279/65 DMCONTENTS ENVELOPE 458

Nil. TENEMENT:

Wood, M.G. 1965. Phosphate Spot Testing of Selected Cores and Cuttings from bores in South Australia REPORTS:

(pgs 2-31)

PLANS Nil.

COMPANY CONFIDENTIAL

PHOSPHATE SPOT TESTING OF SELECTED CORES AND CUTTINGS FROM BORES IN SOUTH AUSTRALIA.

M. G. Wood, IMC Development Corporation, Melbourne, Victoria. April 5, 1965

Spot testing of certain cores and cuttings from bores in South Australia was carried out in the core library of the S.A. Geological Survey between February 22 and March 12.

Only one sample gave a yellow, moderate reaction with ammonium molybdate, which was from the Kulpara Limestone in the Minlaton No. 1 bore. All other samples tested gave less than weak precipitates and a majority gave essentially nil reaction. Results are shown in the attached logs.

The cores and cuttings of only three stratigraphic intervals were selected and tested:-

- 1. The Cretaceous Albian-Aptian interval (so-called "fishscale zone").
- 2. The Cretaceous Transition Beds of the Blythesdale Group.
- 3. The Lower Cambrian Parara and Kulpara limestones.

Bores that intersected these intervals were selected and stratigraphic data was obtained for each bore, if it was available. The Cretaceous bores are all located in the Great Artesian Basin, while the single Cambrian bore is from the Eyre Peninsula.

Yorke

The following bores were examined -

30-6-65

981 K. F9

Cretaceous Bores

-Lake Harry Toonketcher Chappa lanna Jewellery Nickoftime Tooperrawarrina Quartpot Troudannina -Dulkaninna -Clayton Peachawarrina -Innaminka No. 1 Orientos No. 1 Cootabarlow -Putamurdie No. 1 -Witcherrie No. 1 Birdsville Town Bore -Santos Oodnadatta No. 1 Fortville No. 1 Daly Mine Wilkatana No. 1

Cambrian Bore

Minlaton No. 1

The phosphate spot testing was done with an acid solution of ammonium molybdate. The samples were tested as follows:

- a) A small portion of core or cuttings,
 representative of a particular depth,
 was placed on a test plate;
- b) A few drops of ammonium molybdate solution was added;
- c) The reaction with this solution (if any) was then noted by examination under a microscope.

Code used in Description of the Reaction

A letter code was used. The first letter or letters describe the colour of the precipitate obtained -

Y = Yellow

YG = Yellowish-green

GY = Greenish-yellow

G = Green

The second letter or letters describe the intensity of the precipitate -

Copious yellow precipitate = S = Strong

Cloudy yellow precipitate = M = Moderate

Distinct yellow precipitate = W = Weak

Trace of yellow precipitate = VW = Very Weak

These intensity values are only arbitrary and, in many cases, it was difficult to determine which value to use.

The last letter in the code referred to the rate of reaction -

= Slow -N- indicates no reaction

F = Fast

DALY MINE BORE

		<u> </u>	
Depth (feet)	Reaction	Formation	Remarks
_		*****	m1
5	-N-	Unknown	These rocks have
13	YVWS		been subjected
23	-N-		to vvarying
27	-N-		degress of
37	YG Trace		metamorphism.
46	YG Trace	:	
51 50	-N-		
56	-N-		
61	-N-		
71 70	YVWS		
76	YVWS		
81	Y Trace		
86 93	Y Trace		
	-N-	:	
98	-N-		÷
106	YVWS		
113	-N-	{	
121	-N-	, "	
130	Y Trace		
140	Y Trace		
150	Y Trace		
156	-N-		
164	-N-		
178	-N-		
183	-N-	1	
194	-N-	1	
199	-N-		

Below the 200 ft. depth are the metallic ore zones.

Spot samples gave negative results.

WILKATANA NO. 1

Depth (feet)	Reaction	Formation	Remarks
723	YWF	Unknown	Evaporite Beds
777	-N-		
788	-N-		
797	-N-		
811	-N-		
823	-N-		
835	-N-	ł	
847	-N-		
860	-N-	1	
871	-N-		1
888	-N-		
900	-N-		
910	-N-		:
917	-N-		1
927	-N-		
935	-N-		
947	-N-		
957	-N-		
978	-N-		
1000	-N-		
1010	-N-		1
1018 1026	-N-		
1036	Trace Trace	`	i.
1036	-N-		ľ
1058	-N-		1
1068	-N-		1
1079	-N-		
1079	-N-		
1090	Trace		1
1104	-N-		1
1119	-N-		
1119	-N-		
1139	-N-		
1149	-N-		
1159	-N-		
1100			Massive fine grained limest
1174	-N-		grained rimest
1192	-N-		
1203	-N-		

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WILKATANA NO. 1 (Cont'd)

