



PE801438



technology and enterprise

25th November 1988

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18/11
KM/MM
see Merriman
in Fig 12.1

R7086



PETROLEUM DIVISION

24 MAY 1989

REPORT F7431/89

CLIENT REF:	ITC 03130/EXV
TITLE:	Gippsland Basin Source Rock Evaluation
IDENTIFICATION:	As Marked
MATERIAL:	Core and Cuttings
LOCALITY:	Gippsland Basin
WORK REQUIRED:	TOC and Rock-Eval pyrolysis
DATE RECEIVED:	7th November 1988

Investigation and Report by: Brian L. Watson

Manager, Petroleum Services Section: Dr Brian G. Steveson

for Dr William G. Spencer
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1. INTRODUCTION

Total organic carbon (TOC) and Rock-Eval analyses were carried out on 250 core and cuttings samples from the Gippsland Basin. This report contains the results of these analyses along with details of the analytical procedures used and graphical displays of the data. Preliminary results were reported by Facsimile on 25th November 1988.

2. ANALYTICAL PROCEDURES

2.1 Sample Preparation

Cuttings samples (as received) were ground in a Siebtechnik mill for 20-30 seconds.

2.2 Total Organic Carbon (TOC)

Total organic carbon was determined by digestion of a known weight (approximately 0.2 g) of powdered rock in 50% HCl to remove carbonates, followed by combustion in oxygen and measurement of the resultant CO₂ by infra-red detection.

2.3 Rock-Eval Analyses

A 100 mg portion of powdered rock was analysed by the Rock-Eval pyrolysis technique (Girdel IFP-Fina Mark 2 instrument; operating mode, Cycle 1).

3. RESULTS

TOC and Rock-Eval data are listed in Table 1. Table 2 lists the sediments examined which have fair to excellent source richness and is sorted in order of decreasing S₁ + S₂ values. Figures 1 - 19 are cross plots of Tmax versus Hydrogen Index illustrating kerogen Type and maturity for each of the wells studied.

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Rock-Eval Pyrolysis

25/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
BARRACOUTA-A3 (ft)											
9243	447	0.13	0.98	0.40	1.11	0.12	2.45	0.09	0.66	148	60
9410	441	0.54	4.82	0.29	5.36	0.10	16.62	0.44	2.31	208	12
9630	443	0.51	3.60	0.77	4.11	0.12	4.67	0.34	2.25	160	34
9840	441	1.03	5.16	0.69	6.19	0.17	7.47	0.51	2.80	184	24
9990	446	2.27	11.75	1.94	14.02	0.16	6.05	1.16	7.24	162	26
10150	440	0.47	2.70	1.27	3.17	0.15	2.12	0.26	1.57	171	80
10280	446	0.83	4.46	1.14	5.29	0.16	3.91	0.44	2.80	159	40
10430	446	0.74	4.44	0.28	5.18	0.14	15.85	0.43	2.67	166	10
10660	446	6.39	42.46	1.25	48.85	0.13	33.96	4.07	20.38	208	6
11050	450	0.42	1.78	0.56	2.20	0.19	3.17	0.18	1.37	129	40
11137	450	0.58	3.90	0.06	4.48	0.13	65.00	0.37	2.08	187	2
11283	451	0.16	0.99	0.01	1.15	0.14	99.00	0.09	0.85	116	1
11301	455	0.37	4.02	0.00	4.39	0.08	0.00	0.36	1.81	222	0
11469	452	0.11	0.77	0.00	0.88	0.12	0.00	0.07	0.89	86	0
11764	454	0.42	2.94	0.14	3.36	0.12	21.00	0.28	2.64	111	5
BASKER-1 (m)											
3399	439	0.24	1.95	2.67	2.19	0.11	0.73	0.18	1.54	126	173
3438	427	0.16	0.45	1.36	0.61	0.27	0.33	0.05	0.85	52	160
3459	433	0.50	3.78	2.38	4.28	0.12	1.58	0.35	3.27	115	72
3480	433	0.16	0.85	1.60	1.01	0.16	0.53	0.08	0.85	100	188
3621	444	0.09	0.38	0.79	0.47	0.20	0.48	0.03	0.62	61	127
3699	442	0.18	1.13	1.72	1.31	0.14	0.65	0.10	0.84	134	204
3750	441	0.22	1.02	2.15	1.24	0.18	0.47	0.10	1.00	102	215
3825									0.41		
3918	442	0.25	1.80	1.51	2.05	0.12	1.19	0.17	1.45	124	104
3966	442	1.40	14.94	1.20	16.34	0.09	12.45	1.36	6.25	239	19
CHINAERA-1 (m)											
2843	429	0.12	0.52	2.16	0.64	0.20	0.25	0.04	0.83	50	208
2873									0.10		
2954									0.20		
2993									0.44		
3041									0.19		
3056									0.40		
3068									0.19		
3101									0.29		
3131	430	0.13	0.51	2.18	0.64	0.20	0.23	0.05	1.04	49	209
3176									0.29		
3194									0.40		
3242									0.11		
3278									0.19		
3308									0.28		
3347	433	0.21	1.53	1.38	1.74	0.12	1.10	0.14	1.12	137	123
3371	432	0.38	2.78	2.06	3.16	0.12	1.34	0.26	2.28	122	90

AMDEL

Rock-Eval Pyrolysis

25/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
CHIMAERA-1 (continued)											
3410	434	0.36	4.83	4.92	5.19	0.07	0.98	0.43	2.92	165	168
3509	432	0.15	1.58	1.77	1.73	0.09	0.88	0.14	1.34	118	134
3572	434	0.60	6.32	4.16	6.92	0.09	1.51	0.57	3.66	173	114
3602	438	0.22	1.21	2.22	1.43	0.15	0.54	0.11	1.62	75	137
DOLPHIN-1 (ft)											
7540	424	2.38	33.55	3.58	35.93	0.07	9.37	2.99	14.97	224	23
7780	428	0.14	5.54	1.66	5.68	0.02	3.33	0.47	4.29	129	38
7880	424	0.28	7.67	1.12	7.95	0.04	6.84	0.66	42.00	18	2
7920	426	0.81	24.61	1.86	25.42	0.03	13.23	2.11	10.76	228	17
7980	426	0.46	17.53	2.97	17.99	0.03	5.90	1.49	10.68	164	27
8020	428	0.24	3.97	0.66	4.21	0.06	6.01	0.35	2.22	178	29
8070	428	0.21	8.06	2.47	8.27	0.03	3.26	0.68	5.95	135	41
8120	426	0.21	4.11	1.21	4.32	0.05	3.39	0.36	2.78	147	43
8170	426	0.49	14.98	2.10	15.47	0.03	7.13	1.28	7.51	199	27
8850	430	0.12	0.96	0.47	1.08	0.11	2.04	0.09	0.99	96	47
8920	448	0.14	0.49	0.55	0.63	0.23	0.89	0.05	0.58	84	94
9010	429	0.11	0.45	0.56	0.56	0.20	0.80	0.04	0.69	65	81
9180	424	0.15	0.67	0.56	0.82	0.18	1.19	0.06	0.65	103	86
9220	426	0.32	2.92	1.19	3.24	0.10	2.45	0.27	2.25	129	52
9280	427	0.28	3.25	0.71	3.53	0.08	4.57	0.29	1.94	167	36
EMPEROR-1 (ft)											
6040	434	0.26	2.97	5.58	3.23	0.08	0.53	0.26	2.39	124	233
6110	433	0.15	1.12	6.04	1.27	0.12	0.18	0.10	1.52	73	397
6200	433	0.31	3.54	2.34	3.85	0.08	1.51	0.32	2.47	143	94
GOLDEN BEACH WEST-1 (ft)											
5140	423	1.15	18.12	3.74	19.27	0.06	4.84	1.60	10.02	180	37
5415	429	1.22	24.59	0.71	25.81	0.05	34.63	2.15	8.34	294	8
5600	430	1.76	1.38	0.35	3.14	0.56	3.94	0.26	1.55	89	22
5670	424	0.87	9.36	2.23	10.23	0.09	4.19	0.85	6.55	142	34
5740	427	0.32	1.28	1.44	1.60	0.20	0.88	0.13	1.91	67	75
5840	427	0.27	0.31	4.90	0.58	0.47	0.06	0.04	0.61	50	803
5940	424	0.57	4.21	2.25	4.78	0.12	1.87	0.39	2.78	151	80
6070	415	0.57	0.45	0.43	1.02	0.56	1.04	0.08	0.86	52	50
6190	422	1.11	13.91	2.67	15.02	0.07	5.20	1.25	7.39	188	36
6300	433	0.55	0.62	0.40	1.17	0.47	1.55	0.09	1.05	59	38
6387	435	0.17	5.95	0.24	6.12	0.03	24.79	0.51	2.42	245	9
6480	428	0.30	2.46	2.48	2.76	0.11	0.99	0.23	2.87	85	86
6640	426	0.95	3.30	1.63	4.25	0.22	2.02	0.35	2.34	141	69
6720	428	0.24	1.07	2.51	1.31	0.18	0.42	0.10	2.16	49	116
6840	436	0.23	6.04	1.15	6.27	0.04	5.25	0.52	4.35	138	26
7100	441	0.19	1.75	5.18	1.94	0.10	0.33	0.16	2.42	72	214
7230	430	0.27	1.88	2.11	2.15	0.13	0.89	0.17	1.79	105	117
7508	436	0.82	3.85	14.50	4.67	0.18	0.26	0.38	3.88	99	373

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Rock-Eval Pyrolysis

25/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	DI
GOLDEN BEACH-1A (ft)											
5690	428	1.01	5.48	0.88	6.49	0.16	6.22	0.54	3.05	179	28
5790	427	0.42	1.29	0.60	1.71	0.25	2.15	0.14	1.44	89	41
6050	419	0.26	0.57	5.60	0.83	0.32	0.10	0.06	1.15	49	486
6380	419	0.27	0.62	2.72	0.89	0.31	0.22	0.07	0.87	71	312
6420	427	0.19	0.69	2.19	0.88	0.22	0.31	0.07	1.24	55	176
6580	432	0.36	1.31	2.07	1.67	0.22	0.63	0.13	1.61	81	128
6820	436	0.38	1.48	3.95	1.86	0.20	0.37	0.15	1.97	75	200
6950	429	0.06	0.35	3.83	0.41	0.15	0.09	0.03	1.07	32	357
7060	344	0.06	0.29	2.81	0.35	0.18	0.10	0.02	1.27	22	221
7150	438	0.13	0.86	2.57	0.99	0.13	0.33	0.08	1.79	48	143
7330	429	1.84	1.90	1.52	3.74	0.49	1.25	0.31	1.63	116	93
7440	436	0.23	1.02	2.17	1.25	0.19	0.47	0.10	1.22	83	177
7750	443	0.05	0.56	2.43	0.61	0.08	0.23	0.05	1.16	48	209
7870	435	0.71	1.45	1.48	2.16	0.33	0.97	0.18	1.44	100	102
HAMMERHEAD-1 (m)											
1733									0.14		
1830									0.33		
1947									0.21		
2055	421	0.26	1.39	2.48	1.65	0.16	0.56	0.13	1.10	126	225
2094	434	0.21	1.36	3.66	1.57	0.13	0.37	0.13	1.84	73	198
KIPPER-1 (m)											
2000	438	0.22	1.21	2.22	1.43	0.15	0.54	0.11	0.81	149	274
2085									0.24		
2140	418	0.24	1.32	0.28	1.56	0.15	4.71	0.13	1.73	76	16
2195	432	0.16	1.66	2.57	1.82	0.09	0.64	0.15	0.89	186	288
2295	420	0.09	0.37	2.40	0.46	0.20	0.15	0.03	1.28	28	187
2350	428	0.13	0.50	3.14	0.63	0.21	0.15	0.05	1.44	34	218
2405	433	0.16	1.00	2.53	1.16	0.14	0.39	0.09	1.84	54	137
2435	432	0.26	1.72	1.66	1.98	0.13	1.03	0.16	1.86	92	89
2490	435	0.28	1.68	2.24	1.96	0.14	0.75	0.16	1.62	103	138
2525	428	0.12	0.54	2.14	0.66	0.18	0.25	0.05	1.44	37	148
2615	439	0.25	1.83	2.80	2.08	0.12	0.65	0.17	1.85	98	151
2645	435	0.22	2.11	2.37	2.33	0.09	0.89	0.19	1.63	129	145
2685	434	0.10	0.72	3.00	0.82	0.12	0.24	0.06	1.29	55	232
2710	440	0.09	0.40	2.48	0.49	0.19	0.16	0.04	1.59	25	155
2740	438	0.10	0.73	2.49	0.83	0.12	0.29	0.06	1.33	54	187
2770	441	0.11	0.62	1.97	0.73	0.15	0.31	0.06	1.42	43	138
2800	436	0.14	1.13	2.79	1.27	0.11	0.40	0.10	1.80	62	155
2830	370	0.06	0.25	1.95	0.31	0.20	0.12	0.02	1.42	17	137
2860	432	0.19	1.26	1.09	1.45	0.13	1.15	0.12	1.14	110	95

