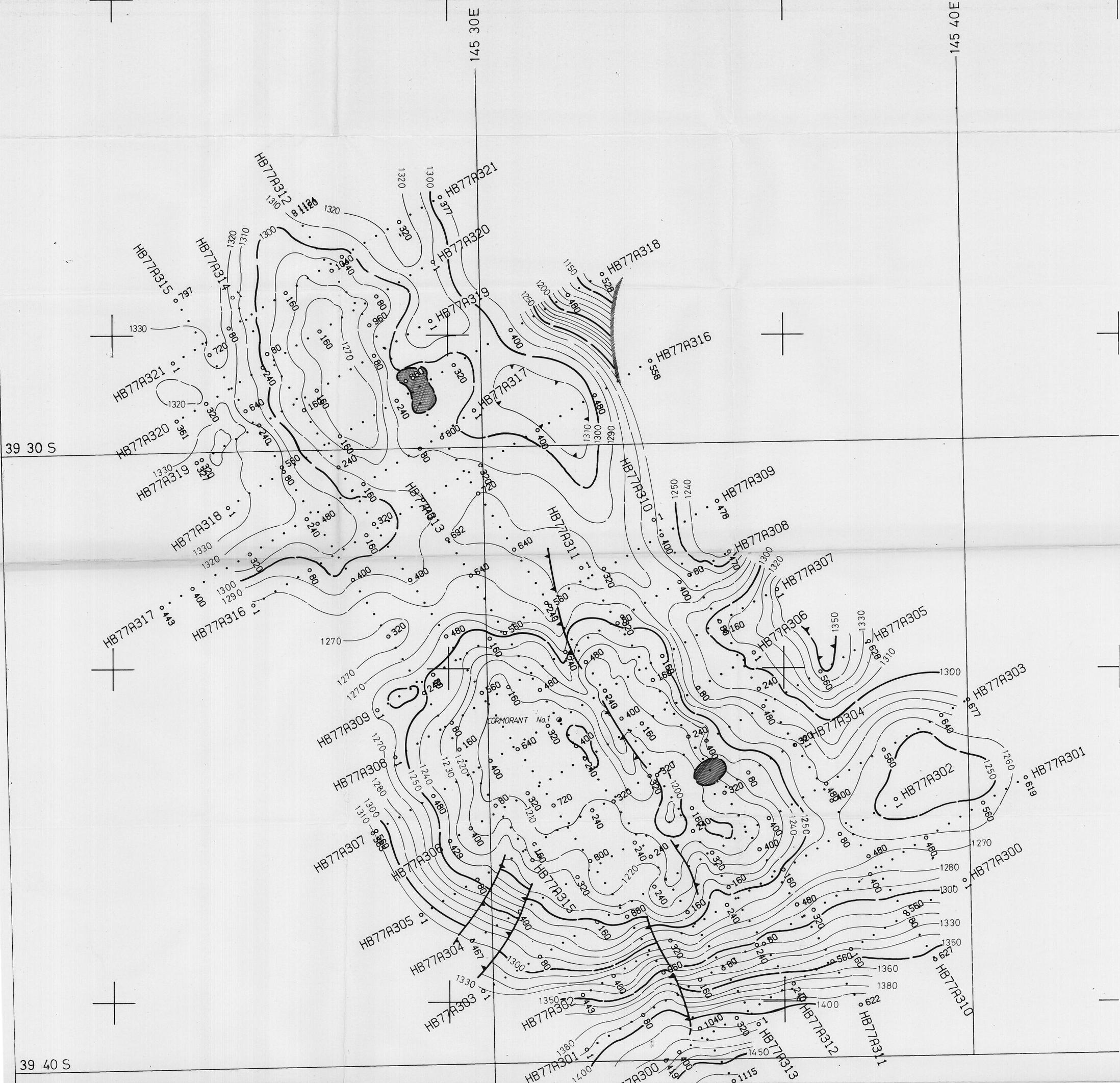
APPENDIX II (cont'd)TIME - DEPTH CONVERSION

