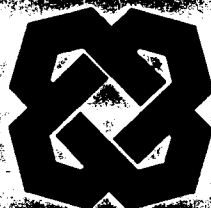


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PE907481



BASIN OIL N.L.

ACN 000 628 017

WELL COMPLETION REPORT

(W1185)

SKULL CREEK NORTH-1

PETROLEUM DIVISION

28 JAN 1999

April 1998

Compiled By: G.P. McDonagh

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FIGURE 1
WELL LOCATION MAP - PPL1 and PPL 2



CULTUS PETROLEUM NL

ONSHORE OTWAY BASIN - VICTORIA

PPL1 & PPL2

SKULL CREEK NORTH-1

Victoria



SKULL CREEK NORTH-1

Mylor 1

Vaughan 1

Braeside 1

PC 4

Blackwood 1

Nth P 1

Nth P 2

Dunbar 1

PC 3

Dunbar East 1

Skull Creek 1

Wallaby Creek 1

WC 2

Iona 1

Iona.2

Port Campbell 1

Grumby 1

PPL1

Langley 1

PC2

PPL2

Vogel 1

Nth P 3

Namgib 1

PEP108

FIGURE 1

Well Completion Report - Skull Creek North-1

WELL:	SKULL CREEK NORTH #1	SPUD:	0930 hours, 06-03-97
WELL TYPE:	EXPLORATION	TD REACHED:	0230 hours, 18-03-97
BLOCK/LICENCE::	PPL1 Otway Basin Victoria	RIG RELEASED:	2300 hours, 22-03-97
RIG:	ODE 30	COMPLETED:	n/a
LATITUDE:	38°33' 35.6" S	STATUS:	Plugged & abandoned exploration well with gas shows
LONGITUDE:	142°59' 45.85" E	TYPE COMPLETION:	Plugged & abandoned
X coord:	673917.62 mE	TYPE STRUCTURE:	Horst Block
Y coord:	5 730 168.00 mN	ZONE(S):	
SEISMIC STATION:	Waarre 3D Xline 2685 inline 9675	REMARKS:	
ELEVATION GL:	77.9 m AHD (prelim)		
RT:	82.2 m		
TD:	1810m MD (Logger Et) 1810m MD (Drlr)		
		CASING SIZE	SHOE DEPTH (mRT)
		16"	6
		9 5/8"	304.0

AGE	FORMATION OR ZONE TOPS	DEPTH (m)		THICKNESS (metres)	HIGH (H) LOW (L)	TWT (msec)
		LOGGERS MD	SUBSEA TVD			
TERTIARY	PORT CAMPBELL LIMESTONE	4.7	+82	43.7	0	
TERTIARY	GELLIBRAND MARL	6	+72	204	-	
TERTIARY	CLIFTON FORMATION	210	-128	30	58m H	252.0
TERTIARY	NARRAWATURK MARL	240	-158	75	-	271.3
TERTIARY	MEPUNGA FORMATION	315	-233	59	27m H	334.6
TERTIARY	DILWYN FORMATION	374	-292	195	34m H	388.2
TERTIARY	PEMBER MUDSTONE	569	-487	56	71m H	553.4
TERTIARY	PEBBLE POINT FORMATION	625	-543	48	77m H	601.4
LATE CRETACEOUS	PAARATTE FORMATION	673	-591	290	72m H	665.8
LATE CRETACEOUS	SKULL CREEK MUDSTONE	963	-881	142	32m L	882.2
LATE CRETACEOUS	NULLAWAARRE GREENSAND	1105	-1023	77	48m H	938.9
LATE CRETACEOUS	BELFAST MUDSTONE	1182	-1100	88	64mH	956.6
LATE CRETACEOUS	WAARRE FORMATION: UNIT "D"	1270	-1188	8	45m H	999.6
	UNIT "	1278	-1196	24	-	
	UNIT "B	1302	-1220	37	-	
LATE CRETACEOUS	UNIT "A	1339	-1257	17	-	1011.4
EARLY CRETACEOUS	EUMERALLA FORMATION	1356	-1274		3m H	1027.6
	1400 SAND				-	
		1810	-1728			
* Geophysical prognosis	T.D. (LOGR. EXTRAP)					

LOG INTERPRETATION (Interval Averages)						PERFORATIONS (4 shots/ft)	
ZONE	INTERVAL m MD	THICK-NESS	NP m	POR %	SW %	ZONE	INTERVAL m MD
No pay is mapped							
Hydrocarbon Show Summary							
1512 - 1525 Fair show - Massive Eumeralla 1400 Sand							

LOG (BPB)	RUN	INTERVAL mRT	BHT/TIME	LOG	RUN	INTERVAL mRT	BHT/TIME
MLL-ML-DLS-SP-CAL	1/1	TD - 1234		PDS-CNL-GR-CAL	4	1650 - 1070	
-DLS-SP-SONIC-GR		1234 - 1182				1560 - 1275 HIRES	
DLS-SP-CAL-SONIC-GR		1182 - 304		RFS	5	1516 - 1293	
GR		304 - SURFACE		PSD	6	8 PT ALL INVALID	
LSS	2	TD - 1070		GR-CCL (DST2a)	7		
SRS (VEL SURVEY)	3	1800 - SURFACE 20 LEVELS		GR-CCL (DST 2b)	8		

FORMATION TESTS										
No.	Interval (mRT)	Formation	Flow (mins)	Shut In (mins)	Bottom Gauge IP/FP (psia)	SIP	Max Surf Press (psia)	Fluid to Surf (mins)	TC/BC	Remarks
1	1494 - 1512	Eumeralla Fm on bottom					NFTS	NFTS		GTS @ RTSM
2a	1540 - 1550	Eumeralla Fm Infl strad w/ GR - CCL	60	30	200/235	608	NFTS	NFTS		NGTS v wk blow when tool opened
2b	1515 - 1525	Eumeralla Fm Infl strad w/ GR - CCL	5/122	32/120	797/-303/335	1386 1572	RTSTM 75min	RTSTM		GTS @ RTSTM

SUMMARY:

Skull Creek North 1 was drilled as an exploration well in Victoria, onshore Otway Basin, PPL 1. It was located 0.75 km northeast of the Skull Creek 1 Waarre/Eumeralla gas discovery well, 0.4 km east of the North Paaratte production station and 190 km WSW of Melbourne.

Skull Creek North was designed to test the Skull Creek Horst downdip (at top Waarre Formation) of Skull Creek 1. The primary target was the NullaWaarre Formation perceived to have closure at the same level as the Waarre units in Skull Creek - 1. Secondary targets included the Waarre Formation and Eumeralla Formation as both formations produced gas on DST in the discovery well

The well reached a total depth of 1810m in the Eumeralla Formation. The top NullaWaarre, Waarre Formation and top Eumeralla Formation, were intersected close to prognosis. The Waarre Formation was thinner than anticipated. Tertiary formations were intersected high to prognosis as a result of incorrect structural interpretation?

A gas show of 398 units was recorded in the Eumeralla when drilling. DST 2b tested the show flowing GTS at RTSTM.

Skull Creek North 1 was plugged and abandoned. Three cement plugs were set as follows:- Plug 1: 1350m to 1350m: Plug 2: 334 to 260m: Plug 3: 10 sack surface plug.

1.0 INTRODUCTION

Skull Creek North-1 is an exploration well located in production license PPL 1 in the onshore Victorian section of the Otway Basin, approximately 190km west-southwest of Melbourne. It is situated in the Port Campbell Embayment (Figure 2), within which are several hydrocarbon fields, including Grumby, Iona, Mylor, North Paaratte, Skull Creek and Wallaby Creek.

The Operator and sole participant, with a 100% interest in Skull Creek North-1, is Basin Oil, a wholly owned subsidiary of Cultus.

The Skull Creek North prospect is a seismically defined central horst fault block on the upthrown side of two major faults. It is situated down dip from the Skull Creek-1 (0.75km SW). The well was designed to test the down-dip hydrocarbon potential of the NullaWaarre Formation. Secondary targets were the Waarre Formation and 1400m sand of the Eumeralla Formation.

The well was spudded at 09.30hrs on 6th of March, 1997 and reached a total depth of 1810mMD at 02.30hrs on the 18th of March, 1997. The OD & E rig 30 was released at 23.00hrs on 22 of March 1997, 16.5 days after spud.

Skull Creek North-1 was plugged and abandoned with gas shows.