AMDEL

Rock-Eval Pyrolysis

25/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
KIPPER-2 (m)											
2240	422	0.07	0.33	0.61	0.40	0.17	0.54	0.03	0.42	78	145
2290									0.34		
2308	436	0.19	2.88	1.32	3.07	0.06	2.18	0.25	1.46	197	90
2313	434	0.51	7.12	3.10	7.63	0.07	2.30	0.63	2.50	284	124
2326	428	0.04	0.05	0.01	0.09	0.50	5.00	0.00	0.53	9	2
2346	433	0.20	5.30	3.10	5.50	0.04	1.71	0.45	2.25	235	138
2347	438	0.05	0.12	0.90	0.17	0.31	0.13	0.01	0.48	25	188
2365	431	0.18	2.34	1.34	2.52	0.07	1.74	0.21	1.78	131	75
2390	410	0.13	2.93	1.90	3.06	0.04	1.54	0.25	1.91	153	99
2435	421	0.10	0.68	1.37	0.78	0.13	0.49	0.06	1.50	45	91
2480	434	0.12	0.87	2.42	0.99	0.12	0.35	0.08	1.34	64	180
2505	429	0.16	1.34	1.95	1.50	0.11	0.68	0.12	1.83	73	106
2565	424	0.22	1.56	0.87	1.78	0.12	1.79	0.14	1.25	124	69
2590	424	0.31	2.95	1.31	3.26	0.10	2.25	0.27	3.14	93	41
LEATHERJACKET-1 (m)											
850	419	0.03	0.07	1.93	0.10	0.30	0.03	0.00	0.91	7	212
MANTA-1 (m)											
2988									0.14		
3042	432	0.14	0.58	1.69	0.72	0.19	0.34	0.06	0.63	92	268
3093									0.36		
3162	438	0.18	1.39	1.34	1.57	0.12	1.03	0.13	0.96	144	139
3210	434	0.25	2.91	0.65	3.16	0.08	4.47	0.26	1.84	158	35
3306	436	0.38	4.76	0.03	5.14	0.07	158.66	0.42	1.58	301	1
HERRIMAN-1 (ft)											
4708	437	0.05	0.16	0.34	0.21	0.25	0.47	0.01	0.79	20	43
4708C	421	0.67	8.15	0.57	8.82	0.08	14.29	0.73	33.12	246	17
5160	426	0.19	5.40	4.42	5.59	0.03	1.22	0.46	3.70	145	119
5490	425	0.17	3.33	0.69	3.50	0.05	4.82	0.29	2.03	164	33
MORAY-1 (ft)											
6330									0.26		
6430	424	0.09	0.36	0.58	0.45	0.20	0.62	0.03	0.59	61	98
6630									0.22		
6640									0.11		
6720									0.42		
7030									0.04		
7510									0.42		
7790									0.24		
8050									0.17		
8180									0.07		
8290									0.11		
8460									0.09		

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Rock-Eval Pyrolysis

25/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
OMEO-1 (m)											
3021	435	14.08	40.81	5.87	54.89	0.26	6.95	4.57	11.30	361	51
3031	441	0.19	0.13	0.08	0.32	0.59	1.62	0.02	1.24	10	6
3081	436	4.68	45.85	0.78	50.53	0.09	58.78	4.21	21.03	218	3
3162	436	1.21	11.61	0.24	12.82	0.09	48.37	1.06	5.50	211	4
3117	437	0.94	8.39	0.31	9.33	0.10	27.06	0.77	4.73	177	6
3189	438	0.14	0.58	0.16	0.72	0.19	3.62	0.06	0.69	84	23
3246	439	0.31	2.48	0.42	2.79	0.11	5.90	0.23	1.54	161	27
OMEO-2A (m)											
2865									0.08		
2937									0.07		
2977	434	0.13	1.04	0.59	1.17	0.11	1.76	0.09	0.85	122	69
2985	436	0.08	0.36	3.04	0.44	0.18	0.11	0.03	0.72	50	422
3009	435	0.11	0.29	3.95	0.40	0.27	0.07	0.03	0.56	51	705
3024	431	0.13	0.38	0.72	0.51	0.26	0.52	0.04	0.46	82	156
3039	437	0.11	0.41	2.35	0.52	0.21	0.17	0.04	0.97	42	242
3066									0.14		
3096	432	0.07	0.23	1.91	0.30	0.23	0.12	0.02	0.53	43	360
3150	440	0.25	1.20	0.63	1.45	0.17	1.90	0.12	1.57	76	40
3165	435	0.13	0.44	1.74	0.57	0.23	0.25	0.04	0.82	53	212
STONEFISH-1 (ft)											
10180	455	0.08	0.57	1.14	0.65	0.12	0.50	0.05	1.14	50	100
10250	435	0.14	0.99	2.11	1.13	0.12	0.46	0.09	1.68	58	125
10280	482	0.25	0.73	2.16	0.98	0.26	0.33	0.08	4.13	17	52
10380	428	0.15	0.47	2.15	0.62	0.24	0.21	0.05	2.60	18	82
SUNFISH-1 (ft)											
7900	429	0.20	0.32	0.93	0.52	0.38	0.34	0.04	1.18	27	78
7950	368	0.21	0.29	1.81	0.50	0.42	0.16	0.04	1.25	23	144
8010	435	0.18	0.47	2.41	0.65	0.28	0.19	0.05	1.30	36	185
8050	435	0.18	0.70	1.76	0.88	0.20	0.39	0.07	1.33	52	132
8100	439	0.21	0.45	3.18	0.66	0.32	0.14	0.05	1.44	31	220
8149	438	0.43	2.92	2.55	3.35	0.13	1.14	0.27	3.61	80	70
SUNFISH-2 (m)											
2520	442	0.07	0.22	1.13	0.29	0.25	0.19	0.02	0.60	36	188
2580	434	0.38	2.05	0.73	2.43	0.16	2.80	0.20	1.40	146	52
2610	430	0.09	0.45	0.23	0.54	0.17	1.95	0.04	0.48	93	47

AMDEL

Rock-Eval Pyrolysis

28/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
TUNA-1 (ft)											
7670	421	0.13	0.54	2.64	0.67	0.20	0.20	0.05	0.84	64	314
7860	420	0.24	1.01	5.06	1.25	0.19	0.19	0.10	0.75	134	674
8070	433	0.75	9.33	0.89	10.08	0.07	10.48	0.84	5.20	179	17
8200	431	0.30	2.84	3.77	3.14	0.10	0.75	0.26	2.79	101	135
8320	431	0.35	3.84	5.17	4.19	0.08	0.74	0.34	7.23	53	71
8500	429	0.26	2.50	3.77	2.76	0.09	0.66	0.23	2.96	84	127
8680	431	0.98	10.29	3.17	11.27	0.09	3.24	0.93	6.03	170	52
8734	434	0.45	4.57	0.29	5.02	0.09	15.75	0.41	2.52	181	11
8777	436	0.47	3.55	0.54	4.02	0.12	6.57	0.33	2.41	147	22
9030	433	0.47	4.07	1.12	4.54	0.10	3.63	0.37	2.03	200	55
9220	435	0.24	2.75	8.50	2.99	0.08	0.32	0.24	1.64	167	518
9346	438	0.43	2.56	0.66	2.99	0.14	3.87	0.24	2.98	85	22
9840	436	0.35	2.43	3.39	2.78	0.13	0.71	0.23	2.73	89	124
9850	428	1.67	6.08	6.31	7.75	0.22	0.96	0.64	2.80	217	225
9960	435	0.39	3.17	3.28	3.56	0.11	0.96	0.29	4.93	64	66
10090	435	0.39	4.89	3.02	5.28	0.07	1.61	0.44	4.09	119	73
10128									0.44		
10180	441	0.11	0.47	3.50	0.58	0.19	0.13	0.04	1.17	40	299
10300	437	0.18	0.76	5.23	0.94	0.19	0.14	0.07	1.05	72	498
10390	434	0.26	1.28	2.47	1.54	0.17	0.51	0.12	1.55	82	159
10700	440	0.32	3.09	3.00	3.41	0.09	1.03	0.28	3.51	88	85
10903	449	0.22	1.16	0.62	1.38	0.16	1.87	0.11	1.70	68	36
11030	435	0.43	2.60	1.43	3.03	0.14	1.81	0.25	2.36	110	60
11140	437	0.18	1.20	0.93	1.38	0.13	1.29	0.11	1.31	91	70
11230	435	0.14	0.74	1.37	0.88	0.16	0.54	0.07	1.29	57	106
11310	437	0.13	0.73	1.28	0.86	0.15	0.57	0.07	1.02	71	125
11531									0.18		
11710	436	0.11	0.50	1.46	0.61	0.18	0.34	0.05	0.96	52	152
11800	439	0.15	0.73	1.37	0.88	0.17	0.53	0.07	1.15	63	119
11880	439	0.11	0.50	1.51	0.61	0.18	0.33	0.05	0.92	54	164

AMDEL

Rock-Eval Pyrolysis

25/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TDC	HI	OI
TUNA-4											
(m)											
2765									0.38		
2795									0.42		
2830	450	0.07	0.41	1.86	0.48	0.15	0.22	0.04	0.85	48	218
2845	442	0.10	0.65	3.33	0.75	0.14	0.19	0.06	1.31	49	254
2870	437	0.29	2.90	2.30	3.19	0.09	1.26	0.26	2.08	139	110
2900	434	0.28	2.93	2.67	3.21	0.09	1.09	0.26	1.84	159	145
2970	436	0.35	2.83	2.42	3.18	0.11	1.16	0.26	2.73	103	88
3015	447	0.17	0.88	2.81	1.05	0.16	0.31	0.08	2.12	41	132
3040	463	0.12	0.55	2.36	0.67	0.18	0.23	0.05	2.36	23	100
3075	339	0.07	0.23	7.37	0.30	0.23	0.03	0.02	0.80	28	921
3150	387	0.13	0.31	2.65	0.44	0.30	0.11	0.03	1.46	21	181
3165	363	0.09	0.20	2.82	0.29	0.32	0.07	0.02	1.29	15	218
3205	304	0.09	0.22	3.18	0.31	0.30	0.06	0.02	1.07	20	297
3220	442	0.20	1.97	2.96	2.17	0.09	0.66	0.18	3.05	64	97
3265	439	0.24	1.21	4.28	1.45	0.17	0.28	0.12	1.44	84	297
3310	439	0.29	1.24	4.05	1.53	0.19	0.30	0.12	1.23	100	329
WIRRAH-1											
(m)											
2975	443	0.29	1.22	1.16	1.51	0.19	1.05	0.12	0.97	125	119
2985									0.46		
3000	431	0.23	0.64	0.16	0.87	0.27	4.00	0.07	0.74	86	21
3020									0.29		
WIRRAH-2											
(m)											
2770	435	0.25	2.07	0.39	2.32	0.11	5.30	0.19	2.28	90	17
2790	439	0.07	0.22	0.92	0.29	0.25	0.23	0.02	2.03	10	45
2855	341	0.09	0.14	0.31	0.23	0.41	0.45	0.01	0.75	18	41
2875	335	0.08	0.14	1.08	0.22	0.36	0.12	0.01	1.00	14	108
2905	435	0.11	0.54	1.61	0.65	0.17	0.33	0.05	2.40	22	67
2925	429	0.12	0.57	4.21	0.69	0.18	0.13	0.05	1.93	29	218
2955	435	0.07	0.73	3.43	0.80	0.09	0.21	0.06	1.70	42	201
2995	436	0.12	0.52	2.86	0.64	0.19	0.18	0.05	1.82	28	157
3025	353	0.09	0.14	2.77	0.23	0.41	0.05	0.01	1.25	11	221
3060	443	0.07	0.19	1.49	0.26	0.27	0.12	0.02	1.18	16	126
WIRRAH-3											
(m)											
3235	378	0.12	0.35	1.63	0.47	0.26	0.21	0.03	0.62	56	262
3250	432	0.26	0.91	1.44	1.17	0.22	0.63	0.09	0.73	124	197