Depth (feet)	Reaction	Formation	Remarks
1212 1220 1233 1243 1253 1263 1270 1283 1290 1300 1310 1320 1332	YVWS Trace -NN- Trace -NNNN- Y Trace Y Trace YVWS Y Trace	Unknown	
region to the second control of the second c		<u> </u>	<u> </u>

MINLATON NO. 1

Remarks	.on	Formati		Reaction	Depth (feet)
d.Cambrian	Mid.C	Limestone		-N-	616
11		11	11	-N-	620
**		71	11	-N-	629
· · · · · · · · · · · · · · · · · · ·		13	11	-N-	ି3େ9
		11	Ÿ , Y	-N-	648
		.11	**	-N-	649
		7.7	3.7	-N-	659
**	•	1,1	7.7	-N-	679
"		77	37	-N-	689
11		11	37	-N-	707
tt -		11	7,9	-N-	719
				-N-	729
				-N-	732
	d	Unname		-N-	1123
		††		-N-	1134
		77		Trace	1140
		††		Trace	1151
,		***		Trace	1160
."		11		Trace	1171
		11		Trace	1176
			1194	YVWF	1148
er Cambrian	Lower	Limestone		YVWF	1195
	HOWET	ff ff	11	YVWF	1205
,,	**	.**	-17	YVWF	1215
	7,7	**	11	YVWF	1226
	11	**	11	YMF	1253
	11	**	***	-N-	1274
* *	77	11	19	-N-	1290
	11	11	77	-N-	1281
	17	11	17	-N-	1301
	11	**	11	-N-	1313
	**	11	11	-N-	1318
	11	11	11	-N-	1324
	1.1	11	71	-N-	1335
	**	**	FT	-N- -N-	1345
	11	11	11	-N-	1355
	11	11	1,1	-N- -N-	1368
		19	11	-N- -N-	1379
	11	77	71	-N- -N-	1398
	**	"	73	-N- -N-	1408
	11	77	11		1424
• • • • • • • • • • • • • • • • • • • •	• •	••	••	YVWF	1424

MINLATON NO. 1 (Cont'd)

	Depth (feet)	Reaction		Forma	tion			Remar	ks
= : .	1455	-N-	Parara	Limestone	Lower				
	1465	YVWF	77 .	11	.11	**	ı		
	1485	YVWF	11	***	11	**			
	1496	YWF	1.1	11	**				
	1506	-N-	''	11	11	31			
	1512	YVWF	11	,11	11	11			
	1530	GVWF	, ,,,	11	17	**			*
	1539	-N-	"	***	**	**		*	*
	1549	YVWF	-11	11	**	***			
	1560	YVWF	31		1,7	!!			e
	1586	YVWF	"	11	11	* 11			
	1617	-N-	77	**	T?	***			
	1627	-N-	17	11	**	91	ļ		
	1637	-N-	11	***	17	71)		
	1654	-N-	71	11	,11	11			
	1665	-N-	1,1	77	11	***			
	1680	GVWF	11	11	1,1	**			
	1700	-N-	***	1,1	11	***	•		
	1721	YWF	1,1	11	11	**			
	1730	YWF	27	††	17	,11			
	1760	YWF	- 99	11	11	11			
	1790	GYWF	17	***	1.7				
	1850	YGVWF	"	11	11	17	l		
	1860	YGVWF	**	7.7	**	**			
	1891	YWF	17	** 11	11	1.9			
	1913	GWF	***	.77	1,1	11			
	1923	YVWF	17	19	77	11,	% 		
	1973	GVWF	17	17 .	**	11			
	1983	GVWF	"	***	11	**	-		
	1993	-N-	11	ŤŤ	1.1	* **			
	2014	GWF	11	11	11	11	ľ		
	2060	GMF	**	***	11	.11			
	2045	YWF	11	,11	7,7	7,7			
	2019	-N-	17	11	17	13			
	2111	GWF	77	11	11	11			
	2101	YWF	,11	11	11	11			
			2118		 				
	2143	-N-	Kulpara	Limestone	Lower	Cambrian			
	2151	YVWF	17	11	11	.11	Ì		
	2075	YWF	- 17	11	77	***			
	2080	YVWF	Parara	Limestone	Lower	Cambrian			
	2116	YWF	77	7.7	**	* ***			
	2108	YVWF	13	71	11				

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MINLATON NO. 1 (Cont'd)