FIGURE 2
STRUCTURAL ELEMENTS MAP - OTWAY BASIN

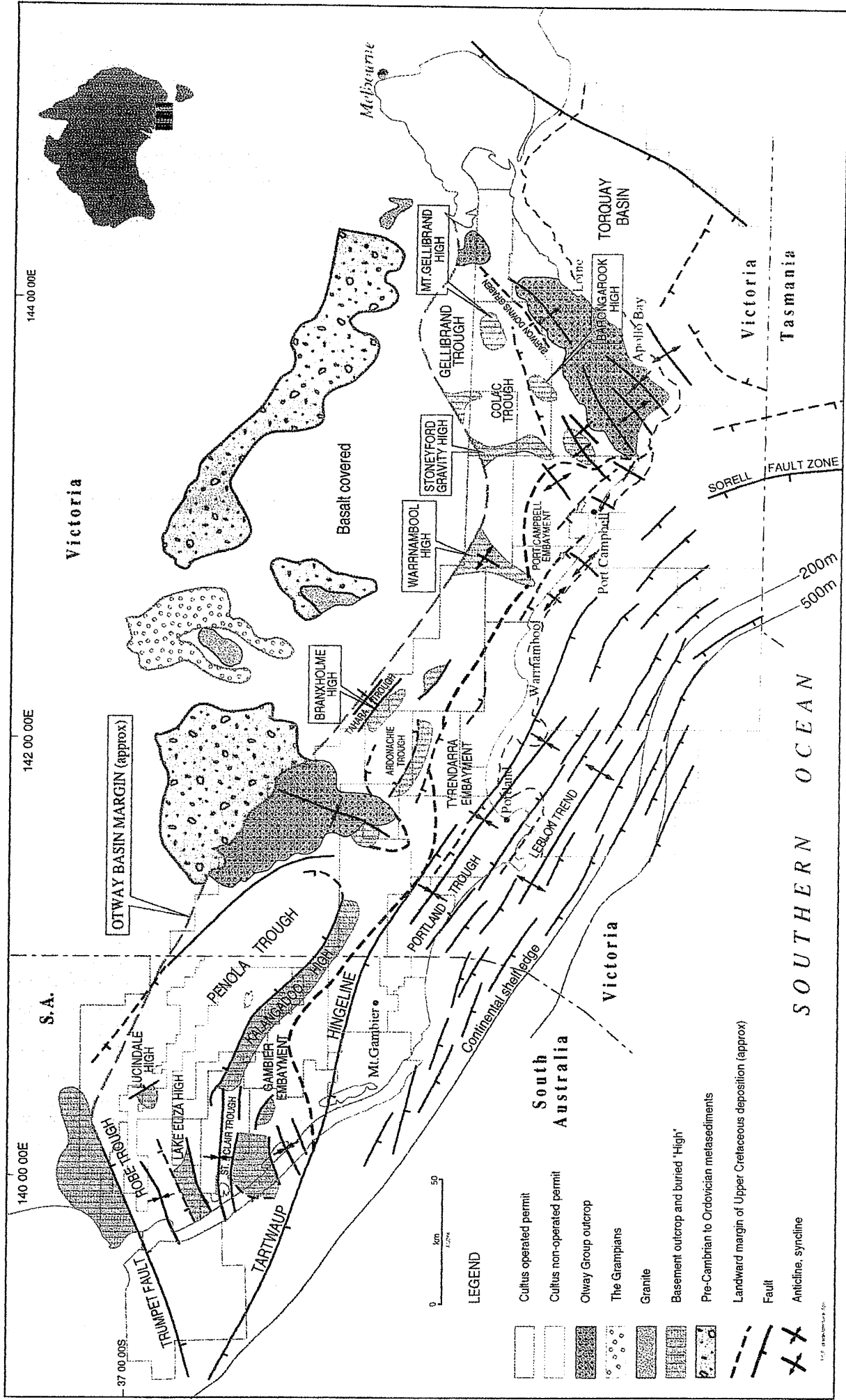
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Well Completion Report) for Skull Creek
North-1, Otway Onshore, PPL 1
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DATE_RECEIVED =
W_NO = W1185
WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR =
CLIENT_OP_CO = CULTUS PETROLEUM

(Inserted by DNRE - Vic Govt Mines Dept)



CULTUS PETROLEUM N.L.
**OTWAY BASIN
 STRUCTURAL ELEMENTS**

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Figure 2

2.0 PRE-DRILLING SUMMARY

2.1 Regional Geology

The Otway Basin, including that of South Australia, covers an area of approximately 140,000km² onshore and offshore (of which 40,000 km² lies onshore), extending just into Tasmanian waters.

The Otway Basin formed as a result of Mesozoic tensional forces which produced a complex of localised intra-cratonic sub-basins (GFE, 1994). This involved two main tectonic phases, a Late Jurassic to Early Cretaceous rift phase marked by extension and rapid subsidence, and a Late Cretaceous to Recent post-rift phase characterised by slower subsidence, and at times compressional forces (Abele *et al*, 1995 - Geol. Rpt. 103).

The Otway Basin consists of four major sedimentary sequences (Figure 3), each deposited during different tectonic phases in southern Australia. The earliest sequence consists of terrestrial sediments deposited in localised intra-cratonic grabens and half grabens, during the Late Jurassic to Early Cretaceous while extension was active. Organic-rich non-marine sediments were deposited in the deeper parts of the grabens or more marginal low energy settings.

The second major sequence, which also contained non marine sediments, was deposited in an intra-cratonic sag basin, although significant basement extension cannot be documented.

The third sequence developed towards the beginning of the Late Cretaceous and entailed major extension. Although terrestrial sediments continued to be deposited, marine rocks formed an important part of the sequence for the first time.

A major period of erosion followed uplift in the Late Cretaceous, forming an unconformity surface that is regionally mappable throughout the basin. Sedimentation resumed with the deposition of largely non marine sediments, with minor marine influences. The percentage of marine sediment rapidly increased with the outbuilding of coastal plain and shelf deposits (GFE, 1994). This process is continuing to the present day.

2.2 Previous Drilling

Since the 1860s the Otway Basin has been recognised as a potential petroleum province. It was the location for Australia's first oil exploration well, Salt Creek, at Alfred Flat, South Australia, in 1866 (Sprigg, 1986). Discovery of bitumen strandings, seepages and oil scums led to the onset of exploration in the basin. Over 150 wells have since been drilled in the Otway Basin, both onshore and offshore, with the greatest number of discoveries of hydrocarbons in the coastal region between Port Campbell and Mt. Gambier.

Mapping of anticlinal structures and intermittent drilling of shallow wells took place between the early 1890s and late 1950. No discoveries were made during this period. It was not until 1959, when Frome-Broken Hill drilled Port Campbell-1, that a discovery was made. It flowed gas from the Late Cretaceous Waarre Formation at an initial rate of 1.5mmcf/d. It was deemed non commercial because the production rate declined rapidly. Shell initiated drilling offshore in the Victorian section of the basin in 1967, soon followed by Esso, but there were no economic successes. It wasn't until 1979 that the first commercial hydrocarbon gas, from the Waarre Formation, was discovered by Beach Petroleum at North Paaratte-1. The field was brought on stream in 1986. Following North Paaratte-1, Wallaby Creek and Grumby were two more fields discovered by Beach, (also from the Waarre Formation) in 1981. Subsequent exploration resulted in the establishment, by Beach, of the Iona gas field in 1988, then the Boggy Creek CO₂ field, by GFE Resources, in late 1991. The first offshore success was with BHP Petroleum's Minerva-1, in 1993, just off Port Campbell. The Mylor (Bridge/GFE) field was discovered in 1994, marking the first recovery of oil from the Waarre Formation (Foster and Hodgson, 1995). The Langley (GFE) field was also discovered in 1994. The most recent discovery in the area was made by Basin Oil in 1996 when the Skull Creek field was discovered.

All of the commercial discoveries in the Victorian section of the Otway Basin are located within the Port Campbell region. In production licences PPL 1 and 2, the following fields are located :- North Paaratte, Wallaby Creek, Grumby, Iona and Skull Creek with Mylor just to the north of the boundary of PPL1 (Figure 4). Boggy Creek, a CO₂ producing field is situated approximately five kilometres west in PPL3.

Given the modest cost of exploration and development in the region and the ready market for any discoveries, this area, especially PPL 1, has excellent potential to produce profitable returns (Traviati and Smith, 1994).

2.3 Drilling Rationale

Skull Creek North -1 was drilled to test the NulaWaarre Formation, the Waarre Formation, top Eumeralla Formation and the 1400m Eumeralla Gas Sand (as encountered in Skull Creek - 1). The Waarre and Eumeralla Formation targets were intended to appraise the size of the Skull Creek Gas Field and was dependent on the integrity of a fault seal between the two wells. It was hoped that the well would clear up the cross fault relationships between the different reservoirs and provide improved velocity profiles on the down-thrown blocks of the Skull Creek Horst. The NulaWaarre and top Eumeralla were purely exploration targets.

Interpretation was based on an 8.5 x 11 km 3D seismic grid of good quality 12 fold data with 12.3 x 12.5 bin geometry. The eastern end of the prospect was defined by good quality 2D data.