CORMORANT NO. 1 WELL
BASS BASIN, TASMANIA. T18P

Velocity Function : $V_i = 5565 + 5956 T, \text{ ft/sec}$

$V_i = 1696 + 1815 T, \text{ m/sec}$

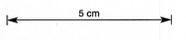
Tr	Z	Tr	Z	Tr	Z	Tr	Z
1200	1344	1350	1558	1500	1782	1650	2017
1210	1358	1360	1573	1510	1798	1660	2033
1220	1372	1370	1588	1520	1813	1670	2049
1230	1386	1380	1602	1530	1829	1680	2065
1240	1400	1390	1617	1540	1844	1690	2081
1250	1414	1400	1632	1550	1859	1700	2097
1260	1429	1410	1647	1560	1875	1710	2113
1270	1443	1420	1662	1570	1891	1720	2130
1280	1457	1430	1677	1580	1906	1730	2146
1290	1471	1440	1692	1590	1922	1740	2162
1300	1486	1450	1707	1600	1938	1750	2179
1310	1500	1460	1722	1610	1953	1760	2195
1320	1515	1470	1737	1620	1969	1770	2212
1330	1529	1480	1752	1630	1985	1780	2228
1340	1544	1490	1767	1640	2001	1790	2245
						1800	2261



 IGNEOUS INTRUSIVE

CONTROL FOR
 TOP OF EASTERN VIEW
 CORMORANT AREA T18P
 TASMANIA
 Seismic Map
 BASS STRAIT OIL & GAS N.L.

Contour Interval: .010 sec
 Datum: MSL
 Scale: 1:50,000 approx.