TABLE 2: Sorted by Source Richness

AMDEL

Rock-Eval Pyrolysis

28/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
3021	435	14.08	40.81	5.87	54.89	0.26	6.95	4.57	11.30	361	51
3081	436	4.68	45.85	0.78	50.53	0.09	58.78	4.21	21.03	218	3
10660	446	6.39	42.46	1.25	48.85	0.13	33.96	4.07	20.38	208	6
7540	424	2.38	33.55	3.58	35.93	0.07	9.37	2.99	14.97	224	23
5415	429	1.22	24.59	0.71	25.81	0.05	34.63	2.15	8.34	294	8
7920	426	0.81	24.61	1.86	25.42	0.03	13.23	2.11	10.76	228	17
5140	423	1.15	18.12	3.74	19.27	0.06	4.84	1.60	10.02	180	37
7980	426	0.46	17.53	2.97	17.99	0.03	5.90	1.49	10.68	164	27
3966	442	1.40	14.94	1.20	16.34	0.09	12.45	1.36	6.25	239	19
8170	426	0.49	14.98	2.10	15.47	0.03	7.13	1.28	7.51	199	27
6190	422	1.11	13.91	2.67	15.02	0.07	5.20	1.25	7.39	188	36
9990	446	2.27	11.75	1.94	14.02	0.16	6.05	1.16	7.24	162	26
3162	436	1.21	11.61	0.24	12.82	0.09	48.37	1.06	5.50	211	4
8680	431	0.98	10.29	3.17	11.27	0.09	3.24	0.93	6.03	170	52
5670	424	0.87	9.36	2.23	10.23	0.09	4.19	0.85	6.55	142	34
8070	433	0.75	9.33	0.89	10.08	0.07	10.48	0.84	5.20	179	17
3117	437	0.94	8.39	0.31	9.33	0.10	27.06	0.77	4.73	177	6
4708C	421	0.67	8.15	0.57	8.82	0.08	14.29	0.73	33.12	246	17
8070	428	0.21	8.06	2.47	8.27	0.03	3.26	0.68	5.95	135	41
7880	424	0.28	7.67	1.12	7.95	0.04	6.84	0.66	42.00	18	2
9850	428	1.67	6.08	6.31	7.75	0.22	0.96	0.64	2.80	217	225
2313	434	0.51	7.12	3.10	7.63	0.07	2.30	0.63	2.50	284	124
3572	434	0.60	6.32	4.16	6.92	0.09	1.51	0.57	3.66	173	114
5690	428	1.01	5.48	0.88	6.49	0.16	6.22	0.54	3.05	179	28
6840	436	0.23	6.04	1.15	6.27	0.04	5.25	0.52	4.35	138	26
9840	441	1.03	5.16	0.69	6.19	0.17	7.47	0.51	2.80	184	24
6387	435	0.17	5.95	0.24	6.12	0.03	24.79	0.51	2.42	245	9
7780	428	0.14	5.54	1.66	5.68	0.02	3.33	0.47	4.29	129	38
5160	426	0.19	5.40	4.42	5.59	0.03	1.22	0.46	3.70	145	119
2346	433	0.20	5.30	3.10	5.50	0.04	1.71	0.45	2.25	235	138
9410	441	0.54	4.82	0.29	5.36	0.10	16.62	0.44	2.31	208	12
10280	446	0.83	4.46	1.14	5.29	0.16	3.91	0.44	2.80	159	40
10090	435	0.39	4.89	3.02	5.28	0.07	1.61	0.44	4.09	119	73
3410	434	0.36	4.83	4.92	5.19	0.07	0.98	0.43	2.92	165	168
10430	446	0.74	4.44	0.28	5.18	0.14	15.85	0.43	2.67	166	10
3306	436	0.38	4.76	0.03	5.14	0.07	158.66	0.42	1.58	301	1
8734	434	0.45	4.57	0.29	5.02	0.09	15.75	0.41	2.52	181	11
5940	424	0.57	4.21	2.25	4.78	0.12	1.87	0.39	2.78	151	80
7508	436	0.82	3.85	14.50	4.67	0.18	0.26	0.38	3.88	99	373
9030	433	0.47	4.07	1.12	4.54	0.10	3.63	0.37	2.03	200	55
11137	450	0.58	3.90	0.06	4.48	0.13	65.00	0.37	2.08	187	2
11301	455	0.37	4.02	0.00	4.39	0.08	0.00	0.36	1.81	222	0
8120	426	0.21	4.11	1.21	4.32	0.05	3.39	0.36	2.78	147	43
3459	433	0.50	3.78	2.38	4.28	0.12	1.58	0.35	3.27	115	72
6640	426	0.95	3.30	1.63	4.25	0.22	2.02	0.35	2.34	141	69
8020	428	0.24	3.97	0.66	4.21	0.06	6.01	0.35	2.22	178	29
8320	431	0.35	3.84	5.17	4.19	0.08	0.74	0.34	7.23	53	71

AMDEL

Rock-Eval Pyrolysis

28/11/88

Client: THE SHELL COMPANY OF AUSTRALIA

Basin: GIPPSLAND

Depth (ft/m)	T Max	S1	S2	S3	S1+S2	PI	S2/S3	PC	TOC	HI	OI
9630	443	0.51	3.60	0.77	4.11	0.12	4.67	0.34	2.25	160	34
8777	436	0.47	3.55	0.54	4.02	0.12	6.57	0.33	2.41	147	22
6200	433	0.31	3.54	2.34	3.85	0.08	1.51	0.32	2.47	143	94
7330	429	1.84	1.90	1.52	3.74	0.49	1.25	0.31	1.63	116	93
9960	435	0.39	3.17	3.28	3.56	0.11	0.96	0.29	4.93	64	66
9280	427	0.28	3.25	0.71	3.53	0.08	4.57	0.29	1.94	167	36
5490	425	0.17	3.33	0.69	3.50	0.05	4.82	0.29	2.03	164	33
10700	440	0.32	3.09	3.00	3.41	0.09	1.03	0.28	3.51	88	85
11764	454	0.42	2.94	0.14	3.36	0.12	21.00	0.28	2.64	111	5
8149	438	0.43	2.92	2.55	3.35	0.13	1.14	0.27	3.61	80	70
2590	424	0.31	2.95	1.31	3.26	0.10	2.25	0.27	3.14	93	41
9220	426	0.32	2.92	1.19	3.24	0.10	2.45	0.27	2.25	129	52
6040	434	0.26	2.97	5.58	3.23	0.08	0.53	0.26	2.39	124	233
2900	434	0.28	2.93	2.67	3.21	0.09	1.09	0.26	1.84	159	145
2870	437	0.29	2.90	2.30	3.19	0.09	1.26	0.26	2.08	139	110
2970	436	0.35	2.83	2.42	3.18	0.11	1.16	0.26	2.73	103	88
10150	440	0.47	2.70	1.27	3.17	0.15	2.12	0.26	1.57	171	80
3210	434	0.25	2.91	0.65	3.16	0.08	4.47	0.26	1.84	158	35
3371	432	0.38	2.78	2.06	3.16	0.12	1.34	0.26	2.28	122	90
5600	430	1.76	1.38	0.35	3.14	0.56	3.94	0.26	1.55	89	22
8200	431	0.30	2.84	3.77	3.14	0.10	0.75	0.26	2.79	101	135
2308	436	0.19	2.88	1.32	3.07	0.06	2.18	0.25	1.46	197	90
2390	410	0.13	2.93	1.90	3.06	0.04	1.54	0.25	1.91	153	99
11030	435	0.43	2.60	1.43	3.03	0.14	1.81	0.25	2.36	110	60
9346	438	0.43	2.56	0.66	2.99	0.14	3.87	0.24	2.98	85	22
9220	435	0.24	2.75	8.50	2.99	0.08	0.32	0.24	1.64	167	518
3246	439	0.31	2.48	0.42	2.79	0.11	5.90	0.23	1.54	161	27
9840	436	0.35	2.43	3.39	2.78	0.13	0.71	0.23	2.73	89	124
8500	429	0.26	2.50	3.77	2.76	0.09	0.66	0.23	2.96	84	127
6480	428	0.30	2.46	2.48	2.76	0.11	0.99	0.23	2.87	85	86
2365	431	0.18	2.34	1.34	2.52	0.07	1.74	0.21	1.78	131	75
2580	434	0.38	2.05	0.73	2.43	0.16	2.80	0.20	1.40	146	52
2645	435	0.22	2.11	2.37	2.33	0.09	0.89	0.19	1.63	129	145
2770	435	0.25	2.07	0.39	2.32	0.11	5.30	0.19	2.28	90	17
11050	450	0.42	1.78	0.56	2.20	0.19	3.17	0.18	1.37	129	40
3399	439	0.24	1.95	2.67	2.19	0.11	0.73	0.18	1.54	126	173
3220	442	0.20	1.97	2.96	2.17	0.09	0.66	0.18	3.05	64	97
7870	435	0.71	1.45	1.48	2.16	0.33	0.97	0.18	1.44	100	102
7230	430	0.27	1.88	2.11	2.15	0.13	0.89	0.17	1.79	105	117
2615	439	0.25	1.83	2.80	2.08	0.12	0.65	0.17	1.85	98	151
3918	442	0.25	1.80	1.51	2.05	0.12	1.19	0.17	1.45	124	104