The Skull Creek North prospect is a tilted fault block on the down-thrown side of the major northern fault of the Skull Creek Horst block. (Figures). The fault is interpreted to a depth where the Early Cretaceous hydrocarbon source is thought to be present.

FIGURE 3

STRATIGRAPHIC TABLE - OTWAY BASIN, VICTORIA

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from Well Completion Report) for Skull
Creek North-1, Otway Onshore, PPL 1
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WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)



OTWAY BASIN - VICTORIA SCHEMATIC STRATIGRAPHIC TABLE

STANDARD CHRONOSTRAT.		AUSTRALIAN BIOSTRATIGRAPHY		GROUP	LITHOSTRATIGRAPHY FORMATION/MEMBER									
SYSTEM	STAGES	SPORE POLLEN ZON.	TIME		S	N								
TERTIARY	PLEIS.	LATE	T. Pleistocenicus	HEYTESBURY GROUP	NIRRANDA GROUP	WANGERRIP GROUP	SHERBROOK GROUP	OTWAY GROUP	CASTERTON	UNDIFF.	PALAEOZOIC BASEMENT			
		EARLY	M. Lipsis C. Bifurcatus									10	PORT CAMPBELL LIMESTONE	
	MIOCENE	LATE	Upper T. Bellus									20	GELLIBRAND MARL	
		MIDDLE	Lower T. Bellus										30	CLIFTON FM
		EARLY	P. Tuberculatus											NARRAWATURK MARL
	OLIGOCENE	LATE	Upper N. Asperus									40	MEPUNGA FORMATION	
		EARLY	Middle N. Asperus										DILWYN FORMATION	
	EOCENE	LATE	Lower N. Asperus									50	PEMBER MUDSTONE	
		MIDDLE	P. Asperopolus										60	PEBBLE POINT FORMATION
		EARLY	Upper M. Diversus Middle M. Diversus Lower M. Diversus Upper L. Balmei											DEMONS BLUFF FM
	PALEOCENE	LATE	Lower L. Balmei									70	WAARRE FM	
		EARLY	Upper T. Longus										CURDIES FORMATION	
	LATE CRETACEOUS	MAASTRICH.	Lower T. Longus									80	PAARATTE FORMATION	
		CAMPANIAN	T. Lilliei										90	SKULL CREEK MEMBER
			N. Senectus											NULLAWARRE GREENSAND
SANTONIAN		T. Apoxyexinus	BELFAST MUDSTONE											
CONIACIAN TURONIAN		P. Mawsonii/ C. Triplex	FLAXMAN FM											
CENOMANIAN	A. Distocarينات													
EARLY CRETACEOUS	ALBIAN	P. Pannosus	100	EUMERALLA FORMATION										
		C. Paradoxa		HEATHFIELD SST.										
		C. Striatus		WINDERMERE MBR KATNOOK SST										
	APTIAN	C. Hughesi	110	LAIRA FORMATION										
	BARREMIAN			PRETTY HILL SST										
	HAUTERIVIAN	F. Wonthagiensis	120	LWR PRETTY HILL SST										
	VALANGINIAN	C. Australiensis												
LATE JURASSIC	RYAZAN		130	CASTERTON BEDS										
		PORT-LAND												
	KIMMER-IDGIAN	R. Watheroensis												

3.0 Results of Drilling

3.1 Stratigraphic and Geophysical Prognosis

Some variations were found between the predicted and drilled sections for this well (Figure 5). Although the accuracy of the geophysical pick for the Eumeralla Formation was as accurate as could be expected, 1274m actual to 1276.5m prognosed, there was some variation from the picks at the tops of other formations.

The Waarre Formation was thicker than expected, 86m as opposed to the prognosed 43.5m. This is thought to be due to the presence of extra sediment above the unconformity at the base. The Skull Creek Mudstone was considerably thinner at 142m (prognosed at 228.5m) while the overlying Paratte Formation (340m, prognosed at 179.5m) was considerably thicker. As the upper surface of the Paratte Formation is an unconformity, the extra section may be the result of less erosion at the Skull Creek North - 1 location.

The major differences in the Tertiary are a thinning of the Dilwyn Formation relative to the prognosis, a thickening of the Narraturk Marl and the upper surface being shown as an unconformity in the well, and the considerably thicker Gellibrand Marl overlain by a thin Port Campbell Limestone. The variation in the thickness of these units relative to the prognosis is believed to be due to an incorrect interpretation of the structure.

3.2 Stratigraphic Summary (see Figure 3: Stratigraphic Table)

The Eumeralla Formation, the youngest formation in the Late Jurassic to Early Cretaceous Otway Group, is a thick megasequence of volcanogenic sandstone and mudstone and represents the early sedimentary fill of the rifted Otway Basin. Sediments making up the Eumeralla Formation were deposited by braided rivers in a variety of environments ranging from high-energy fluvial to low-energy lacustrine (Abele *et al*, 1995 - Geol. Rpt. 103).

The first marine incursion is marked by the Late Cretaceous Sherbrook Group. Sedimentation began in fluvial to coastal environments on the upper and lower delta plain forming the Waarre Formation. Progressive deepening allowed the deposition of offshore mud to form the Belfast Mudstone. The NullaWaarre Greensand was deposited in a shallow marine environment due to a sudden fall in sealevel (Abele *et al*, 1995 - Geol. Rpt. 103). A rising sea level led to the deposition of the Skull Creek Mudstone in a pro-delta environment. The sediments of the Paratte Formation were deposited in a prograding deltaic environment culminating in a shallow marine to fluvial environment. The Sherbrook Group unconformably overlies the Otway Group, and is unconformably overlain by the Wangerrip Group.

The Palaeocene to Early Eocene Wangerrip Group was deposited in shallow marine and deltaic environments, also with a predominantly non marine source. The oldest formation, the Pebble Point, reflects the initial transgression. As the water deepened, a deltaic sequence prograded out into the basin, with the Pember Mudstone and the Dilwyn Formation representing the pro-delta and lower delta plain deposits respectively (Tickell, *et al*, 1992 - Geol. Rpt. 95).

The succeeding Middle Eocene to Early Oligocene Nirranda Group is predominantly marine with a mixed terrigenous/carbonate source, and was deposited in estuarine and coastal settings. The Mepunga Formation disconformably overlying the Dilwyn, is interpreted as a beach barrier system conformably overlain by the open marine Narraturk Marl (Blake, 1980).

Finally, the Late Oligocene to Late Miocene Heytesbury Group marks the first major development of shelf carbonates, with only a minor terrigenous sediment input. The group is made up of the Clifton Formation, a shallow marine sheet of carbonate sand, the Gellibrand Marl, deposited in a low energy, continental shelf environment, and the overlying Port Campbell Limestone, in a moderate continental shelf region, above fair weather base (Abele *et al*, 1995 - Geol. Rpt. 103).

3.3 Hydrocarbons

FID total gas and chromatograph detectors were in operation from spud to TD. A fluoroscope was used to detect oil shows in cuttings samples under UV light.

The section surface to top Eumeralla Formation, including the Nollawarre Greensand (primary target) and Waarre Sandstone (secondary target) was devoid of gas and oil shows.

Mud gas shows were recorded during drilling from the Eumeralla Formation. There was no oil fluorescence seen. The gas shows were from 1375m to 1379m where 119 units were recorded from a sandstone with poor visible porosity. One hundred and seventy one units were indicated in a sandstone between 1496 and 1512m with poor to fair visible porosity. The sample was comprised mostly methane (97%). The section from 1469 to 1476 contained 134 units, once again from a sandstone with poor visible porosity, 396 units from the interval between 1525 and 1549m, and 144 units from the section between 1512 and 1525m.

Two drill stem tests flowed gas to surface but at a rate too small to measure. These were DST 1 which tested the Eumeralla Formation between 1494 and 1512 m, and DST 2b, also in the Eumeralla Formation between 1515 and 1525m. A third test, DST 2a merely showed a very weak blow when opened and did not flow any gas to surface.

A log evaluation is included as Appendix 2b. No net pay is interpreted in Skull reservoir sections interpreted to be water saturated. Minor log pay is mapped in the Waarre Fm, Unit C.