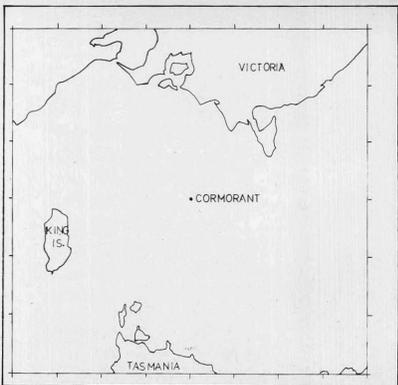


BSO 705/8

174040

T/18P part V*

CR-0166C



 IGNEOUS INTRUSIVE

**NASPERUS
(OIL) HORIZON
CORMORANT AREA T18P
TASMANIA**

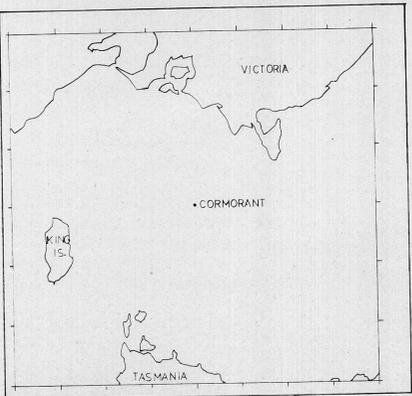
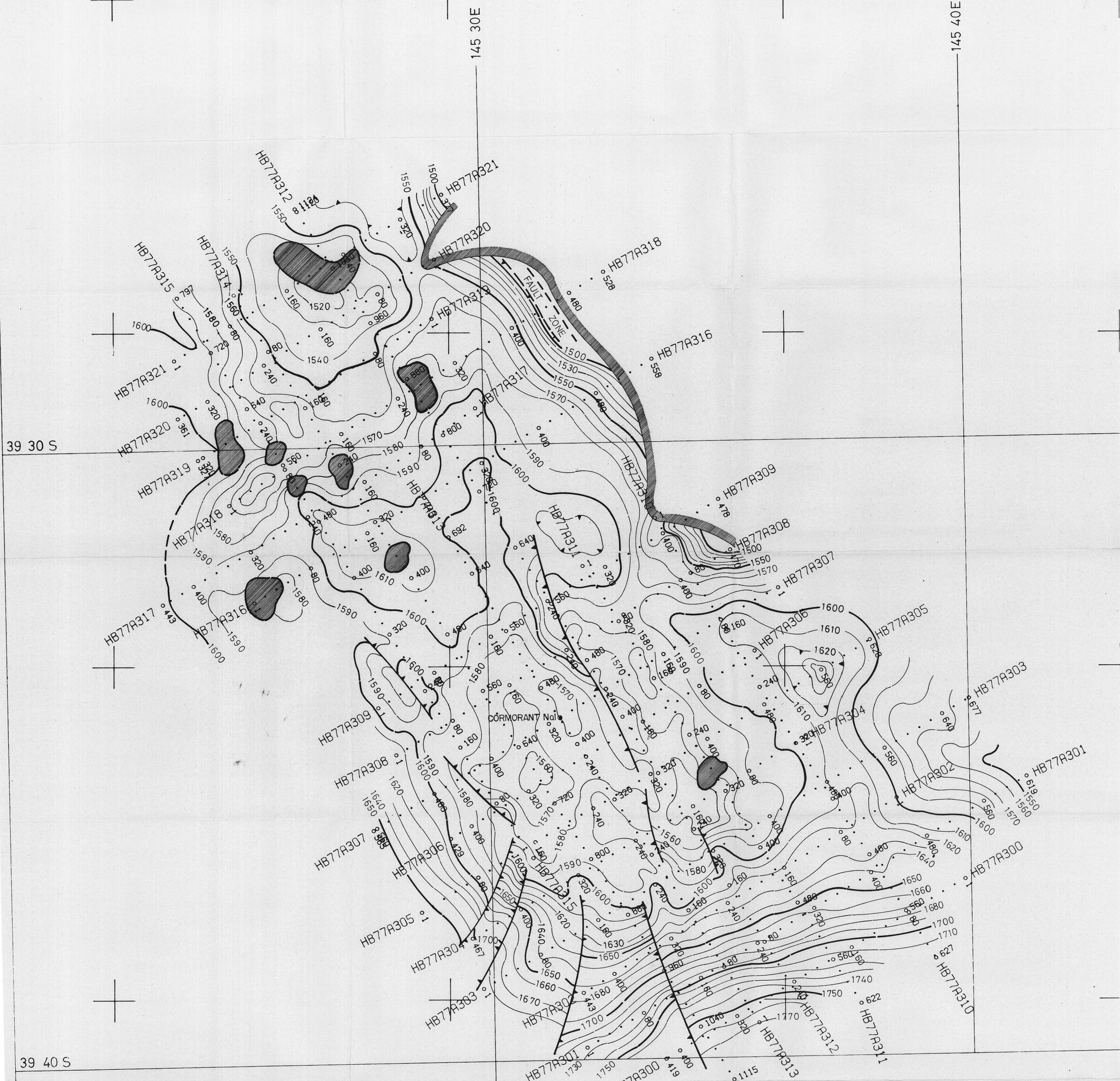
Seismic Map
BASS STRAIT OIL & GAS NL.
174041

Contour Interval .010 sec
Datum. MSL
Scale. 1:50,000 approx.