FIGURE 1

BARRACOUTA-A3

THE SHELL COMPANY OF AUSTRALIA

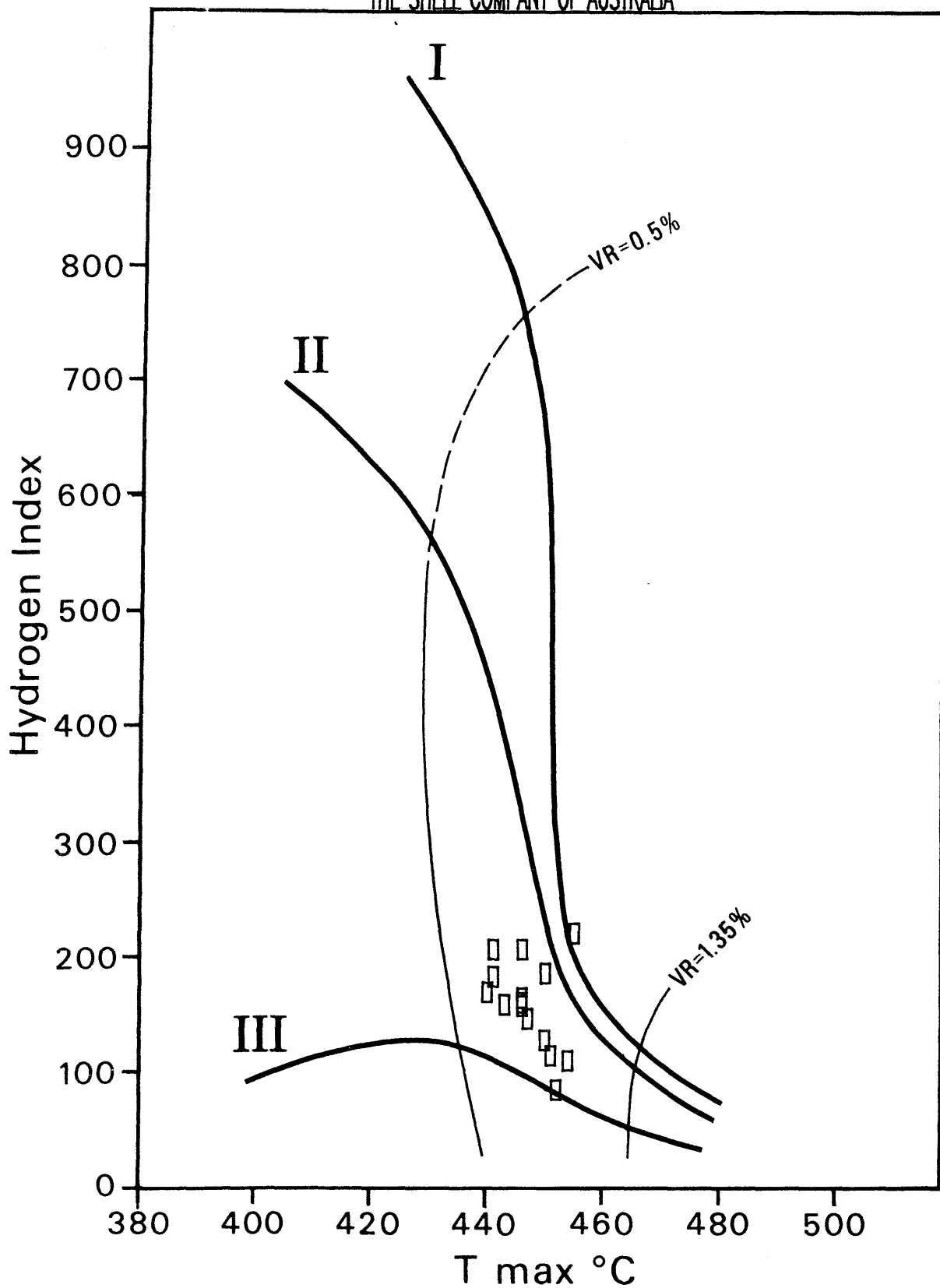


FIGURE 2

BASKER-1

THE SHELL COMPANY OF AUSTRALIA

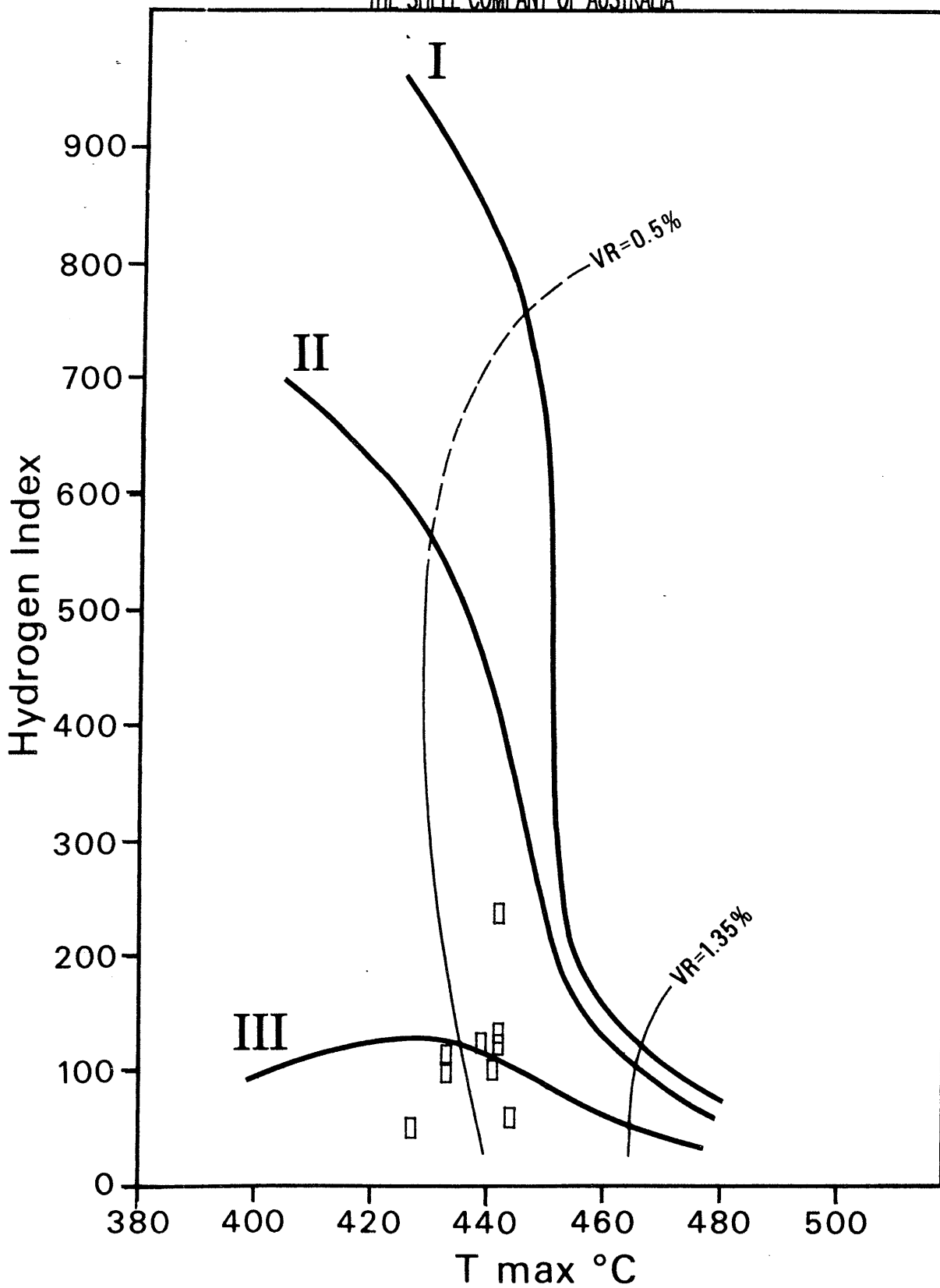


FIGURE 3

CHIMAERA-1

THE SHELL COMPANY OF AUSTRALIA

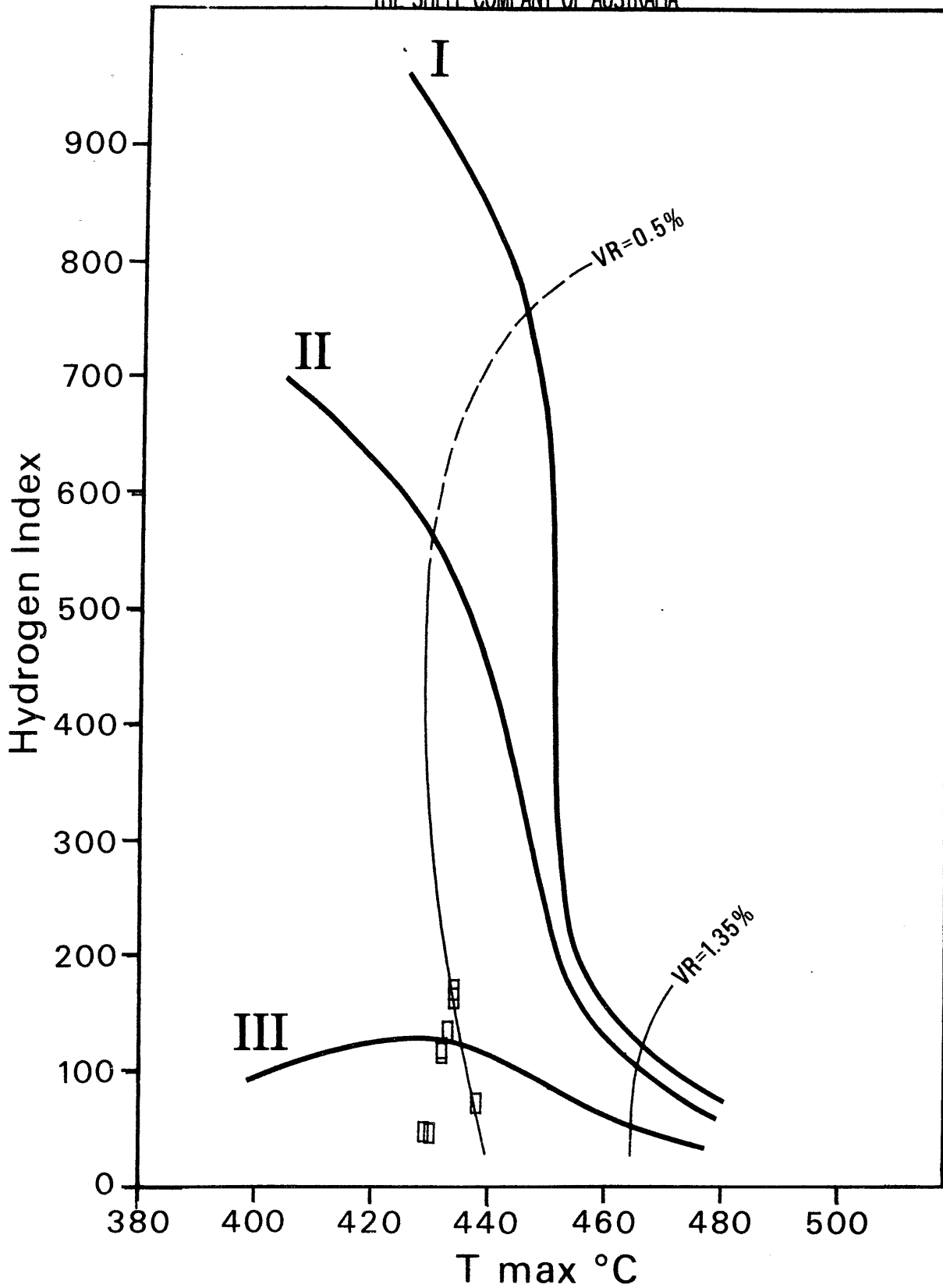


FIGURE 4

DOLPHIN-1

THE SHELL COMPANY OF AUSTRALIA