FIGURE 4
OTWAY BASIN - PPL1 LOCATION MAP

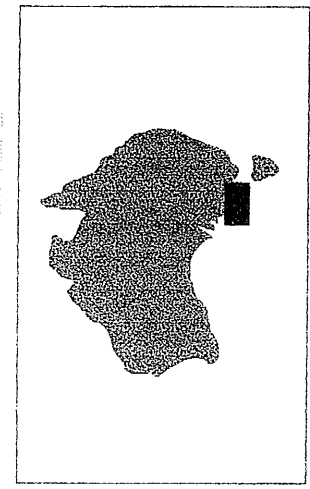
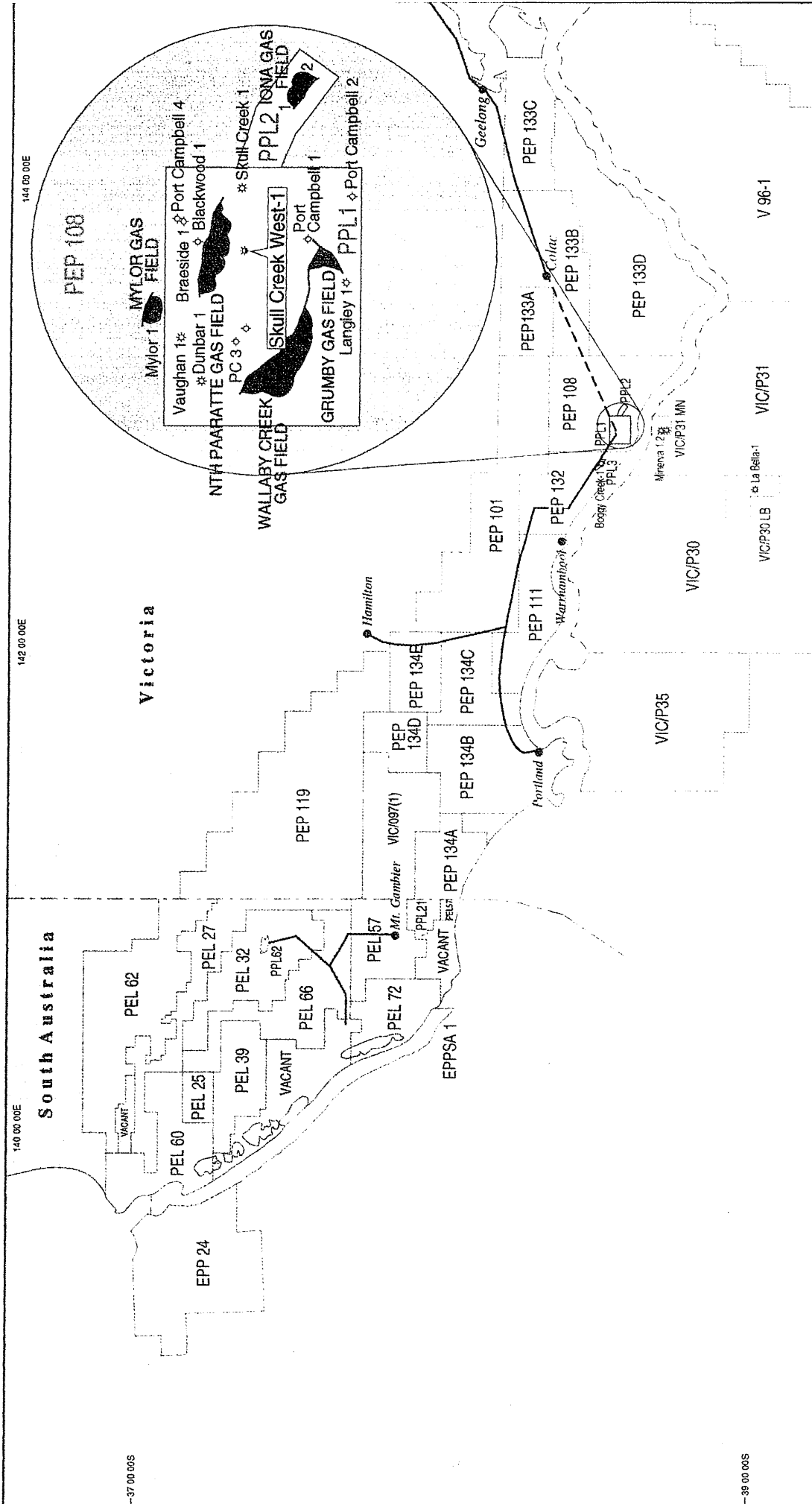
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North-1, Otway Onshore, PPL 1
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DATE_RECEIVED =
W_NO = W1185
WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR =
CLIENT_OP_CO = CULTUS PETROLEUM

(Inserted by DNRE - Vic Govt Mines Dept)






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CULTUS PETROLEUM N.L.

OTWAY BASIN

PPL1 - LOCATION MAP

LEGEND

-  Cultus tenement
-  Pipeline
-  Proposed Pipeline

0 100 km

AGD66

FIGURE 5

PREDICTED vs ACTUAL STRATIGRAPHIC SECTION

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SUBTYPE = STRAT_COLUMN
DESCRIPTION = Predicted vs. Actual Stratigraphic
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Onshore, PPL 1
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DATE_RECEIVED =
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CONTRACTOR =
CLIENT_OP_CO = BASIN OIL N.L.

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BASIN OIL N.L.

ONSHORE OTWAY BASIN

PPL 1

SKULL CREEK NORTH-1

PREDICTED v ACTUAL STRATIGRAPHIC SECTION

LAT: 38°33'35.26"S

GL: 77.9m

SPUD: 0930hrs 6/3/97

LONG: 142°59'45.85"E

RT: 82.6m

RIG RELEASE: 2300hrs 22/3/97

LOCATION: INLINE 9675 XLINE 2685

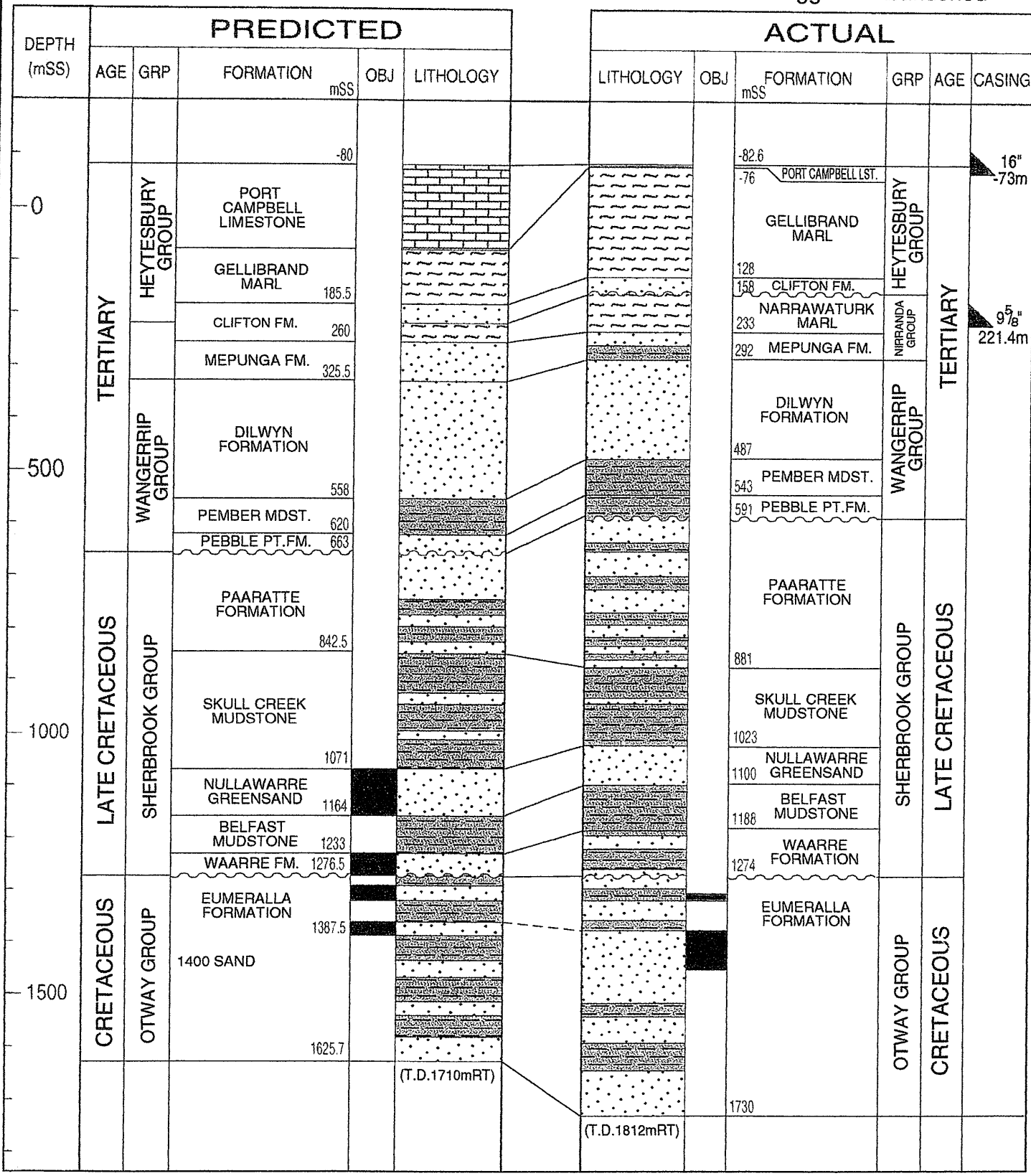
TD: 1812mRT

STATUS: Plugged & Abandoned

DEPT. NAT. RES & ENV



PE907685



4.0 REFERENCES

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FIGURE 6
SEISMIC SECTION W3D-0801