2134	Depth (feet)	Reaction		Format	, 10 <u>n</u>		Remarks
2167	2134		Kulpara				
2183	2138	YWF	. 11	71		"	
2183	2167	-N-	71	31			
2212		-N-	***	11			
2203		-N-	**	11			
2198 -N- """"""""""""""""""""""""""""""""""""		-N-	37	17	77		
2249 -N- """"""""""""""""""""""""""""""""""""		-N-	17	11	**	71	
2228 -N- """"""""""""""""""""""""""""""""""""		-N-	77	11	11	11	•
2242 -N- " " " " " " " " " " " " " " " " " " "			11	11	**	11	
2283 -N- " " " " " " " " " " " " " " " " " " "				11	11	**	
2293 2304 -N- 2314 -N- 2324 -N- 2345 -N- 2348 -N- 2372 -N- 2365 -N- 2386 -N- 2386 -N- 2404 -N- 2432 -N- 2443 -N- 2443 -N- 2443 -N- 2445 -N- 2450 -N- 2461 -N- 2461 -N- 2488 -N- 210 2488 -N- 210 2555 -N- 2556 -N- 2558 -N- 2558 -N- 2558 -N- 2573 -N- 2583 -N- 2597 -N- 2610 -N- 2630 -N- 2630 -N- 2637 -N- 2654 -N- 2637 -N- 2654 -N- 2654 -N- 2654 -N- 2654 -N- 2657 -N- 267 -N-			11	17	tt	11	
2304			11	11	.11	.11	,
2324			17	11	2.5	17	ı
2345 2348 -NNNNNNNNNN			**	11	11	***	
2348			11	11	11	11	
2372			11	71	1,1	tt -	
2365			**	71	1.1	1.1	
2386			**	***	11	11	
2404 -N- """"""""""""""""""""""""""""""""""""			11	††	11	11	
2432 -N- " " " " " " " " " " " " " " " " " " "			17	11	71	11	
2443 -N- " " " " " " " " " " " " " " " " " " "			37	77	11	1,1	
2421 -N- " " " " " " " " " " " " " " " " " " "			,	**	11	11	
2450 -N- """"""""""""""""""""""""""""""""""""			1,	1.1	77	11	
2461 -N- " " " " " " " " " " " " " " " " " " "			11	FT	11	11	l
2477 -N- """"""""""""""""""""""""""""""""""""			111	11	11	11]
2485 -N- """"""""""""""""""""""""""""""""""""			,,	.11	11	17	l
2488 -N- " " " " " " " " " " " " " " " " " " "			11	11	11	11	
2494 -N- " " " " " " " " " " " " " " " " " " "			11	77	1,7	17	·
2518 -N- " " " " " " " " " " " " " " " " " " "		•	11	.11	11	. 17	
2525			11	11	,11	11	
2536			11	11	11	**	
2546			•••	11	.11	77	
2563 -N- " " " " " " " " 2573 -N- " " " " " " " " " " " " " " " " " "			111	11	17	11	
2573			* **	11	11	11	
2583 -N- " " " " " " " " 2591 -N- " " " " " " " " " " " " " " " " " "			. 57	11	.71	11	
2591 -N- " " " " " " " 2597 -N- " " " " " " " " " " " " " " " " " "			11	77	.11	11	,
2597 -N- " " " " " " " 2610 -N- " " " " " " " " " " " " " " " " " "			11	11	**	**	
2610			11	,11)1	11	1
2630 -N- " " " " " " 2637 -N- " " " " " " " " " " " " " " " " " "			1		,11	**	
2637					.11	ŤŤ	
2654 -N- " " " "							
2004 -N-			l .				1
2691 -N- " " " " "		-N- -N-	,,,	11	**	11	

MINLATON NO. 1 (Cont'd)

Depth (feet)	Reaction		Forma	tion		Remarks
2700	-N-		Limestone	Lower		
2705	-N-	17	77	17	***	
2728	-N-	11	11	11	11	
2741	-N-	1.9	7.7	**	***	1
2763	-N-	11	77 .	11	.17	,
2778	-N-	17	, * 11	11	11	
2798	-N-	. 31	11	11	11	
2815	-N-	17	ŤŤ	17	**	1
2828	-N-	***	11	17	11	
2848	-N-	11	11	11	17	
2856	-N-	11	11	11	**	1
2870	-N-	11	1,1	11	11	
2879	-N-	**	1.1	.11	77	
2884	-N-	***	1,1	11	11	
2914	-N-	11	1,1	17	11	
2938	-N-	17	11	77	19	,
2928	Y Trace	111	11	11	11	
2968	-N-	11	11	**	71	
3004	-N-	,,	11	11	**	
3024	-N-	,97	11	11	**	
3031	-N-	,,,	11	**	***	
3041	-N-	77	77	**	11	
3054	YVWS	"	11	77	11	
3074	-N-	77	11 .	77	11	
3081	YVWS	1,	11	11	11	
3104	Y Trace	**	11	11	11	*
3125	YVWF		Unname	ed		
3134	YVWF		11			
3141	YVWF		***			
3161	YVWF		1,1			
3174	YVWF	[.11			
3183	YVWF	1	***			
3195	YVWF	1	* Î.f			
3215	YVWF	1	11			
3234	YVWF	:	11			:
3241	YVWF	1	11			1