BSO 705/9
T18P part V*

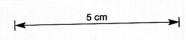
OR-066c

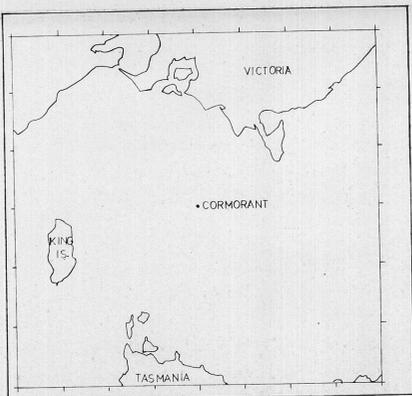
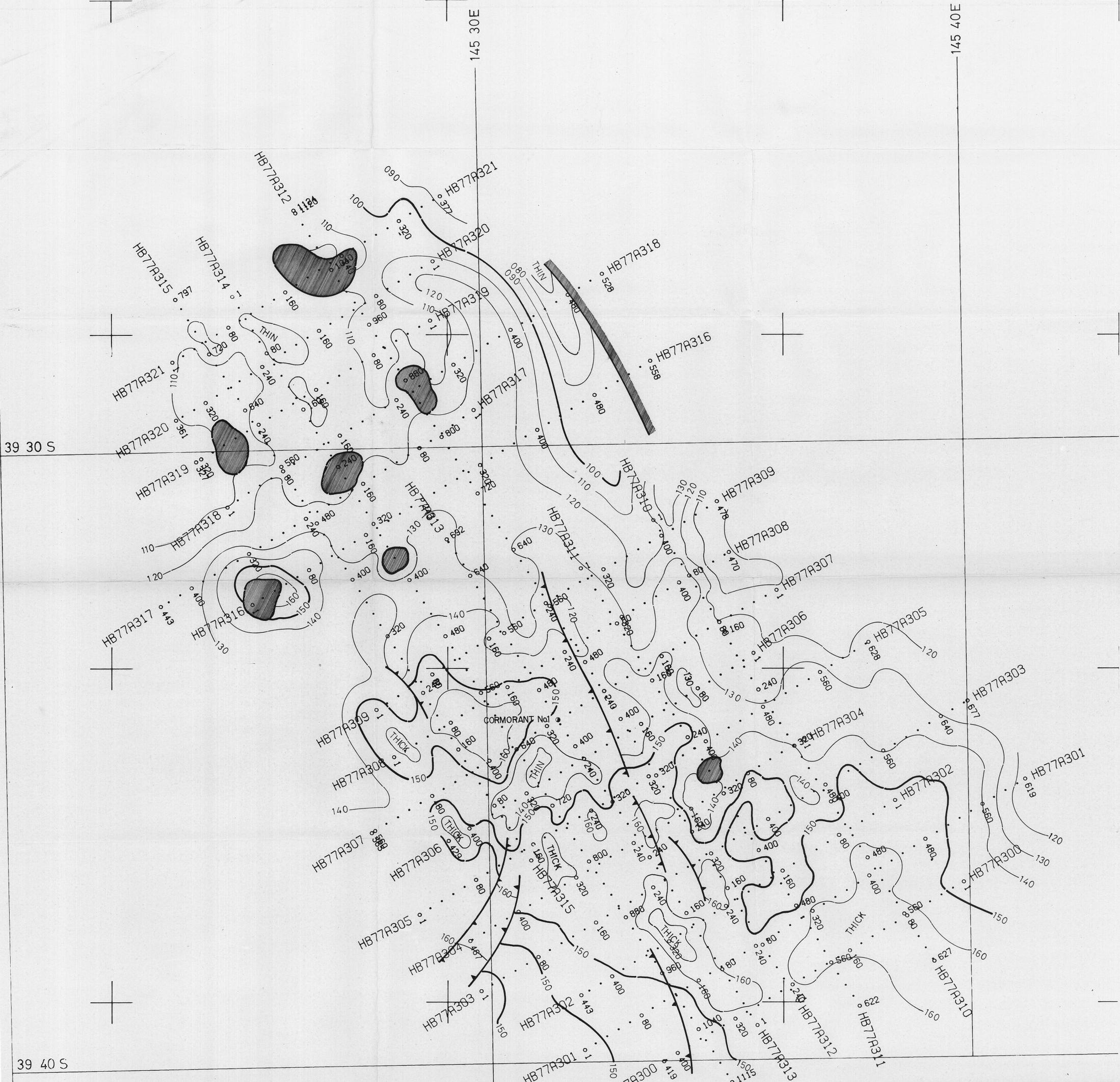