PE907686

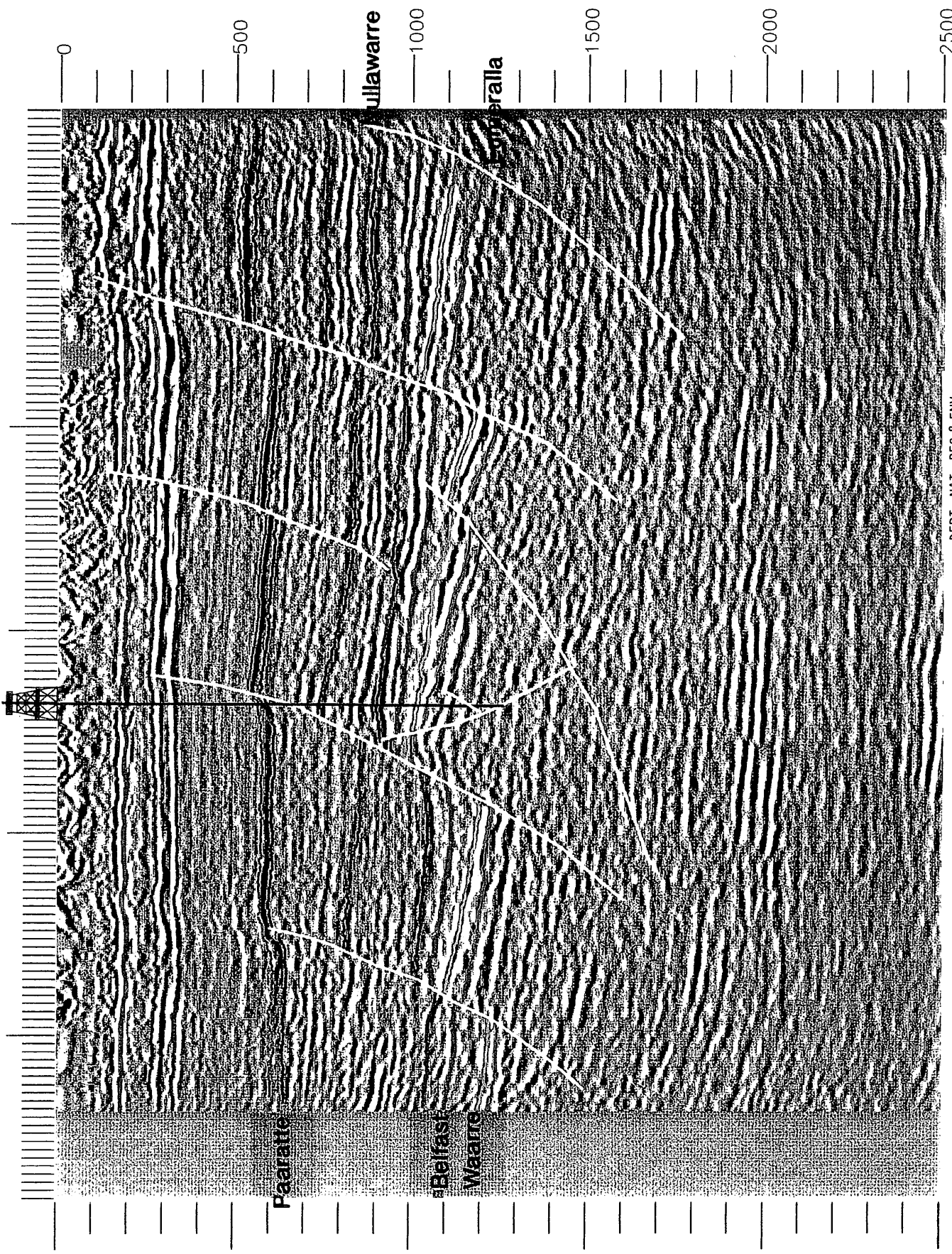
This is an enclosure indicator page.
The enclosure PE907686 is enclosed within the
container PE907481 at this location in this
document.

The enclosure PE907686 has the following characteristics:

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CONTAINER_BARCODE = PE907481
NAME = Seismic Section
BASIN = OTWAY
PERMIT = PPL 1
TYPE = SEISMIC
SUBTYPE = SECTION
DESCRIPTION = Seismic Section with interpretation
(figure 6 from Well Completion Report)
for Skull Creek North-1, Otway Onshore,
PPL 1
REMARKS = Shows...Paaratte, Belfast, Waarre,
Nullawarre and Eumeralla Formations.
DATE_CREATED =
DATE_RECEIVED =
W_NO = W1185
WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR =
CLIENT_OP_CO =

(Inserted by DNRE - Vic Govt Mines Dept)

Skull Creek North-1



DEPT. NAT. RES & ENV



PE907686

1175m

w3d0801.3dv

Figure 6

APPENDIX 1

LITHOLOGICAL DESCRIPTIONS

APPENDIX 1

1. Lithological Descriptions

Samples were described from 306m to TD at 1810m

Interval (m)	Description
306 - 315m	Narrawaturk Marl Marl: medium brown, trace to common fossil fragments including bryozoa, forams, shell fragments, echinoid spines and sponge spicules, common glauconite, trace to common pyrite, very soft, sticky, non fissile.
315 - 377	Mepunga Formation Sandstone grading to Claystone Sandstone: medium to dark brown, very fine to grit, dominantly grit, subrounded, weak to occasional strong calcareous cement, abundant off white to dominantly brown argillaceous and silt matrix - matrix supported, strong brown staining on quartz grains, trace brown iron oxide pellets at top, trace glauconite, trace pyrite, friable to occasionally hard, no visible porosity, no oil fluorescence Claystone, medium yellow to brown at top, becoming dark brown with depth, slightly to very calcareous, - in general decreasing with depth, often abundant dispersed very fine to grit quartz sand grains, moderately silty, trace glauconite, trace fossil fragments, trace pyrite, soft, very dispersive, non fissile
377 - 568	Dilwyn Formation Sandstone grading to Claystone Sandstone: light to medium brown, very fine to grit, dominantly grit, subangular to rounded, dominantly subrounded, poorly sorted, very weak silica cement, abundant dark brown argillaceous matrix, - matrix supported,, clear to opaque quartz grains, trace yellow quartz grains, trace pyrite, friable, very poor inferred porosity, no oil fluorescence. Claystone: dark brown to light brown grey, moderately to very silty, often abundant dispersed very fine to dominantly grit sized quartz grains, trace glauconite, decreasing with depth, trace pyrite, sticky, non fissile
528 - 629	Pember Mudstone Claystone intermixed with minor Sandstone Claystone: light to dark brown, dominantly medium brown, moderately to very silty, common dispersed very fine quartz and partially altered feldspar sand grains in part, trace pyrite, common glauconite, trace black coaly detritus, trace micromica, soft sticky, non fissile Sandstone, light to medium brown, very fine to grit, dominantly medium, angular to rounded, dominantly subrounded, poorly sorted, very weak silica cement, abundant dark brown argillaceous matrix - matrix supported, opaque quartz grains, common to abundant orange-brown quartz grains, common glauconite, trace pyrite, friable, very poor to poor inferred porosity, no oil fluorescence.