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ORIENTOS NO. 1

Remarks	n	Formatio		Reaction	Depth (feet)
	Albian	ormation	Tambo For	GY Trace	2950
	17	11	***	-N-	2960
	11	11	17	-N-	2970
	11	11	71	GY Trace	2980
	11	7.7	11	_N_	3000
	11	11	11	-N-	2990
	11,	11	***	GY Trace	3010
			3014		,
	Aptian	Formation	Roma Fo	-N-	3020
	11	71	11	YGVWF	3030
	11	f†	***	-N-	3040
	777	7.7	"	YG Trace	3050
Traces	Aptian- Neocomian		Transition Blythesdal	-N-	4080
**	11	"	11	-N-	4090
11	11	11	111	-N-	4100
	1,1	tt	11	-N-	4110
*	11	11	11	YVWF	4120
	11	11	,,	-N-	4130
	71.	11	11	-N-	4140
	11	**	11	Y Trace	4150
	11	-11	71	Y Trace	4160
	11	17	,,	Y Trace	4170
	17	77	11	Y Trace	4180
	11		71	Y Trace	4190
	11	27		GVWF	4200
	11	,11	11	YVWF	4210
	47	13	- 11	GYVWF	4220
	. 11	11		YGVWF	4230
	11.	77	17	GVWF	4240
	11	11	71	-N-	4250
	11	11	111	-N-	4260
	11	11	**	YVWF	4270
	39	, 11	***	YVWF	4280
	11	**	77	YVWF	4290
	11	17	**	YVWF	4300
	91	11	11	YVWF	4310
	11	**	19	YVWF	4320
	11	11	,,	YVWF	4330
	11	11	79	YVWF	4340
	37	11	,,	YVWF	4350

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ORIENTOS NO. 1 (Cont'd)

Depth (feet)	Reaction	Formation	Remarks
4360	YVWF	Transition Beds Aptian- Blythesdale Group Neocomian	:
4370 4380	YWF YWF	11 11 11	3

COOTABARLOW

Depth (feet <u>)</u>	Reaction		Formati	on.		Remarks
1336 1348 1352 1372 1374	-N- G Trace -N- YVWF -N-	1390		ptia	ın-Albian " " "	
1393 1401 1427 1447 1467 1472	N- N- N- N- N-	Blythesdale "" "" "" "" ""	Group	U.	Jurassic " " " " "	

Cores very poorly identified.

Depths tested were those that could be accurately determined.

INNAMINKA NO. 1

· · · · · · · · · · · · · · · · · · ·			
Depth (feet)	Reaction	Formation	Remarks
3942 3947 4031 4039 4040 4048	-N- Y Trace Y Trace Y Trace YVWF -N-		Cores
2680-2690 2700-2710 2730-2740 2740-2750 2760-2770	Y Trace Y Trace YVWF -N- -N-	= ? Tambo Formation Albian """"""""""""""""""""""""""""""""""""	Cuttings " " " " "
2780-2790 2800-2810 2820-2830 2840-2850 2860-2870 2880-2890 2900-2910 2920-2930 2940-2950 2960-2970 2980-2990 2990-3000	-N- -N- -N- -N- Y Trace YVWF YVWF -N- -N- -N-	- Roma Formation Aptian """"""""""""""""""""""""""""""""""""	17 17 17 17 17 17 17 17 17
3930-3940 3950-3960 3970-3980 4010-4020 4030-4040 4050-4060 4070-4080 4090-4100 4110-4120 4130-4140 4150-4160 4160-4170 4180-4190 4200-4210 4220-4230 4240-4250 4260-4270	-N- YVWF Trace YVWF -N- YVWF YVWF YVWF YVWF YVWF YVWF YVWF YVWF	- ? Upper Blythesdale Neocomian Group " " " " " " " " " " " " " " " " " " "	17 17 17 17 17 17 17 17 17 17 17 17 17 1

INNAMINKA NO. 1 (Cont'd)

Depth (feet)	Reaction			Formation		Remarks
4280-4290	-N-	= ?	Upper	Blythesdale	Neocomian	Cuttings
4300	-N-	-	Group	•	3.17	11
4320	-N-		77	77	1,3	11,
4340		(No	sample))		:
4360	-N-	1	7,	77	11	11
4380	-N-		**	1.5	**	71
4400	-N-		**	77	††	
4420	-N-		.77	11	11	77
4440	-N-		17	,11	17	11
4460	-N-		**	!!	.11	11
4480	-N-		17	***	11	11
4500	N		31	- 11	11	11
4520	-N-		13		17	11
4540	-N-	-	. **	. 1,1	11	11
4560	-N-		**	11	77	11
4580	YWF		1.1	11	77	- 11
4590	-N-		11	11	11	11
4600	-N-		77	.71	11	77