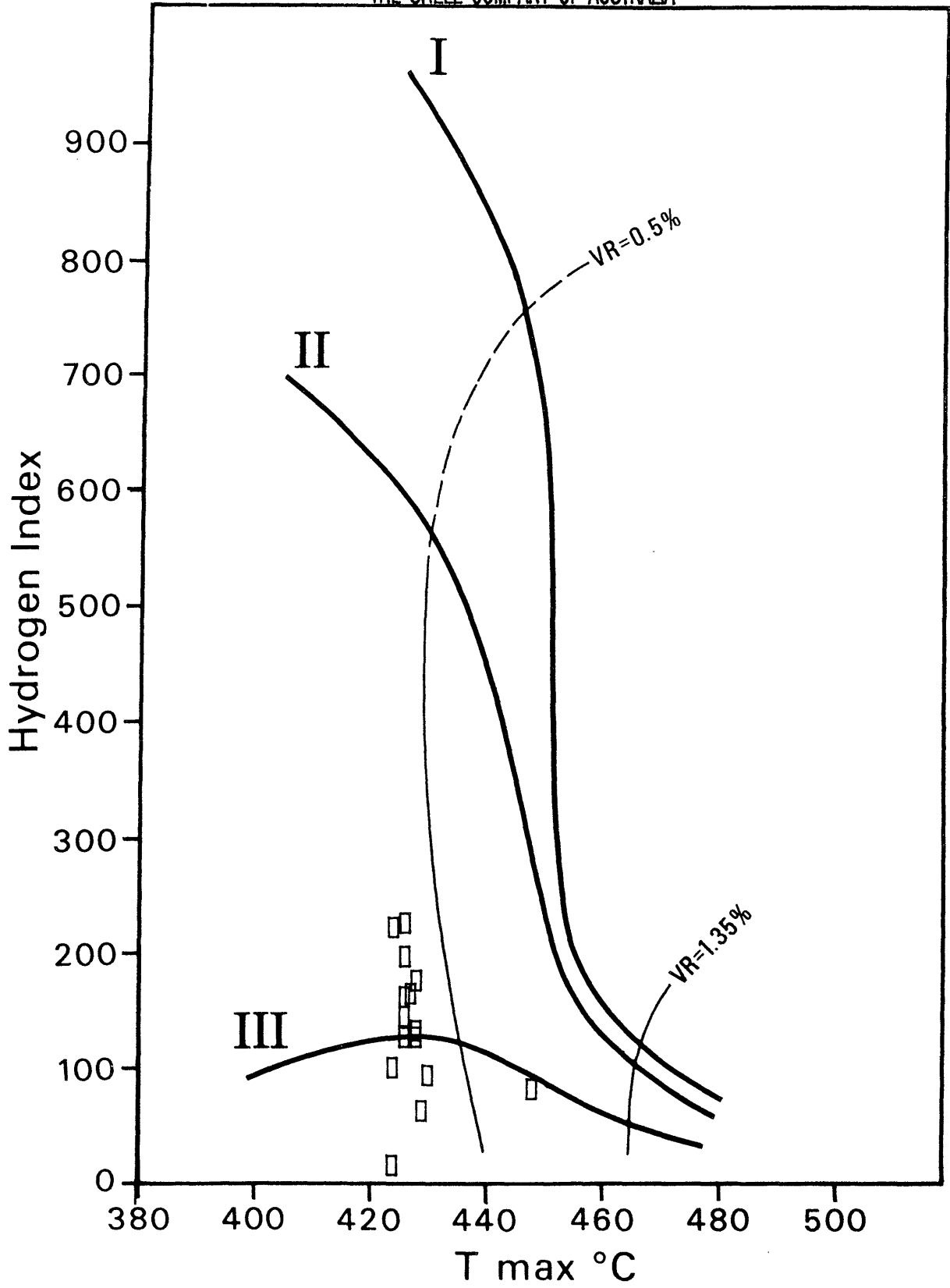


FIGURE 5

EMPEROR-1

THE SHELL COMPANY OF AUSTRALIA

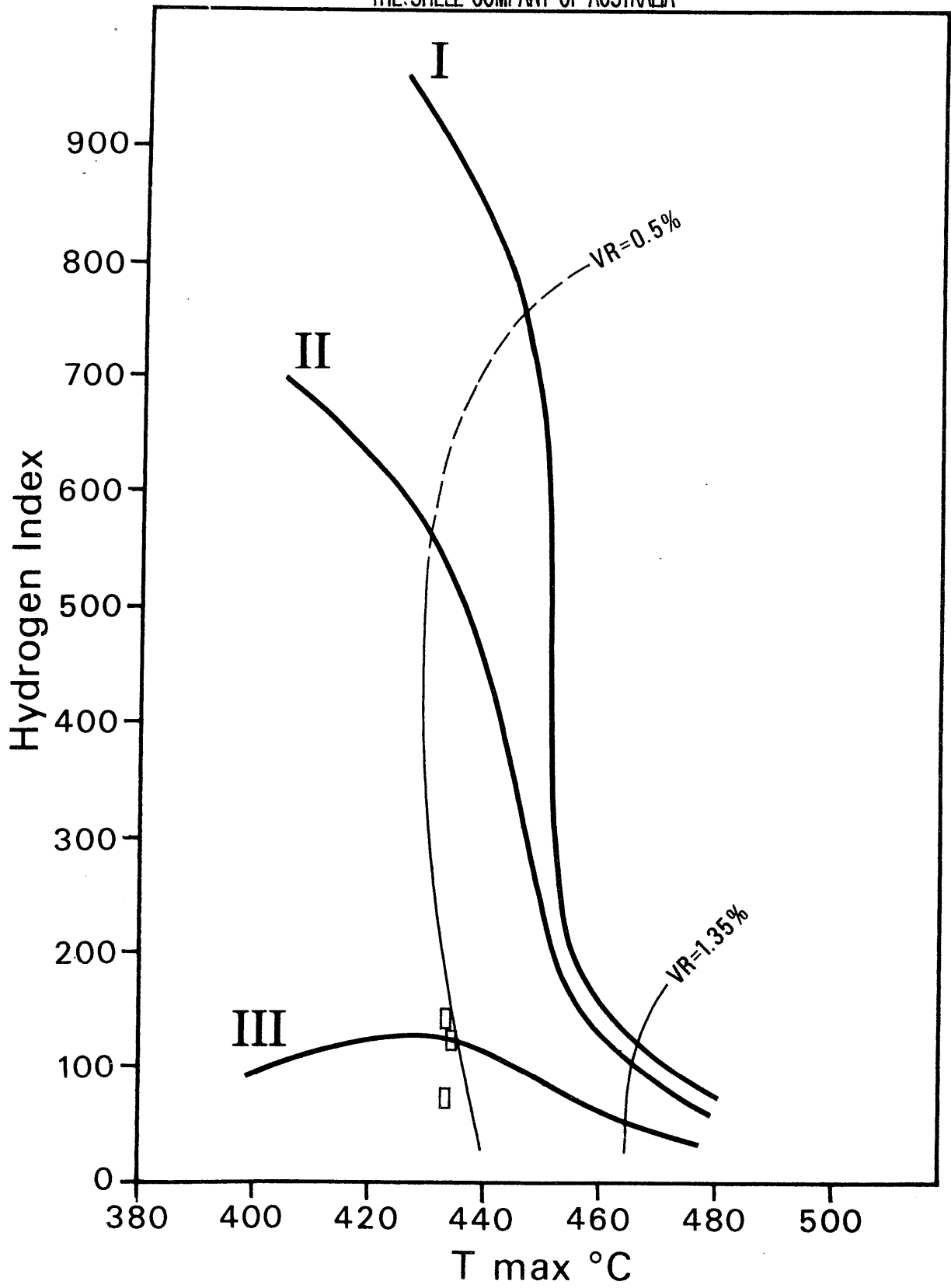


FIGURE 6

GOLDEN BEACH WEST-1

THE SHELL COMPANY OF AUSTRALIA

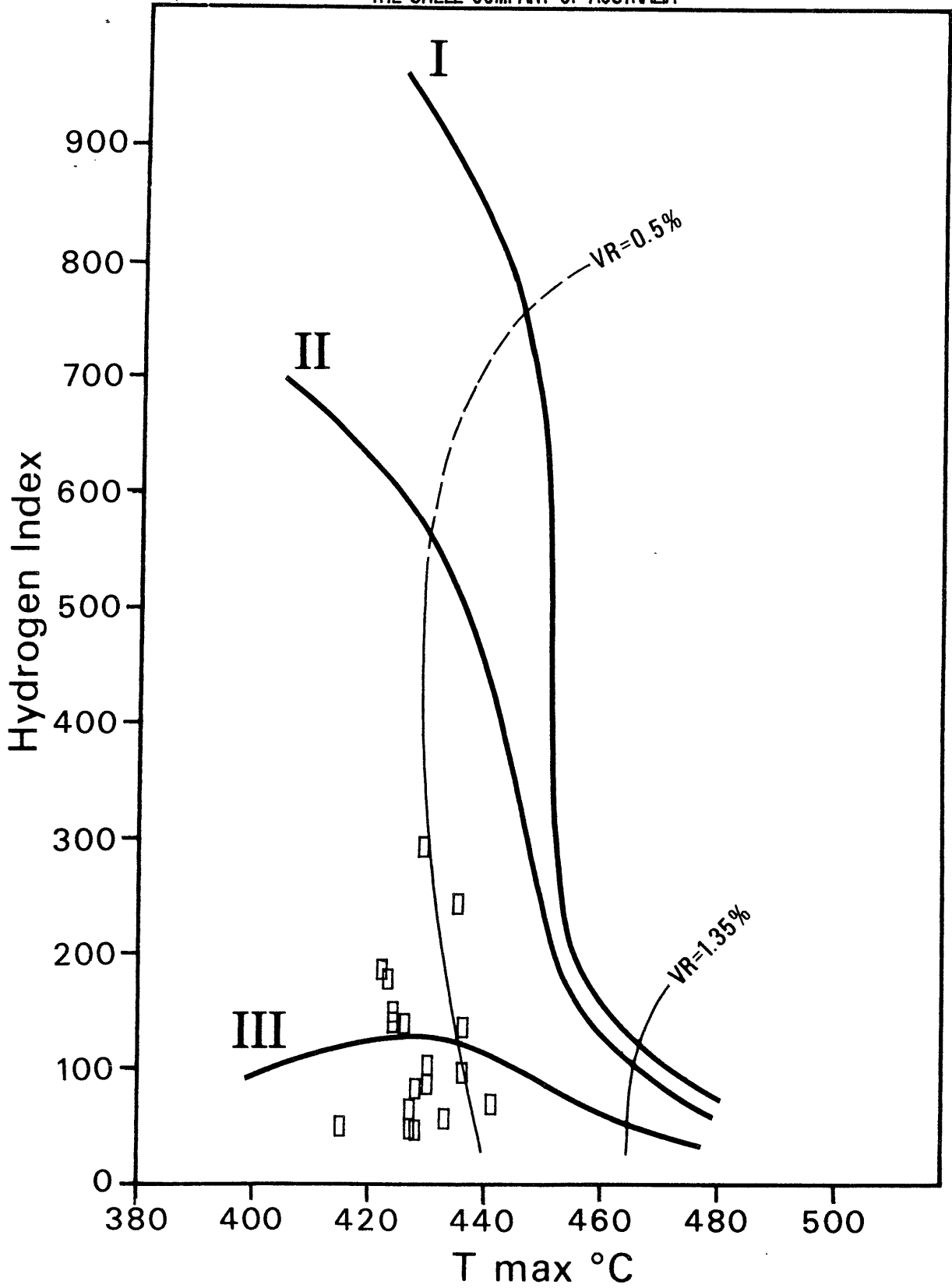


FIGURE 7

GOLDEN BEACH-1A

THE SHELL COMPANY OF AUSTRALIA

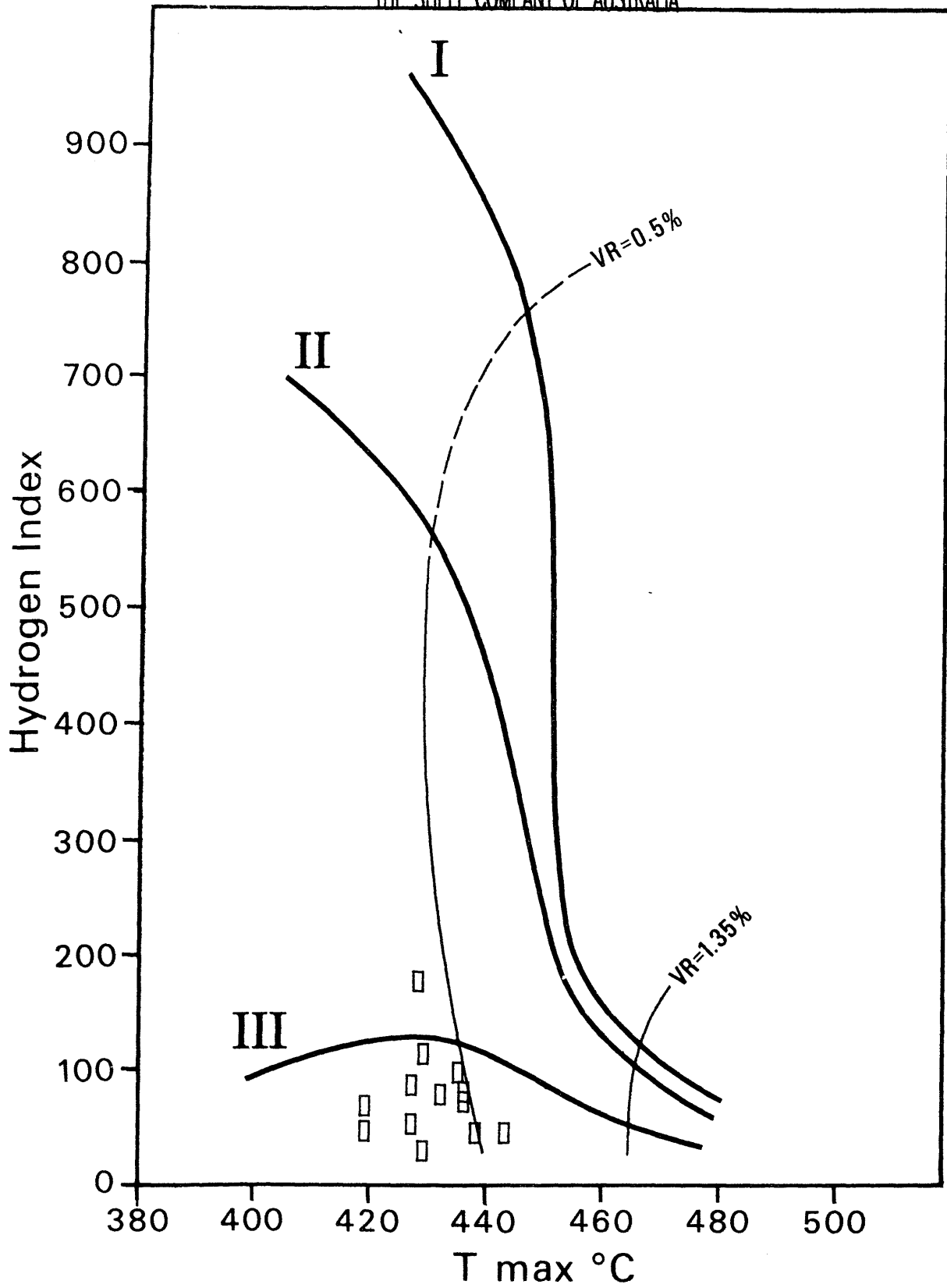


FIGURE 8

HAMMERHEAD-1