- 629 - 672 **Pebble Point Formation**
Claystone intermixed with minor Sandstone
Claystone, dark grey green, moderately to very silty, trace dispersed to very fine quartz sand grains, common glauconite, trace pyrite, soft, sticky, non fissile
Sandstone: light green to light orange grey, very fine to grit, dominantly coarse grit, angular to rounded, dominantly subrounded, poorly sorted, weak silica cement, abundant green grey argillaceous and silt matrix, common green to brown quartz grains, trace glauconite, trace pyrite, friable, very poor inferred porosity, no oil fluorescence
- 672 - 916 **Paaratte Formation**
Sandstone interbedded with and in part grading into Claystone.
Sandstone: light to medium grey, very fine to pebble, dominantly very coarse, in general becoming finer with depth, angular to subrounded, dominantly subangular, poorly sorted, weak silica cement, occasionally moderate pyrite cement, common to abundant medium to dark grey argillaceous and silt matrix - in part matrix supported, common yellow-orange quartz grains and multicoloured volcanogenic lithics - decreasing with depth, trace to occasionally common black coaly detritus, trace to common pyrite, friable, fair inferred porosity, no oil fluorescence.
Claystone: medium to dark grey, medium to dark brown, dominantly medium brown grey, moderately to very silty, abundant dispersed very fine to grit quartz sand grains in part, trace carbonaceous detritus, trace pyrite, trace coarse muscovite flakes, trace micromica, soft, sticky, non fissile.
- 916 - 1103 **Skull Creek Mudstone**
Claystone with minor laminated and finely interbedded Sandstone.
Claystone: medium grey to medium brown grey, very silty, often very finely arenaceous with quartz and altered feldspar grains, trace black carbonaceous flecks and detritus, trace pyrite, trace micromica, soft, sticky, non fissile.
Sandstone: off white, very fine to fine, occasional medium to very coarse grains in part, dominantly very fine, subangular to subrounded, well sorted, moderate silica cement, weak calcareous cement in part, abundant off white argillaceous and silt matrix, common off white fine altered feldspar grains, trace fine black carbonaceous detritus, trace pyrite, friable to moderately hard, no visual porosity, no oil fluorescence.
- 1105 - 1182 **Nullawaare Greensand**
Sandstone grading in part to Claystone
Sandstone: Light to medium yellow green, very fine to very coarse, dominantly medium, subangular, poorly sorted, weak to moderate silica cement, abundant white to medium green argillaceous matrix - matrix supported, clear to yellow orange quartz grains, trace pyrite, friable to moderately hard, very poor to poor visual porosity, no oil fluorescence.
Claystone,: off white to medium green grey, abundant dispersed very fine to very coarse clear to yellow quartz grains, trace black carbonaceous detritus, rare glauconite, trace pyrite, non calcareous, soft, non fissile.

1182 - 1270 **Belfast Mudstone**
Massive Claystone with interbedded Limestone at base
Claystone: medium to dark grey brown, moderately silty, trace very fine partially altered feldspar grains, common to abundant glauconite, common medium brown cryptocrystalline dolomite in part, trace Inoceramus, trace black carbonaceous flecks, trace to common pyrite, trace micromica, soft - firm, slightly subfissile
Limestone; off white to medium brown, crypto to finely crystalline, very dolomitic in part, common glauconite in part, abundant very fine sand grains in part, no visual porosity, no oil fluorescence - possible fracture/fault infill

1270 - 1278 **Waare Unit "D"**
Claystone with interbedded Limestone and Sandstone
Claystone: medium brown, moderately to very silty, rare dispersed very fine to grit opaque quartz grains, common brown to black carbonaceous flecks and detritus, common very fine partially altered feldspar grains in part, trace pyrite, common micromica, firm, very dispersive, slightly subfissile
Sandstone: light grey, very fine to grit, dominantly coarse, angular to subangular, poorly sorted, moderate silica and calcareous cements, abundant medium brown argillaceous matrix - grading to arenaceous claystone in part, clear to opaque quartz grains, trace black carbonaceous detritus, trace pyrite, moderately hard, very poor visual porosity, no oil fluorescence.
Limestone: off white to medium brown, crypto to finely crystalline, often calcilitic and amorphous, very dolomitic in part, abundant very fine sand grains in part, very hard, no visual porosity, no oil fluorescence.

Waare Unit "C"
Sandstone interbedded with Claystone
1278 - 1314 Sandstone: light brown grey, very fine to grit, dominantly medium, angular to subangular, very poorly sorted, strong silica cement, trace white argillaceous matrix, common brown silt matrix in part, trace black carbonaceous detritus, trace pyrite, hard, poor visual [porosity, no oil fluorescence
Claystone: medium brown, moderately to very silty, rare dispersed very fine to grit opaque quartz grains, common black carbonaceous flecks and detritus, common very fine partially altered feldspar grains in part, trace pyrite, common micromica, firm very dispersive, slightly subfissile

1314 - 1342 **Waare Unit "B"**
Claystone with minor interbedded Sandstone
Claystone: off white to medium brown to medium grey, very silty, very finely arenaceous in part, moderately calcareous in part, common black coaly detritus, trace pyrite, trace green lithics, trace micromica, slightly subfissile
Sandstone: very light brown grey, very fine to medium, dominantly fine, angular to subangular, moderately sorted, moderate silica cement, weak to moderate calcareous cement, trace to common white argillaceous matrix, trace green lithics, trace black coaly detritus, trace pyrite, friable to moderately hard, fair inferred porosity, no oil fluorescence

1342 - 1348 **Waare Unit "A"**

Sandstone

Sandstone: off white to light grey, very fine to coarse, dominantly medium, subangular, poor to moderate sorting, moderate to strong silica cement, abundant white argillaceous matrix - often matrix supported, common grey green brown and red lithics, trace black coaly detritus, trace pyrite, moderately hard to hard, very poor visual porosity, no oil fluorescence.

1348 - 1375 **Eumeralla Formation**

Sandstone interbedded with Claystone

Sandstone: light to medium green grey, very fine to medium, occasionally coarse, subangular to subrounded, occasionally angular, moderately sorted, weak to moderate silica cement, mostly weak to moderate, calcareous cement, strong in part, abundant off white and medium green argillaceous matrix, abundant grey green lithics, occasional to common red brown lithics, partially altered feldspar grains, trace coarse green and brown mica flakes, trace black carbonaceous detritus and flecks, trace pyrite, friable, generally very poor inferred visual porosity, no oil fluorescence, gas shows.

Claystone: off white to light brown grey, light green grey, non to occasionally very silty, trace fine partially altered feldspar grains in part, trace black coaly detritus, trace coarse brown and green mica flakes, trace micromica, firm non fissile.

APPENDIX 2
ELECTRIC LOG DATA

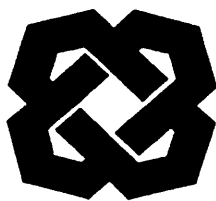
APPENDIX 2a
FIELD ELECTRIC LOG REPORT

CULTUS PETROLEUM N.L.
Electric Logging Report Sheet

Well Name: Skull Creek North-1 **Permit:** PPL1 **Observer:** David Homer **Date:** 18-21/3/97

TIME	OPERATION
1255 18-3-97	Rig up run# DLS 3,3,7/CSS 12,25/SBT5
1330	Casing check
1430	Repeat section
1510	Main log
1615	Sticking under ledges at 1229, 1202m, log over this interval with calipers closed
1915	Rig down run#1
1915	Rig up LSS 12/42 run#2
2000	Casing check
2110	Repeat section
2145	Main log
0220	Rig down run#2
0220	Rig up run#3 CIS-V.D.
0610	Out of hole waiting on rig
0700	Rig down run#3
	WIPER TRIP
1550	Rig up run#4 SGS 8, CNS 67, PDS 67
1620	Run in hole
1630	Casing check
1710	Repeat section (low resolution)
1730	Main log-1 (low resolution)
1745	Main log-2 (low resolution)
1755	High resolution pass
2215	Rig RFT run#5
0420	Rig down run#5
0420	Rig up run#6 PSD 17
0524	Repeat section
0541	Main log
0745	Finish main log
0840	Rig down
	Demobilize second crew. Demobilize Multibutton Dipmeter, Acoustic Imager, LSS and Spectral Gamma Ray

APPENDIX 2b
LOG ANALYSIS RESULTS



PPL 1

SKULL CREEK NORTH 1

FINAL PETROPHYSICAL INTERPRETATION

NULLAWARRE GREENSAND

WAARRE FORMATION

&

TOP EUMERALLA FORMATION

Doc 48000142

G. O'Neill
Cultus Petroleum NL
Exploration Department
March 1998

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

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7. DRILL STEM TESTS	5
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7. KEY EVALUATION PARAMETERS & TECHNIQUES	

ENCLOSURES

1. LOG EVALUATION PLOT	
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1. EXECUTIVE SUMMARY

Skull Creek North 1 was drilled as an exploration well in Victoria, onshore Otway Basin, PPL 1. It was located 0.75 km north of the Skull Creek 1 Waarre/Eumeralla gas discovery well, 3.5 km east of the North Paaratte production station and 190 km WSW of Melbourne.

Skull Creek North 1 was designed to test the Skull Creek Horst Block downdip (at top Waarre Formation) of Skull Creek 1. The primary target was the Nullawarre Greensand which was perceived to have closure at the same structural level as the Waarre Formation gas reservoirs in Skull Creek 1. Secondary targets included the Waarre Formation and Eumeralla Formation as both formations produced gas on DST in the discovery well.

Skull Creek North 1 reached a total depth of 1810 mRT in the Eumeralla Formation. All target zones, top Nullawarre Greensand (48 m high), top Waarre Formation (45 m low) and top Eumeralla Formation (03 m high) were intersected high to prognosis.