PUTAMURDIE NO. 1

Depth (feet)	Reaction		Form	ation		Remarks
3250 3280	-N- YVWF	Fishs		Lower	Albian	
3310	YVWF	Roma	Formation	Lower	Aptian	
3 34 0	-N-	11	n	111	11.	
3 370	-N-	11	**	11	11	
3430	YVWF	**	**	71	11	
3440	-N-	"	11	11	11	
3460	-N-	111	**	11	17	
3490	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	***	**	11	.11	
3520	YVWF	"	11	11	37	
3550	\mathbf{YWF}	"	. 11	11	11	
3580	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	''	17	1.1	11	
3610	-N-	''	77	.11	11	
3640	-N-	71	11	11	! !	
3670	YWF	"	77	1,1	"	
3700	YVWF	"	. 11	11	.11	
3730	-N-		17	77	11	•
3760	YVWF	77	11	79	11	
3790	GVWF	"	11	11	†† ,	
3820	YVWF	11	17	311	11	
3850 388 0	-N-	,,,	1,9 .11	**	11	
3910	YWF	17	11	†† ††	77	
3940	YVWF	17	"	**	†† ††	
3940	YVWF	3970		.,		
3970	-N-	Transi	tion Beds		Aptian-	
4000	YVWF	11	11	11	"	4
4030	YVWF	11	11	***	**	
4060	YVWF	177	11	1.1	• ••	•
4090	-N-	17	**	11	**	
		4103	· · · · · · · · · · · · · · · · · · ·			
4120	-N-		Sandstone	U. Ju	ırassic	
4150	YVWF	77	77		11	•

DULKANINNA BORE

Depth (feet)	Reaction	Formation	Remarks
320-344 344-400 400-410 410-455 455-465 465-485 485-522 522-585 585-836 836-855	YVWF -NN- YVWF -N- YVWF -NNNNN-		

All the available material for this bore was tested.

It is an old bore and the correlation has not been worked out. Also, many of the samples have been lost.

CLAYTON BORE

Depth (feet)	Reaction	Formation	Remarks
345-348	YVWF		
348-391	Y Trace	<u> </u>	
391-427	-N-		
427-450	YVWF		
450-482	Y Trace		
482-512	Y Trace		
512-555	Y Trace		
555-580	-N-	:	
580-607	Y Trace		
607-670	-N-		No compoletion
670-700	Y Trace	1	No correlation available. All
700-790	- N-		material available
790-875	-N-		was tested.
875-908	-N-	İ	was tested.
908-914	Y Trace -N-		Very old bore.
914 - 920 920 - 930	Y Trace		
930-938	-N-		
930-938	-N-		
959-984	Y Trace		\$
984 - 1007	-N-		
1007-1042	-N-		
1042-1085	-N-		
1085-1097	-N-		
1097-1139	-N-		
1139-1176	-N-		
1176-1215	-N-		
1215-1276	-N-		
1276-1356	-N-	:	
1356-1357	-N-		
1357-1418	Y Trace		
1418-1582	- N -		
1582-1587	-N-		
1587-1589	YVWF	·	
1589-1598	-N-		
1598-1599	YVWF	,	
1599-1611	-N-		
1611-1616	-N-	1	
1616-1622	YVWF		
1622-1640	-N-	1	
1640-1669	-N-		
1669-1704	-N-	1	
		1	

PEACHAWARRINA BORE

Depth (feet)	Reaction	Formation	Remarks
1218-1297 1297-1449 1449-1580 1580-1582 1582-1664 1664-1665 1665-1840 1840-2043 2043-2209 2209-2295 2295-2314 2314-2325 2325-2332 2332-2342 2342-2348 2348-2375 2375-2398 2398-2407 2407-2464	Y Trace -NN- Y Trace -N- YVWF -NNNNNN- Y Trace		

1052-2464 Marine

BLACK OAK

Depth (feet)	Reaction	Formation	Remarks
450	-N-		
		The only core available is from 448'6" to 454'0".	