 IGNEOUS INTRUSIVE

U. M. DIVERSUS
 HORIZON
 CORMORANT AREA T18P
 TASMANIA
 Seismic Map
 BASS STRAIT OIL & GAS NL

174042
 Contour Interval .010sec
 Datum MSL
 Scale 1:50,000 approx.
 BSO 705/10
 T/18P part V* CR-0166C

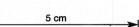




 IGNEOUS INTRUSIVE

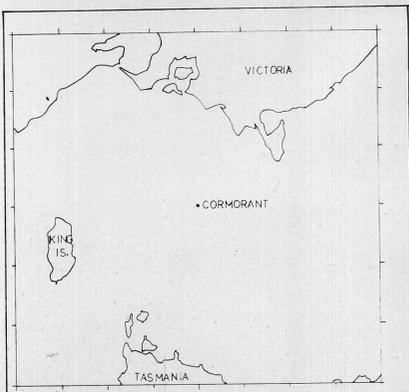
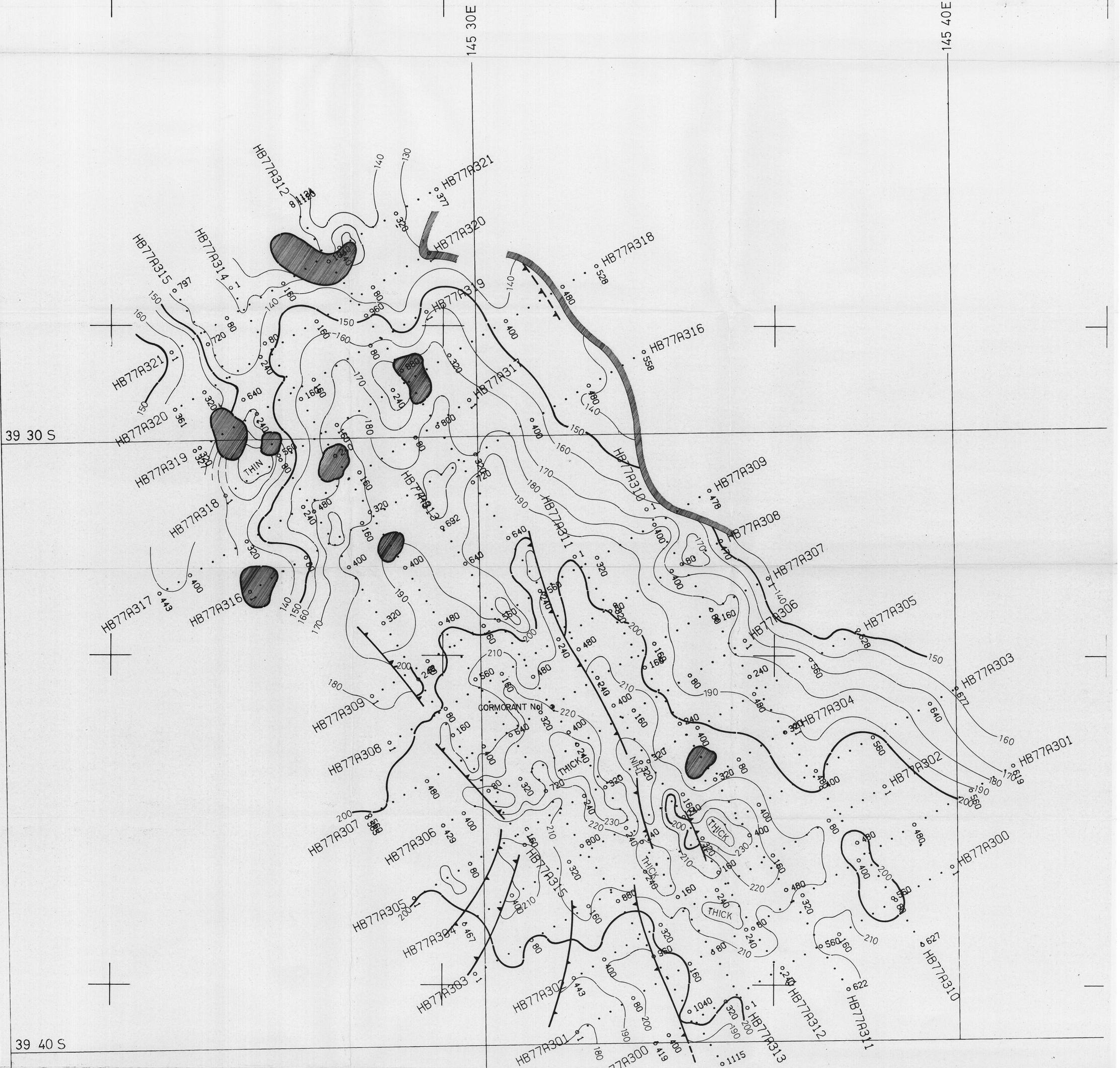
ISOPACH
 EASTERN VIEW TO
 NASPERUS
 CORMORANT AREA T18P
 TASMANIA
 Seismic Map
 BASS STRAIT OIL & GAS NL.

Contour Interval: 0.10 sec
 Datum: MSL
 Scale: 1:50,000 approx
 BSO 705/II

174043


T/18P part V*

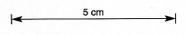
OR-0166C



 IGNEOUS INTRUSIVE

ISOPACH
 N.ASPERSUS TO
 U.M. DIVERSUS
 CORMORANT AREA T18P
 TASMANIA
 Seismic Map
 BASS STRAIT OIL & GAS NL.
 174044

Contour Interval. .010 sec
 Datum. MSL
 Scale 1: 50,000 approx
 BS O 70 5/12
 T/18P part V*



OR-0166c