The Nullawarre Greensand and Waarre Sandstone were devoid of gas & oil shows.

Gas shows of up to 396 units were recorded in the Eumeralla Formation (1496 - 1549 mRT). These were tested by DST's 1, 2a & 2b. DST 1 flowed GTS at RTSTM and recovered 4 bbls of mud. DST 2a was a misrun. DST 2b flowed GTS at RTSTM.

No full hole cores were cut. An attempt was made to core the "1400m sandstone" (GTS at 1.1 mmcf/d in Skull Creek 1, DST 3) after DST 1. This attempt was abandoned due to poor hole conditions.

No net pay is interpreted in Skull Creek North 1, with all potential reservoir sections interpreted to be water saturated. Minor log pay was calculated in the top of the Waarre Formation.

Skull Creek North 1 was plugged and abandoned.

2. PAY SUMMARY

Log analysis was run from the top Nullawarre Greensand to 1550 mRT in the Eumeralla Formation. No net pay is interpreted in Skull Creek North 1 with all potential reservoir sections interpreted to be water saturated. Minor log pay is mapped in the Waarre Formation, Unit C over the interval 1291 -1297 mRT.

Cut-off parameters used to derive the net reservoir and pay were as follows:

Vsh <= 40%
Phit >= 10%
Swf <= 70%.

Enclosure 1, the Log Evaluation Plot, visually presents these data.

Table 1, Appendix 2 & Appendix 3 detail the net reservoir and sand intervals.

Both the Nullawarre Greensand & Eumeralla Formation are shaly.

The Waarre Formation contains 19.7 metres of net reservoir (Phit 20.8%, Vsh 18.5%) through 86 metres of section. The net to gross ratio for this interval is 23%.

3. MUDLOG SHOWS

The Nullawarre Greensand and Waarre Sandstone were devoid of gas & oil shows (see Appendix 4).

Gas shows of up to 396 units were recorded in the Eumeralla Formation over the interval 1496 - 1549 mRT (see Appendix 4). These shows were tested by DST's 1, 2a & 2b. DST 1 flowed gas to surface at RTSTM and recovered 4 bbls of mud. DST 2a was a misrun. DST 2b flowed GTS at RTSTM.

TABLE 1: SKULL CREEK NORTH 1 LOG INTERPRETATION SUMMARY

Formation	Interval (metres)	Gross Thick (metres)	Net	Net Thickness (metres)	Net/Gross	Vsh Ave %	Phit Ave %	Swt Ave %
Nullawarre	1105-1182	77.0	Reservoir	47.1	61%	34.0	16.5	86.8
			Sand	49.0	63%	33.8	16.3	87.1
Waarre	1270-1356	86.0	Reservoir	19.7	23%	18.5	20.8	86.3
			Sand	22.7	26%	18.2	18.7	87.0
Eumeralla	1356-1550	194.1	Reservoir	41.0	21%	35.6	16.2	93.5
			Sand	54.1	28%	35.1	15.0	98.6

4. ELECTRIC LOGGING

One suite of electric logs was run by BPB, at total depth as detailed in Table 2 below. The Field Electric Log Report is appended.

TABLE 2: ELECTRIC LOGGING SUMMARY

Run	Log	Interval mRT	Comments
1	GR DT-DLS-SP MLL-CAL ML	1810 - surface 1810 - 304 1810 - 1234 & 1150 - 304 1810 - 1234	61.0°C @ 1810 mRT, 6 hours since circ. Closed caliper 1234 - 1150 mRT due to hole conditions.
2	LSS-GR	1810 - 1070	61.0°C @ 1810 mRT, 12.75 hrs since circ Long spacing sonic for waveform taping.
3	CIS	1800 - surface	Velocity survey, 20 levels
4	NGT-PDS-CNS-CAL high resolution pass	1650 - 1070 1560 - 1275	61.0°C @ 1650 mRT, 4.3 hrs since circ.
5	RFS	1516 - 1293	9 points, 5 valid, 3 tight, 1 seal failure
6	PSD (dipmeter)	1650 - 550	
7	GR-CCL		DST 2a correlation
8	GR-CCL		DST 2b correlation

5. CORING

No full hole cores were cut. An attempt was made to core the "1400m sandstone" (GTS at 1.1 mmcf/d in Skull Creek 1, DST 3) after DST 1. This attempt was abandoned due to poor hole conditions.

6. RESERVOIR PETROLOGY

Reservoir petrology was not run on samples collected in Skull Creek North 1. Refer to the Skull Creek West 1 Final Electric Log Interpretation Report for petrology results on core plugs collected in the Waarre Formation & Eumeralla Formation. SCAL data (m, n, CEC) from these cores were applied in this petrophysical evaluation.

7. DRILL STEM TESTS

Three DST's were conducted in Skull Creek North 1, Eumeralla Formation as detailed in Table 3 below.

TABLE 3: DRILL STEM TEST SUMMARY

NO.	INTERVAL (mRT)	FORMATION	FLOW (mins)	SHUT IN (mins)	BOTTOM GAUGE IP/FP (psia)	SIP	FLUID TO SURF (mins)	TC/ BC	REMARKS
1	1494-1512 (D)	Eumeralla Fm conventional	5/90	30/70	741/- 241/228	1752 1255	GTS 63	1/8"	GTS @ RTSTM Rec: 4 bbl mud
2a	1540-1550m L	Eumeralla Fm Infl strad w/ GR-CCL	60	30	198/236	611	NFTS		misrun
2b	1515-1525 L	Eumeralla Fm Infl strad w/ GR-CCL	5/122	32/120	299/- 305/335	1384 1570	GTS 75 mins	1/4"	GTS @ RTSTM Rec: indeterminant

8. RFS DATA

The BPB RFS tool was run in Skull Creek North 1 attempting 9 pretests before hole conditions prevented further tests. 5 valid formation pressures, 3 tight tests and 1 seal failure were recorded.

Gas shows of up to 396 units were recorded in the Eumeralla Formation over the interval 1496 - 1549 mRT. RFS data failed to conclusively define a gas gradient through the sand featuring the gas show. Points 8 & 9 established a possible gradient of 0.188 psi/ft. The sand was tested by DST 2b and flowed GTS at RTSTM.

RFS data are contained in Appendix 6.

9. HOLE SUMMARY

Electric logs were acquired in a 8.5" borehole. Hole conditions through the Nullawarre Greensand, Waarre Formation and Eumeralla Formation were fair to good. The caliper tool was closed from 1234 - 1150 mRT while logging with the GR-DLS-SP-DT-MLL-ML tool because of adverse hole conditions in the Belfast Mudstone.

Badhole is flagged on the log interpretation plot based on the following criteria:

- $Drho > 0.1$ gm/cc (density correction)
- $Dcal > 1.5$ " (differential caliper)

The Wyllie sonic equation was used for porosity evaluation where badhole was interpreted.

10. MUD DATA

The mud data while recording electric logs were as follows:

Mud type:	KCI PHPA polymer
Mud weight:	9.45 ppg
Mud resistivity:	0.288 ohm-m at 18.5°C
Mud filtrate resistivity:	0.232 ohm-m at 18.5°C
Mud cake resistivity:	0.594 ohm-m at 18.5°C
Bottom hole temperature:	61.0°C (DLS logging run)

11. INTERPRETATION PROCEDURES

Standard environmental corrections were applied to the electric logging measurements using Mincom's Geolog deterministic program. Key evaluation parameters and techniques are tabled in Appendix 7.

Shale Volume

The neutron-density equation was used to derive shale volume in the Nullawarre Greensand (see Appendix 1: Cross plots).

The GR log was used to derive shale volume in the Waarre Formation & Eumeralla Formation. Sand volumes were cross-checked against the mudlog cuttings description.

Porosity

The density equation was used to derive matrix porosity (Phit). The Wyllie sonic equation was used to derive porosity (Phit) in poor hole conditions.

Water Saturation

Clean Nullawarre Greensand and Eumeralla Formation water sample data are unknown.

A Pickett plot was generated and used to derive R_{wa} (0.28 ohm-m at 110°C) in the Nullawarre Greensand. Waarre Formation cementation (m) and saturation (n) exponents were applied when deriving this value for R_{wa} .

A R_w of 0.4 ohm-m at 25°C (15 000 ppm NaCl eq) was used for both the Waarre and Eumeralla Formations. This value was derived from analysis of a water sample collected in Skull Creek North 1, DST 2 in the Waarre Formation.

The Archie Equation was used to derive values of water saturation in the Nullawarre Greensand. Values for CEC (applied in the Waxman-Smits equation) are unknown.

The Waxman-Smits equation was used to derive values of water saturation in the Waarre Formation and Eumeralla Formation. Values for CEC were ascertained in the Skull Creek West 1 SCAL program.