BIRDSVILLE TOWN BORE

Depth (feet)	Reaction		Forma	tion		Remarks
2900-2910	YVWF		Formation		Cretaceous	Trace
2910-2920	YVWF	"	11	77	.11	11
2920-2930	YVWF	77	7.7	7,7	11	**
2930-2940	YVWF	.77	11	11	11	11
2940-2950	YVWF	177	11	77	tit	-11
2950-2960	YVWF	77	11	11	11	***
2960-2970	YVWF	17	11	11	**	.**
2970-2980	YVWF	"	11	31	11	
		2980	 	· · · · · · · · · · · · · · · · · · ·	·. · · . · · · · · · · · · · · · · · ·	
2980-2990	-N-	Fishsca	ale Zone	Lower	Cretaceous	77
2990-3000	-N-	11	11,	11	11	**
3000-3010	-N-	17	11	***	##	11
3010-3020	-N-	3013				
3020-3030	YVWF	Roma	Formation	Lower	Cretaceous	17
3030-3040	YVWF	11	11	11	11	. 17
3040-3050	YVWF	77	11	1,1	21	-11
3050-3060	YVWF	77	11	1,1	TT	11
3060-3070	YVWF	117	7 7	77	ti	11
3070-3080	YVWF	71	.77	111	11	77
3080-3090	YVWF	11	11	7,7	11	11
3090-3100	YVWF	77	77	11	11	11
3100-3110	YGVWF	t,	1,1	17	1.1	77
3110-3120	YVWF	, TT	,71	.11	**	ti ·
3120-3130	YVWF	77	71	. 11	71	-17
3130-3140	YVWF	- 17	***	17	77	77
3140-3150	YVWF	211	71	11	11	,,,
3150-3160	YVWF	111	11	77	***	**
3160-3170	YVWF	11	77	71	. 11	**
3170-3180	YVWF	17	11	11	**	"
3180-3190	YVWF	17	11	11	11	<u>''</u>
3190-3200	YVWF	**************************************	. 11	11	11 11	? ?
3200-3210	YVWF	- 11	11	11	77	"
3210-3220	YVWF	11	"	11	**	,, ,,
3220-3230	YVWF	11	11	11	11	,,
3230-3240 3240-3250	YVWF	11	**	11	77	"
	YVWF	11	11	11	11	11
3250-3260 3260-3270	YVWF -N-	11	33	**	11	11
3270 - 3280	-N-	,,	17	19	71	11
3280-3290	-N-	1,7	11	11	11	11
3290-3300	YVWF	,,	.11	**	.11	11
3300-3310	-N-	1,	17	11	41	**
\$5555 55 40	s. ∓4 ±2.					
		ı				i

BIRDSVILLE TOWN BORE (Cont'd)

Depth (feet)	Reaction		Format	ion		Remarks
3310-3320 3320-3330	YVWF -N-	Roma	Formation	Lower	Cretaceous	Trace'
3330-3340	-N-	,,	11	11	77	17
3340-3350	-N-	,,	11	11	77	77
3350-3360	-N-	17		11	17	**
3360-3370	-N-	11	11	11	19	,,
0000 0010	missing					
3380-3390	YVWF	77	11	***	**	,,
3390-3400	YVWF	177	11	tī	11	17
3400-3410	YVWF	77	11	11	**	11
3410-3420	Y Trace	77	††	11	11	11
3420-3430	YVWF	11	71	11	11	37
3430-3440	YVWF	,, ,	1.1	71	11	**
3440-3450	missing		11	11	11	11
3450-3460	YWF	,,,	11	11	11	17
3460-3470	Y Trace	1,7	11	11	**	11
3470-3480	Y Trace	,,,	11	11	tt	11
3480-3490	Y Trace	1,	71	11	11	***
3490-3500	Y Trace	,,	11	11	11	17
3500-3510	YVWF	,,	11	-11	11	11
3510-3520	YVWF	,,	11	11	71	11
3520-3530	YVWF	117	11	11	11	11
3530-3540	YVWF	**	7.7	111	11	17
3540-3550	YVWF	, ,,	77	11	**	11
3550-3560	YVWF	717	11	11	,,	11
3560-3570	YVWF	**	**	11	11	11
3570-3580	YVWF	177	***	77	,,	17
3580-3590	YVWF	71	17	11	,,	11
3590-3600	YVWF	**	71	11	,,	11
3600-3610	YVWF	,,	11	11	77	77
3610-3620	YVWF	**	77	17	11	11
3620-3630	YVWF	,,	.**	11	77	77
3630-3640	YVWF	,,,	17	11	,,	
3640-3650	YVWF	77	31	11	,,	**
3650-3660	YVWF	. ,,	11	77	***	11
3660-3670	YVWF	,,,	11	71	11	77
3670-3680	YVWF	-71	-11	77	77	77
3680-3690	YVWF	***	17	77	11	**
3000 3050	TYWE	3691				
3690-3700	YVWF	Tranci	tion Beds	Lower	Cretaceous	
3700-3710	YVWF	11 41151	.cron beus	TOMET	cretaceous	17
=	- 1 III	Ī				•••

BIRDSVILLE TOWN BORE (Cont'd)

Depth (feet)	Reaction]	Format	ion		Remarks
3710-3720 3720-3730 3730-3740 3740-3750 3750-3760 3760-3770 3770-3780 3780-3790 3790-3800 3800-3810 3810-3820 3820-3830 3830-3840 3840-3850 3850-3860	YVWF YVWF YVWF YVWF YVWF YVWF YVWF YVWF	Transition "" "" "" "" "" "" "" "" "" "" "" "" ""	Beds "" "" "" "" "" "" "" "" "" ""	Lower	Cretaceous "" "" "" "" "" "" "" "" "" "" "" "" ""	Trace