THE SHELL COMPANY OF AUSTRALIA

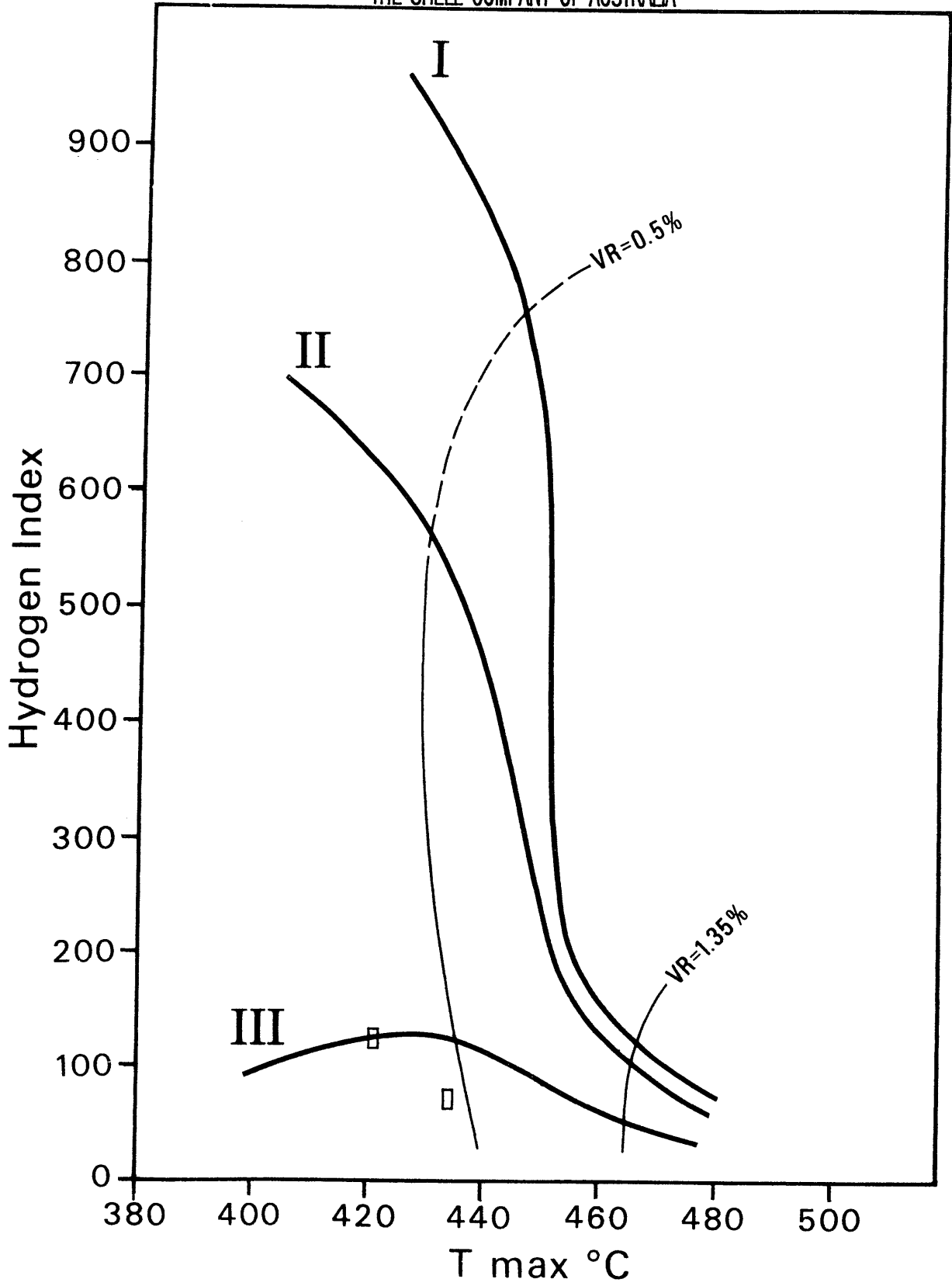


FIGURE 9

KIPPER-1&2

THE SHELL COMPANY OF AUSTRALIA

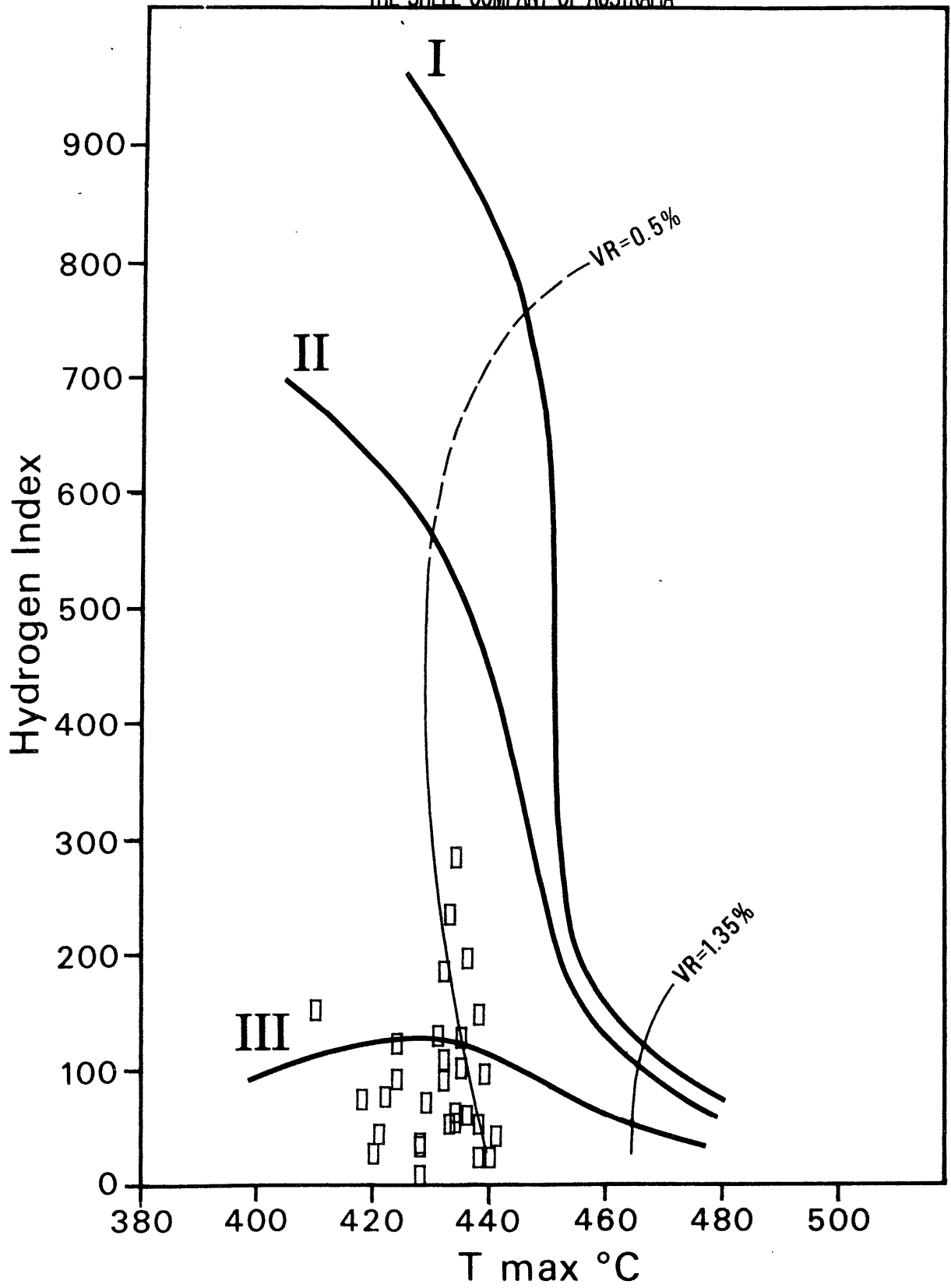


FIGURE 10

LEATHERJACKET-1

THE SHELL COMPANY OF AUSTRALIA

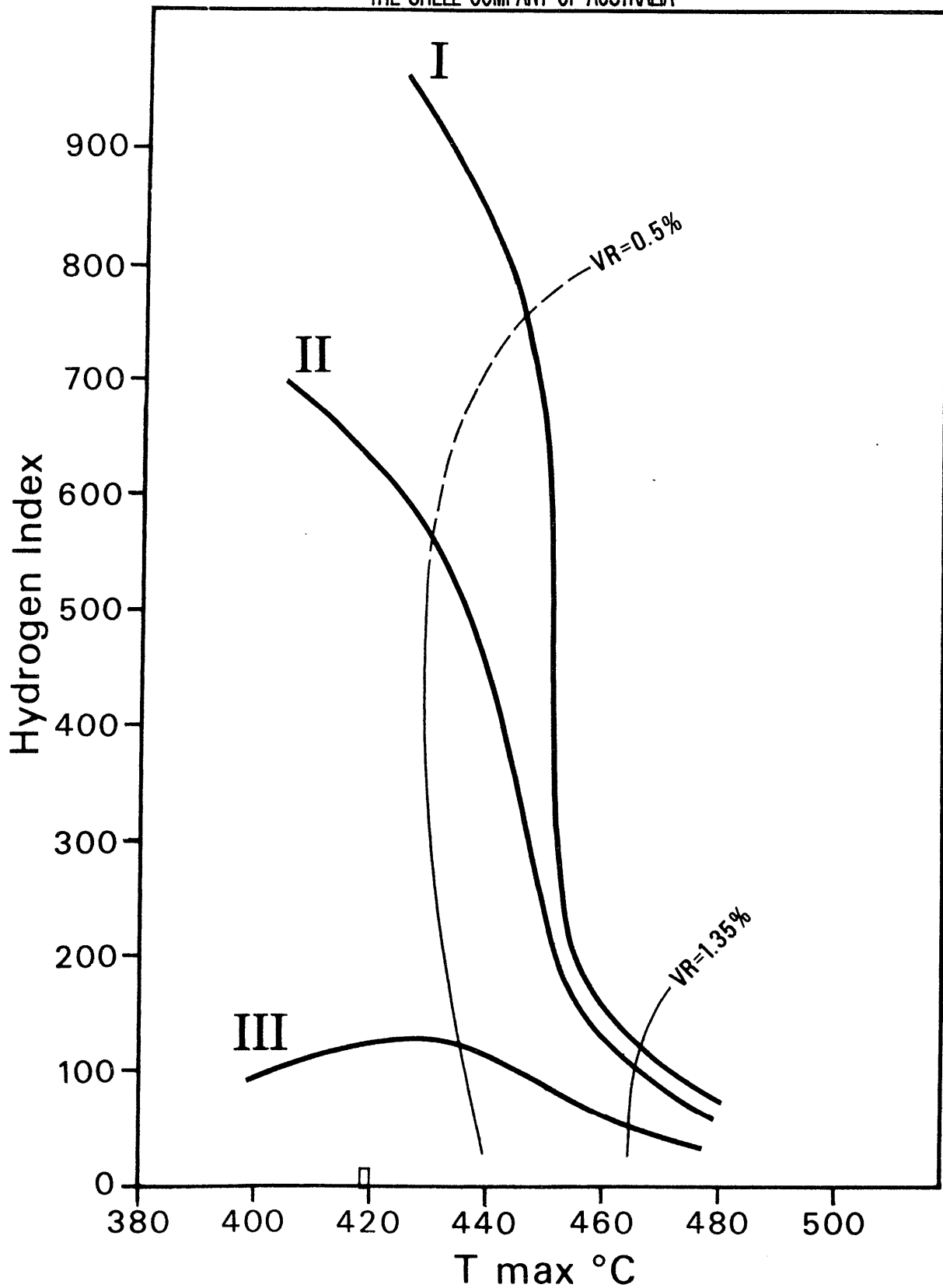


FIGURE 11

MANTA-1

THE SHELL COMPANY OF AUSTRALIA

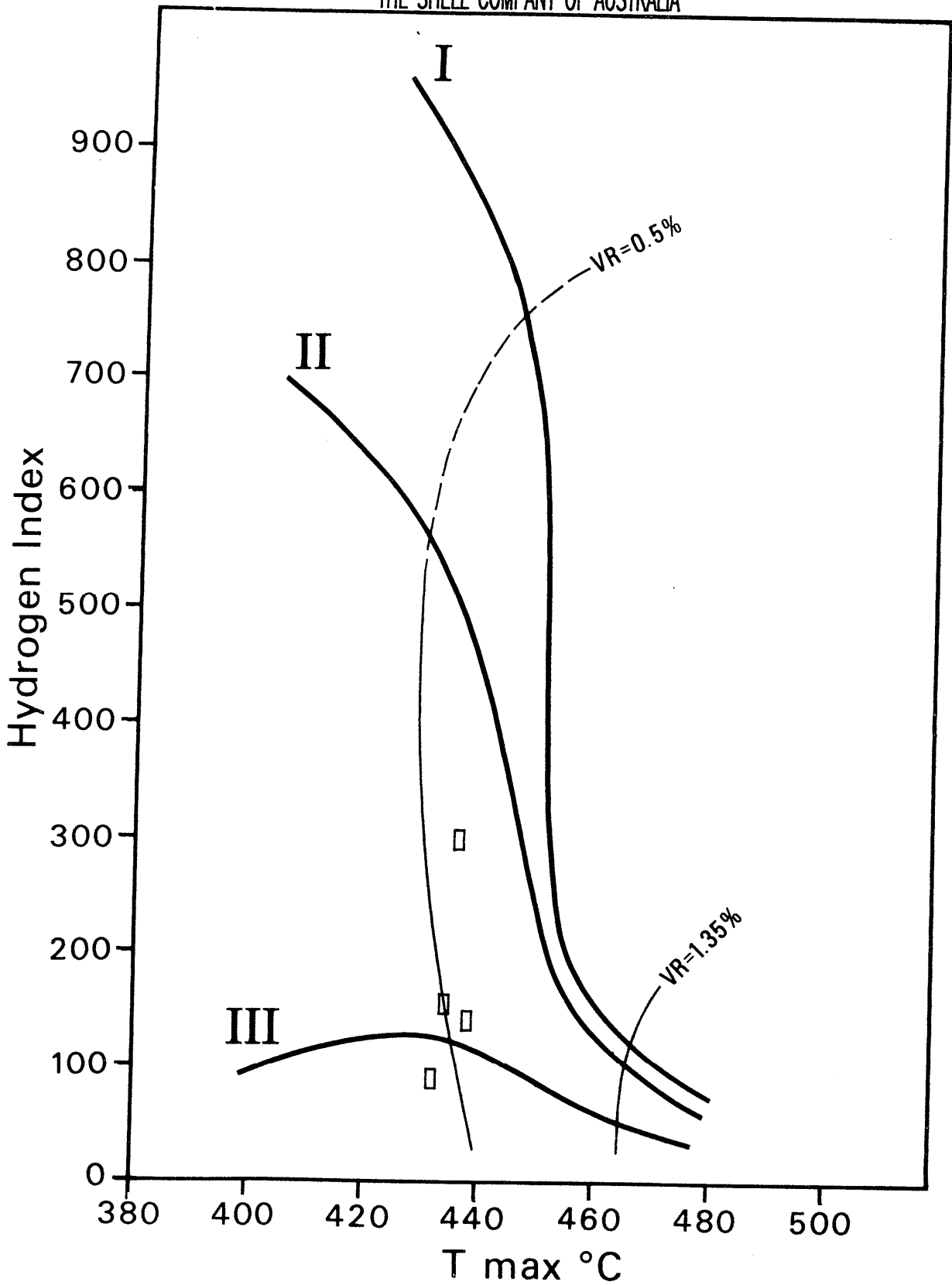