WITCHERRIE NO. 1

					·	<u></u>
Depth (feet)	Reaction		Formation	n	Ren	narks
300-310	YVWF		Formation	Albian		
310-320	YVWF	77	79	1,1		
320-330	YVWF	***	**	11		
330-340	YVWF	***	7.1	11		
340-350	\mathbf{YWF}	17	11 ·	11	1	
350-360	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	n n	71	11]	
360-370	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	77	11	.11		
370-380	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	**	11	11		only
380-390	YVWF	**	11	11	11	11
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		396				
390-400	YVWF	Roma	Formation	Aptian	"	1.7
400-410	YVWF	1tOma	TOI MACTOR	npt ran		
410-420	YVWF	77	11	11		
420-430	YVWF	,,,	17	11		
430-440	YVWF	,,	11	-17		
440-450	YVWF	<11	,,,	ff		
450 - 460	YVWF	,,	11	**		
460-470	YVWF	,,	77	**		
470-480	YVWF	77	**	ff	1 .	
480-490	YVWF	11	17	11		
490-500	YVWF	79	11	77	1	
500-510	-N-	,,	11	11		
510-510 510-520	- N- - N-	7.7	11	. ***		
520 – 520	YVWF	,,	17	**		
520 - 530 530 - 540	YWF	,,	19	77		
550 - 560	- N-	77	11	**	1	
560 – 570	YVWF	,,	**	11		
570 – 570	YVWF	11	**	**		
580 - 590	YVWF	77	17	11		
590 – 590	YVWF	.,,	11	.11		
600-610	-N-	,,	11	7.7		
610-620	YWF	17	17	**		
620-630	-N-	,,	**	11		
630-640	-N-	.,,	1)	: ††		
	-N-	,,	11	11		
640-650	GWF	11	11	***		
650-660 660-670	-N-	,,	**	11		
	YWF	1,	**	11		
670-680	- N-	11	11	11	1	
680-690	YWF	•••	71	.17	1	
690-700		11	11	11		
700-710	YVWF	,,	11	**	1	
710-720	-N-	,,,	 t#	11		
720-730	-N-	1				
		1]	

WITCHERRIE NO. 1 (Cont'd)

Depth (feet)	Reaction		For	rmation	Remarks
730-740 740-750 750-760 750-760 760-770 770-780 780-790 790-800 800-810 810-820 820-830 830-840 840-850 850-860 860*870 870-880 880-890 890-900	YWF -N- YGVWF YVWF -N- YVWF -N- -N- -N- -N- -N- -N- -N- -N- -N-	Roma ** ** ** ** ** ** ** ** ** ** ** ** **	Formation	Aptian '' '' '' '' '' '' '' '' ''	Trace " " "
910-920 920-930 930-940 940-950 950-960 960-970 970-980 980-990 990-1000 1000-1010 1010-1020 1020-1030 1030-1040	-N- YWF -NN- YVWF -N- YVWF -NNN- YWF -NN-	1037	tion Beds "" "" "" "" "" "Sandstone	Neocomian "" "" "" "" "" "" "" "" "" "" "" "" "") Quartz) Sand)

SANTOS - OODNADATTA

Depth (feet)	Reaction	Formation	,	Remarks
418	-N-		Albian	
420	-N-		**	
422	YVWF		77	<u> </u>
425	YVWF		.97	
428	GVWF		19	
430	YVWF		* 1,1	
432	YVWF		17	
434	-N-		1. 49	
435	YVWF		.77	Trace
437	YVWF	1	**	11
438	YVWF		11	177
440	YVWF		11	11
441	YVWF		11	·
443	YVWF		**	•
445	-N-		**	
446	YVWF	1	**	
448	YVWF		ff .	
450	YVWF)	31	
452	YVWF)		
455	YVWF)	Aptian	
457	-N-		***	
460	-N-		***	
463	YVWF		1.9 11	
467	-N-	, , , , , , , , , , , , , , , , , , ,	**	
470	-N-		77	
475	YVWF	1	,,, ,,,	
480	YVWF		11	
485	-N-		11	·
490	-N-		77	
495 500	-N- -N-	1	77	
	-N-		7.7	
505 510	-N-		71	
515	-N-		17	
520	-N-	·	17	
525	-N-		77	
530	YVWF	·	1,1	
540	-N-		77	
550	-N-		11	
560	YVWF		tt j	
570	YVWF		**	
580	YVWF		1,1	
590	YVWF		**	
600	YVWF		**	
			:	

SANTOS - OODNADATTA (Cont'd)

Depth (feet)	Reaction	Formation	Remarks
610	YVWF	Aptian	
620	YWF	· - w.	
630	-N-	TT .	
640	YVWF	**	
650	YVWF	***	
670	-N-	**	
680	-N-	. 11	
690	-N-	**	
700	YVWF	***	
710	YVWF	***	•
720	YVWF	n l	
730	-N-	ft.	
740	YVWF	!	
750	YVWF	77	
760	-N-	रेर -	
770	YVWF	77	
780	-N-	57	
790	YVWF	**	
800	YVWF	n	*
782	YVWF	. ***	
810	YVWF	***	
820	-N-	"	
830	YVWF	"	
840	YVWF	· "	
850	-N-	"	
860	-N-	"	
870	YVWF	. **	
880	YVWF	**	
890	-N-		
900	YVWF	"	
932	YVWF	. 11	
947	YVWF	177	
966	YVWF	77	

FORTVILLE NO. 3

,	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1			
Depth (feet)	Reaction		Formation	1	Remarks
1710-1730 1730-1750	- N- - N-	Tambo	Formation	Albian) Very slow) Yellow Green) reaction
1750-1770	YVWS	,,,	† †	**) reaction
1770-1790	YVWS	11	11 *	11	
1790-1810	YVWS	11	11	71	*
1810-1830	YVWF	,,,	***	***	
1830-1850	YVWF	11	tt ×	tŢ	
1850-1870	YWF	1853			•
1870-1890	YVWF	Roma	Formation	Aptian	
1890-1910	YVWF	ItOma	roi macton	nptran	
1910-1930	YVWF	**	17	**	
1930-1950	YVWF	11	17	11	
1950-1930	YWF	1,11	.**	in	
1970-1990	-N-	17	**	***	
1990-2010	YVWF	77		11	
2010-2030	YVWF	- 77	11	11	
2010-2050	-N-	,,,	ŤŦ	17	
2050-2070	-N-	***	1.1	17	* 1
2070-2090	-N-	11	## ·	11	
2090-2110	-N-	. ,,	11	**	
2110-2130	YVWF	11	***	11	
2130-2150	-N-	ti	11	11	
2150-2170	YVWF	111	††	F.F	
2170-2190	YWF	7.7	11	17	
2190-2210	YVWF	71	ŧŧ	.17	
2230-2250	YVWF	77	**	17	
2210-2230	YVWF	-11	**	17	
2250-2270	Y Trace	11	7.1	51	. '
2270-2290	YGVWF	1 11	1,1	11	
2290-2310	YVWF	*	***	ŧΫ	
2310-2330	YVWF	11	77	.11	
2330-2350	YVWF	***	11	77	v.
2350-2370	YVWF	77	.11	**	
2370-2390	YVWF	77	ir .	"	
2390-2410	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	***	. 19		
2410-2430	\mathbf{YWF}	117	11	f1	·
2430-2450	YVWF	77	1,1	**	
2450-2460	$\mathbf{Y}\mathbf{V}\mathbf{W}\mathbf{F}$	11	1/1	**	
2460-2470	YWF	17	71	77	
2470-2480	YWF	****	91	19	
2480-2490	YVWF	-78	77	. !!	
2490-2500	YVWF	-11	11	**	
		1			

FORTVILLE NO. 3 (Cont'd)

 				og - og framtiskere og skriger og		. .	_
 Depth (feet)	Reaction	tion Formation				Remarks	
 2500-2510	YVWF	Roma	Formation	Aptian			-
2510-2520	YVWF	17	11	- 1f			
2520-2530	YVWF	17	11	77			
2530-2540	YVWF	F1	,11	* 11			
2540-2550	-N-	77	11	11			
2550-2560	YVWF	17	77	TT .			
2560-2570	YVWF	11	,77	. 11			
2570-2580	YWF	- 11	1 11	11			
2580-2590	YVWF	***	11	* 11			
2590-2600	-N-	17	11	,11			
2600-2610	-N-	**	***	11			
2610-2620	-N-	11	***	11			
2620-2630	YVWF	77	**	7,7			
2630-2640	-N-	2634					
2640-2650	-N-	Trans	ition Beds	Aptian-		1	
2650-2660	-N-	11	11	Neocomia	n		
2660-2670	YVWF	11	17	11			
2670-2680	-N-	n	**	***			
2680-2690	YVWF	- 11	11	**			
2690-2700	YWF	11	11	11		1	
2700-2710	YWF	11	31	* **			
2710-2720	YWF	17	11	**			
2720-2730	YWF	**	11	77			
2730-2740	YVWF	11	11	11			
2740-2750	YVWF	71	11	11			
2750-2760	YVWF	-11	1.1	11			
2770-2780	YWF	1.2	.11	71		!	
2780-2790	YVWF	***	11	37			
2790-2800	YVWF	77	11	,11			
2800-2810	YGVWF		11	17			
2810-2820	YGVWF	11	47.	11			
2820-2830	YVWF	11	77				
2830-2840	YVWF	11	97	17			
2840-2850	YVWF	7.7	,11	77			
2850-2860	-N-	rt	-77	11			
2860-2870	YVWF	"	11	!!			
2870-2880	YWF	***		17			
2880-2890	YVWF	117		11			
2890-2900	YVWF	11		27			
2900-2910	-N-	11		11			
2930-2940	YVWF	***		**			
2940-2950	YVWF	**		11			
2950-2960	YVWF	199		.**			
2960-2970	YVWF	- 11	.77	11			
		1					

FORTVILLE NO. 3 (Cont'd)

Depth (feet)	Reaction	Formation	Remarks
2970-2980 2980-2990 2990-3000 3000-3010	YVWF YVWF YVWF YWF	Transition Beds Aptian-Neocomian	