FIGURE 12

MERRIMAN-1

THE SHELL COMPANY OF AUSTRALIA

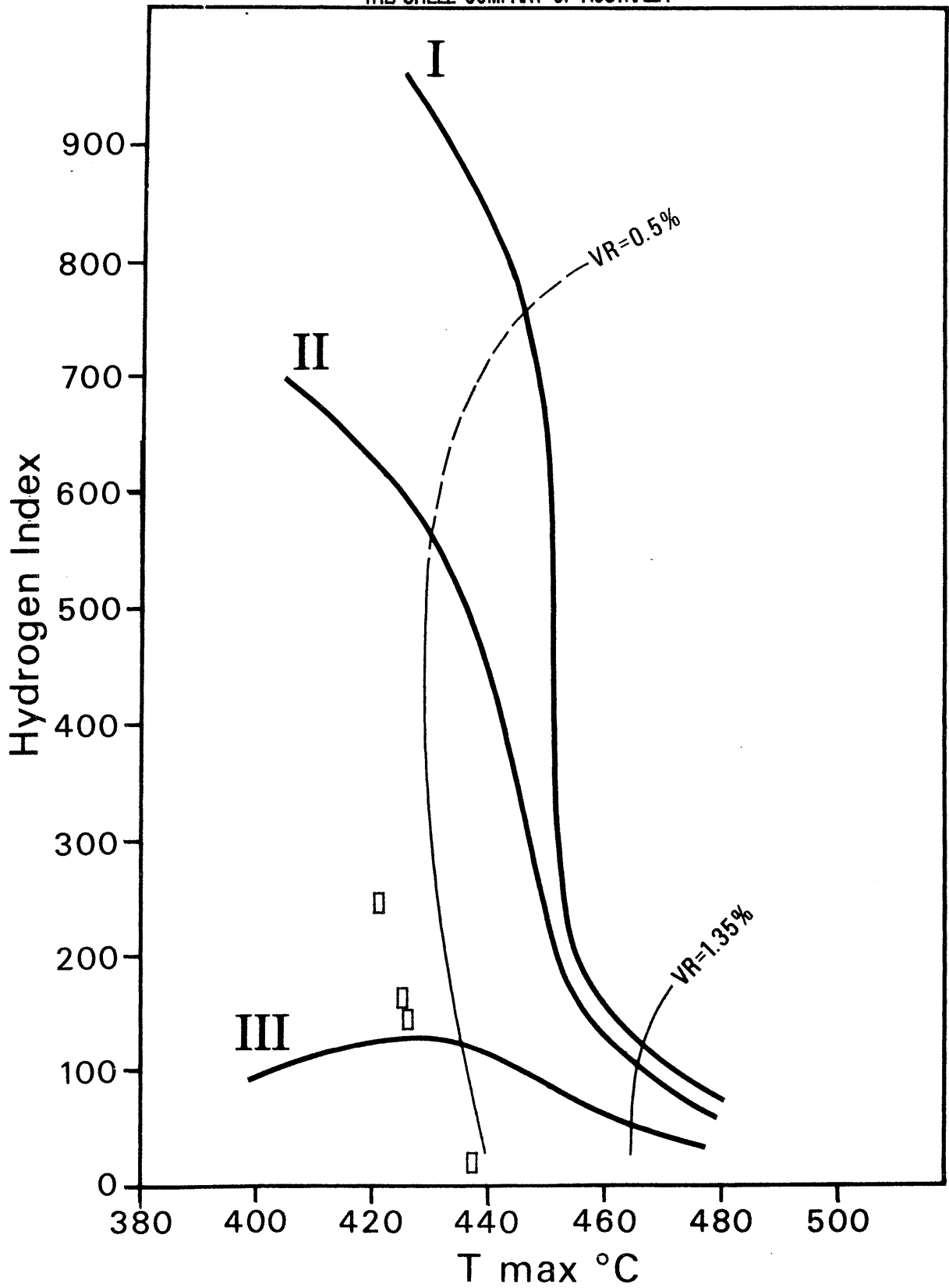


FIGURE 13

MORAY-1

THE SHELL COMPANY OF AUSTRALIA

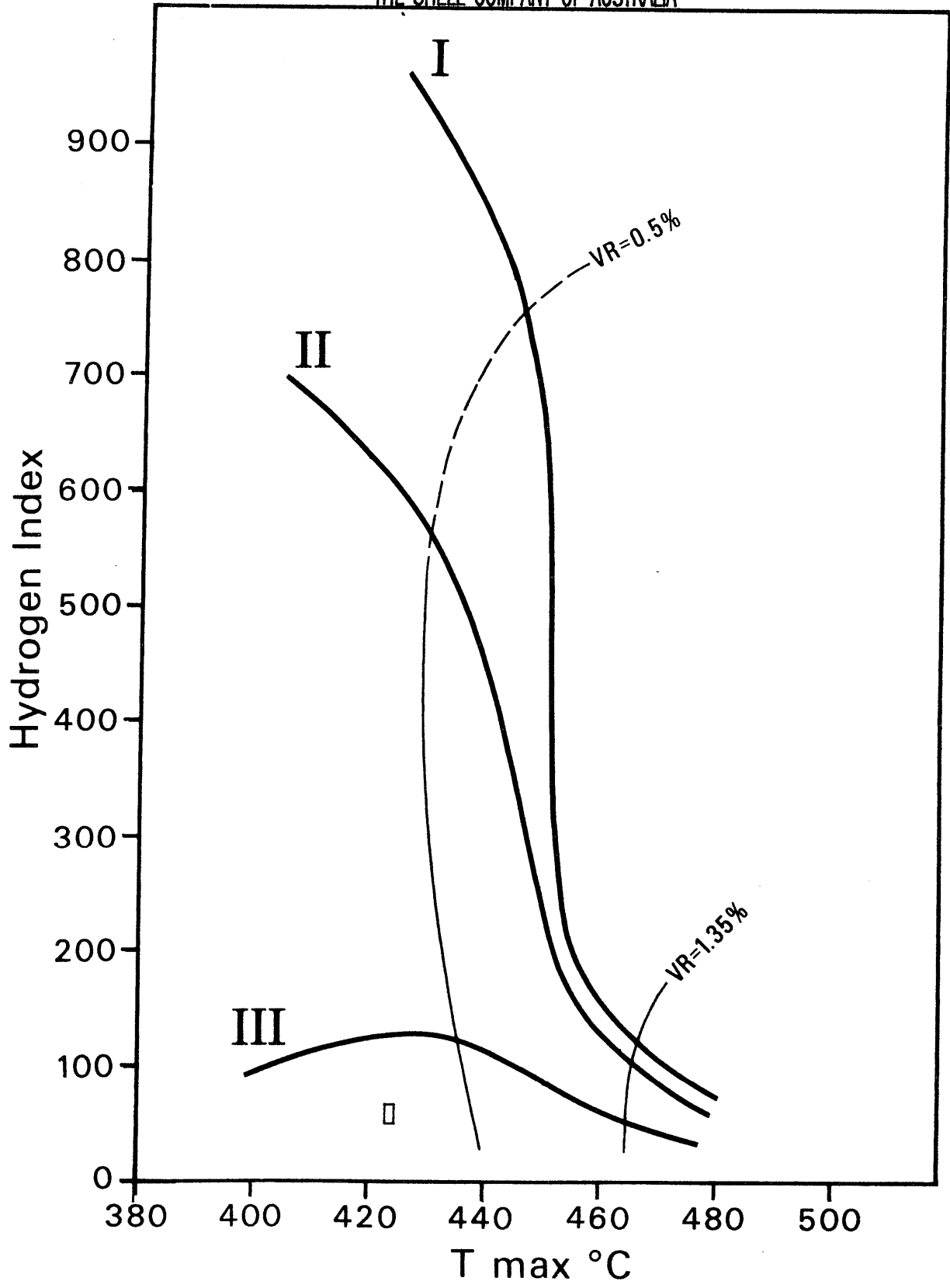


FIGURE 14

OMEQ-1&2A

THE SHELL COMPANY OF AUSTRALIA

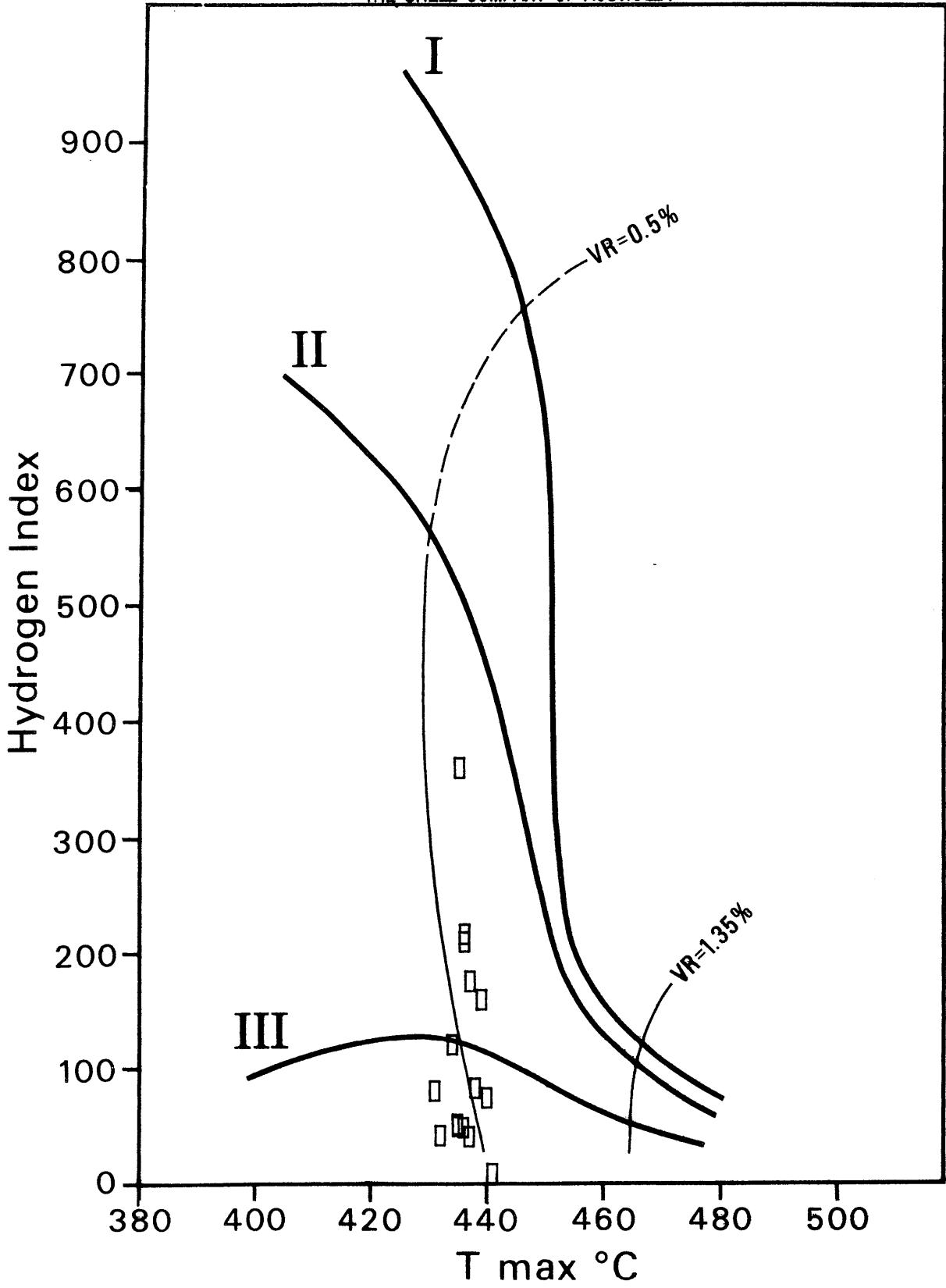


FIGURE 15

STONEFISH-1

THE SHELL COMPANY OF AUSTRALIA

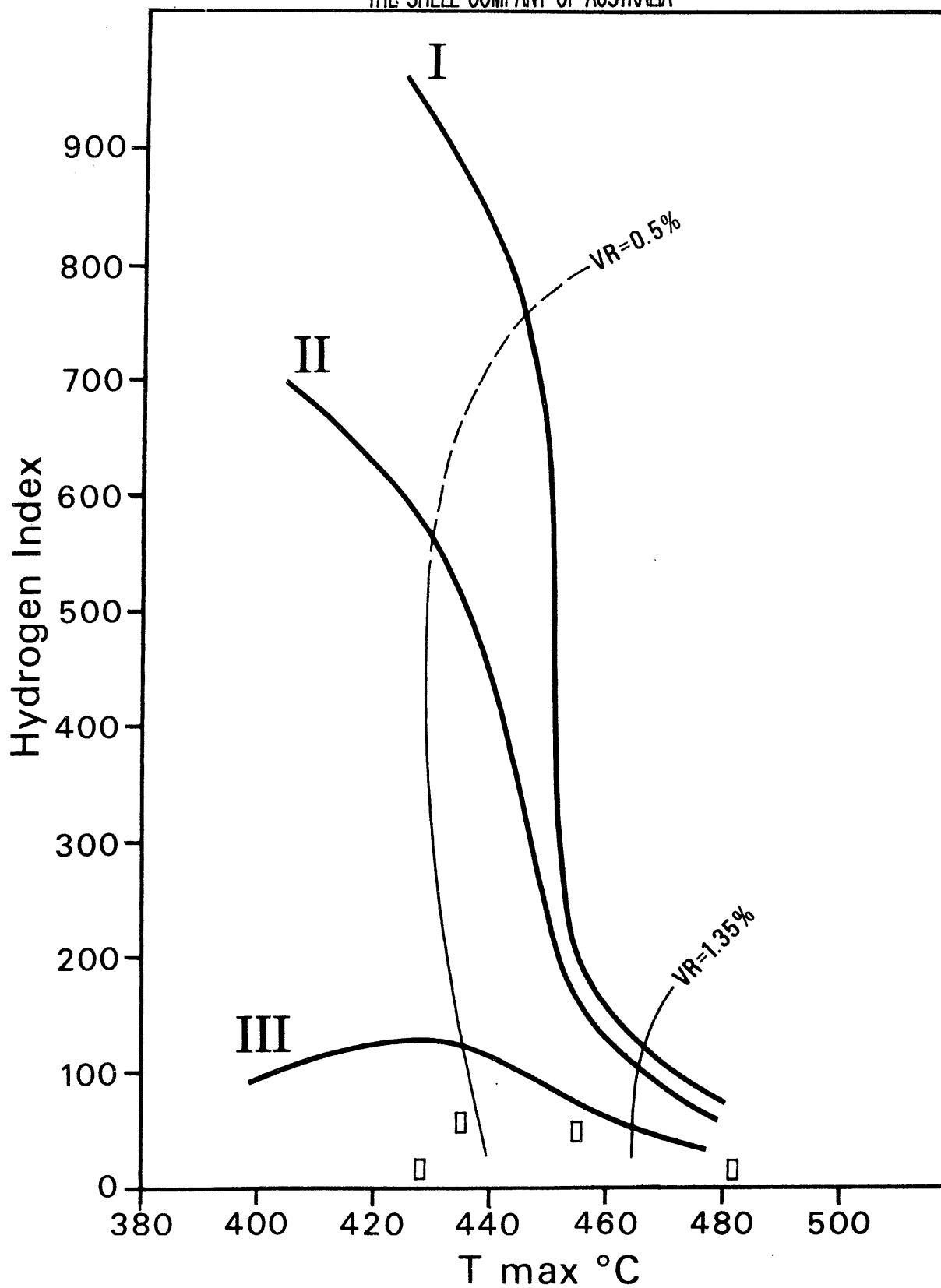


FIGURE 16

SUNFISH-1&2

THE SHELL COMPANY OF AUSTRALIA

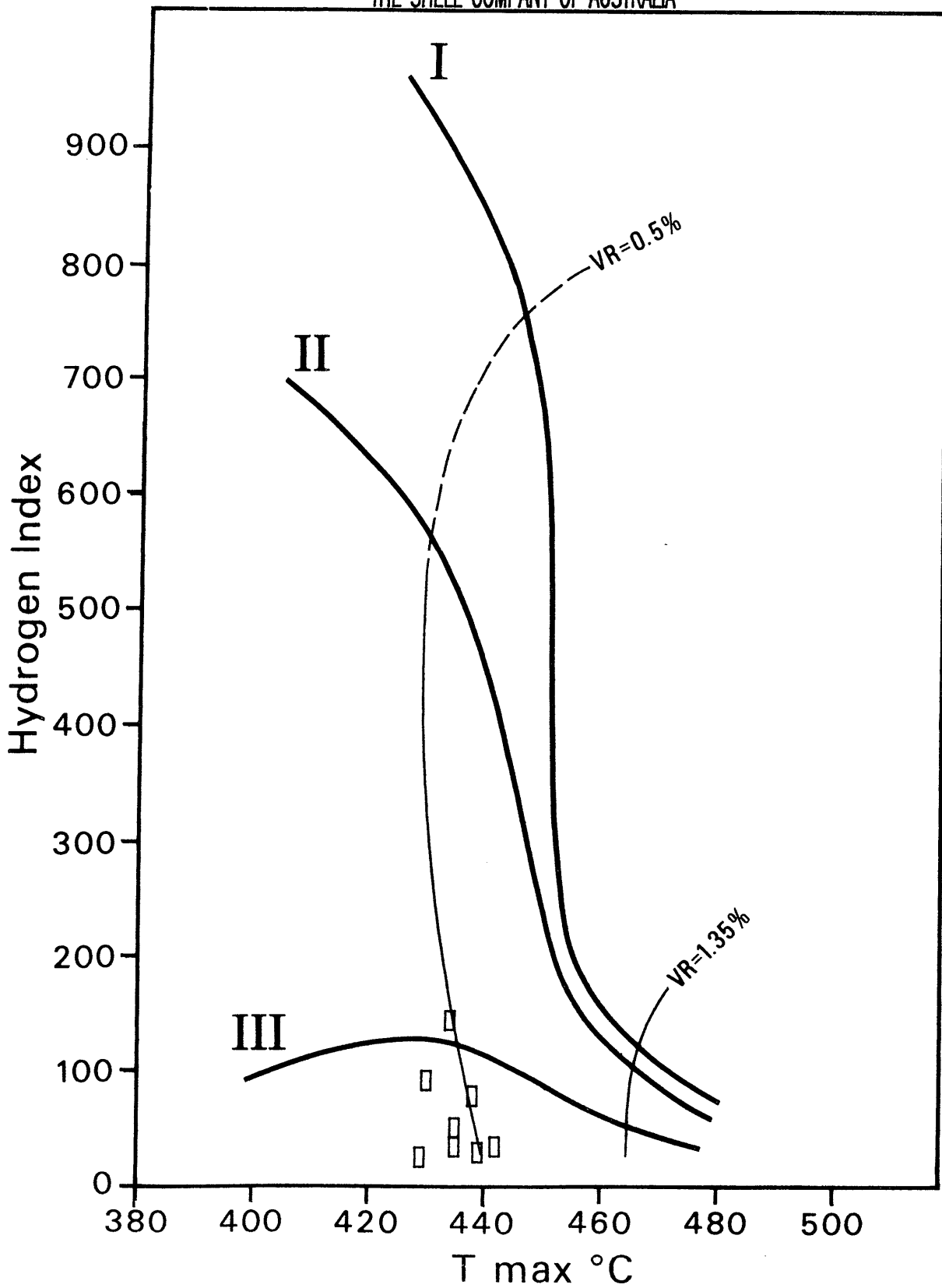


FIGURE 17

TUNA-1

THE SHELL COMPANY OF AUSTRALIA

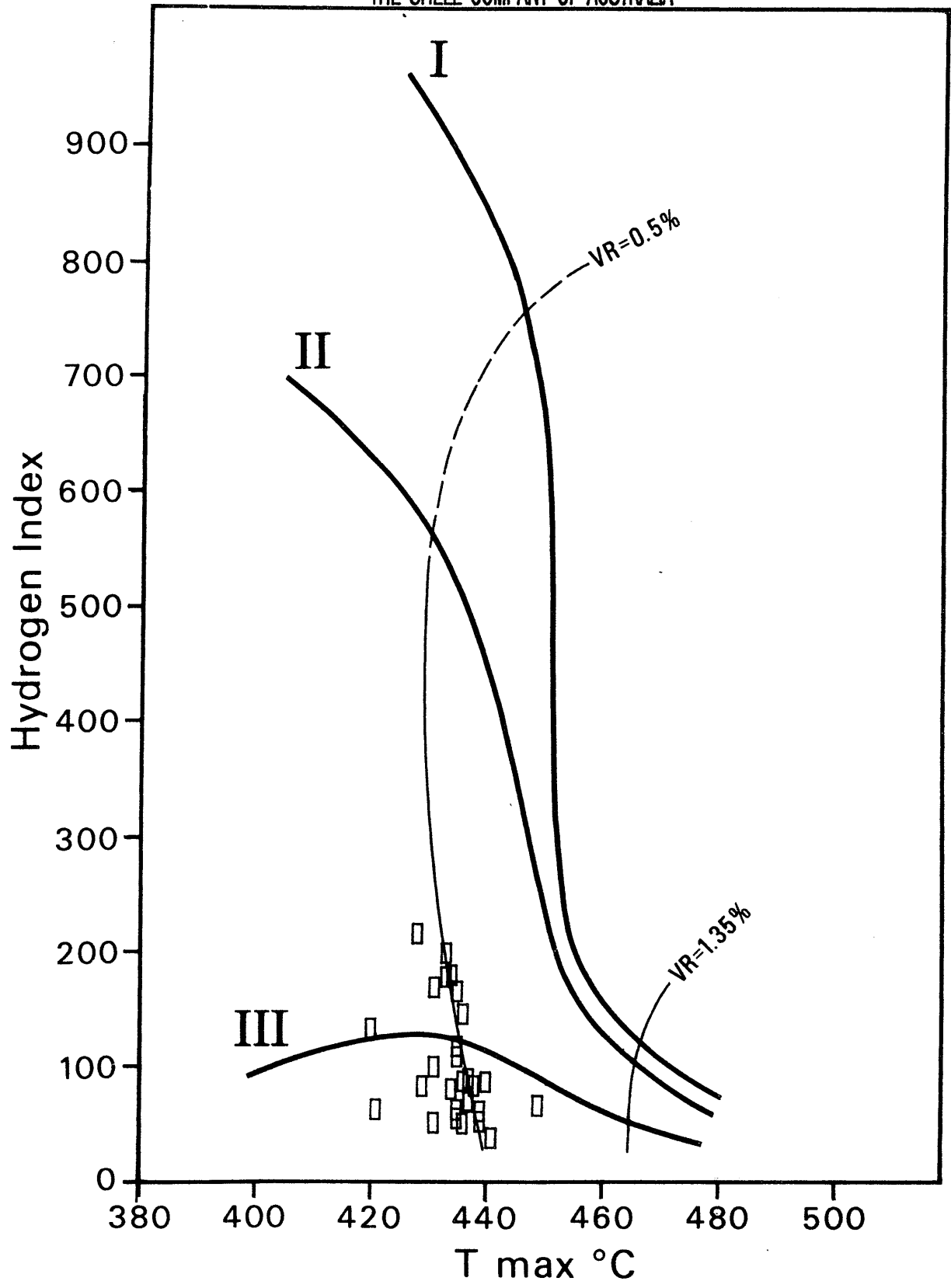


FIGURE 18

TUNA-4

THE SHELL COMPANY OF AUSTRALIA

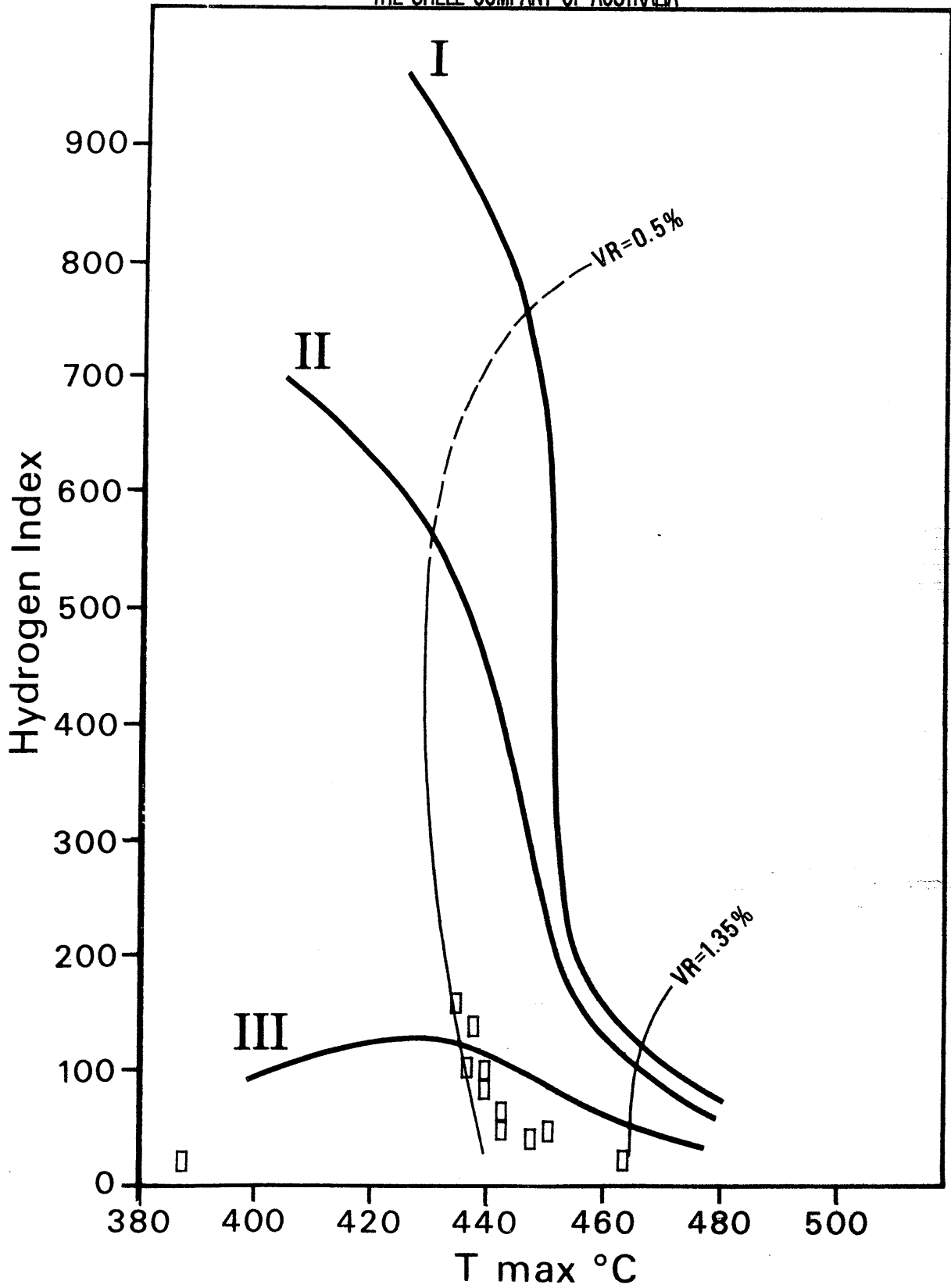


FIGURE 19

WIRRAH-1,2&3

THE SHELL COMPANY OF AUSTRALIA