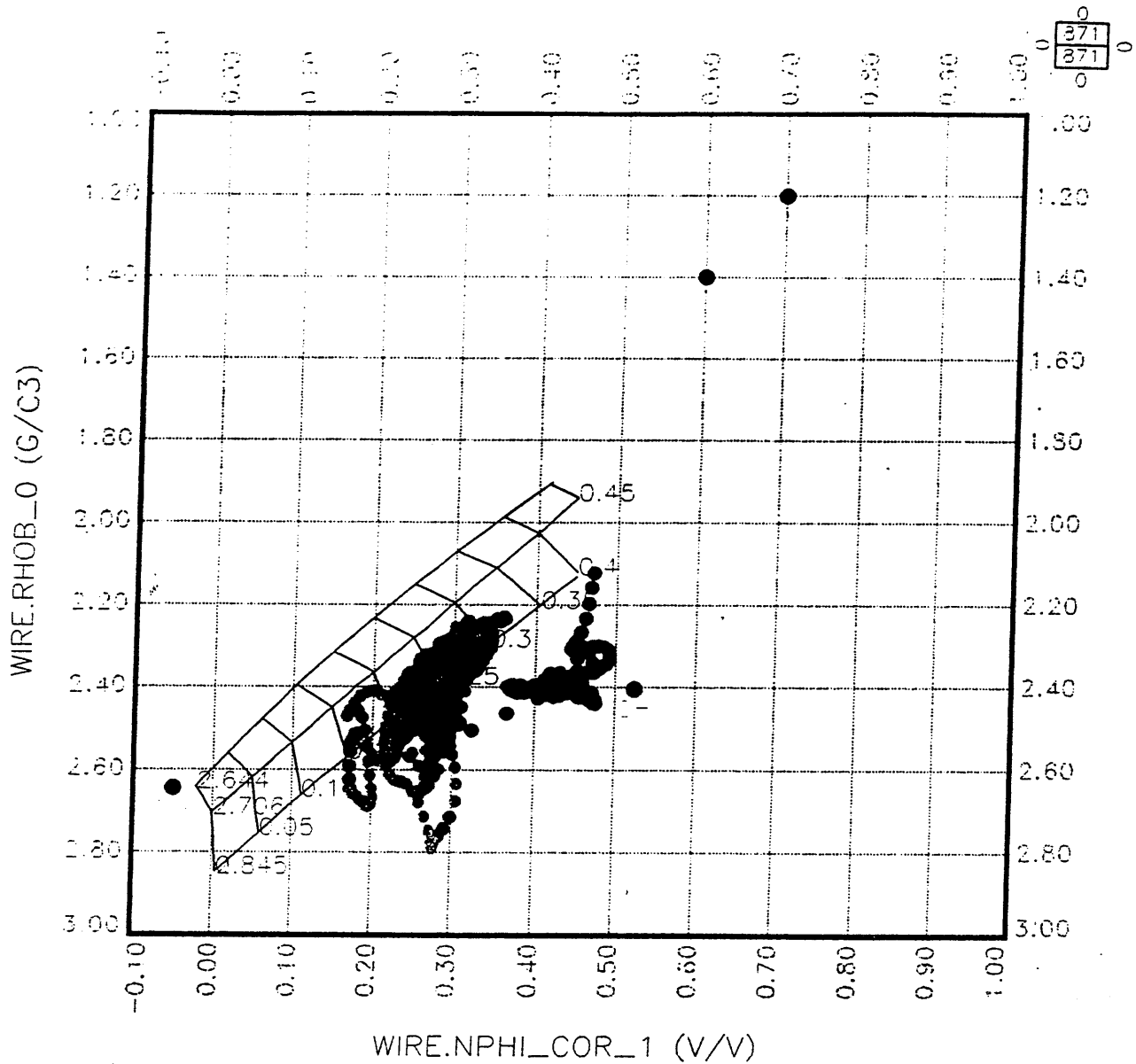
12. REFERENCES


- | | |
|--------------|---|
| Cultus, 1997 | Skull Creek North 1 Preliminary Data Report- unpublished. |
| Cultus, 1997 | Skull Creek West 1 Final Electric Log Interpretation Report- unpublished. |

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

APPENDIX 1: CROSS PLOTS

RHO vs. NPHI Crossplot
Well: SKULL_CREEK_NORTH_1
 1095.0 - 1182.0 METRES
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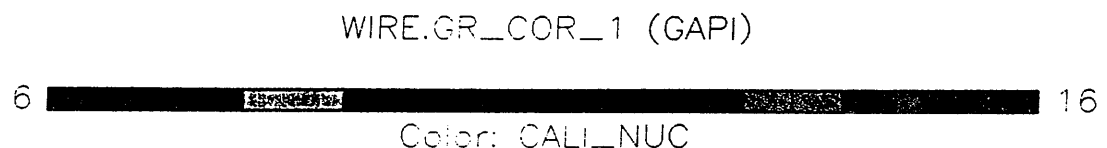
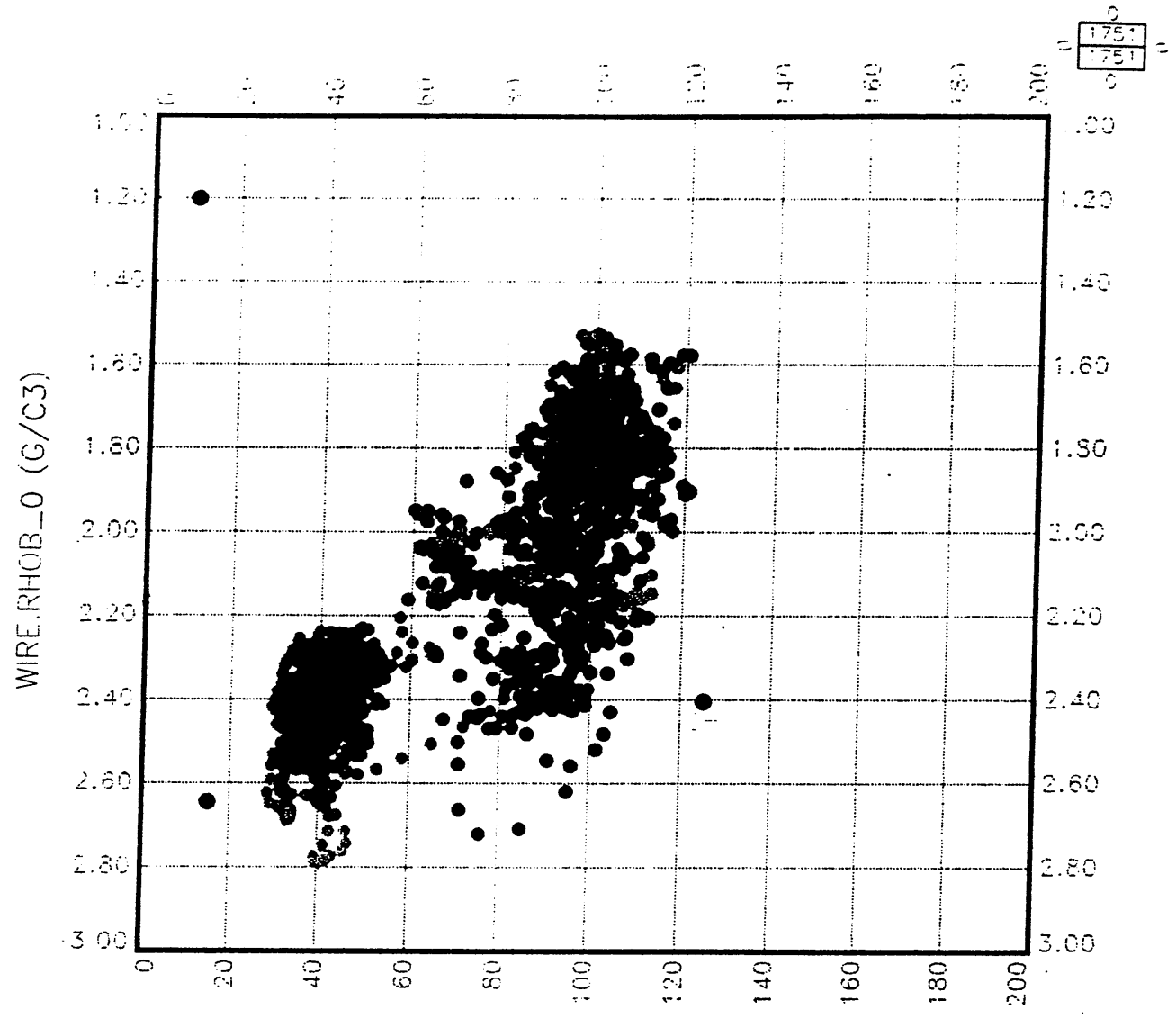


0  150

Color: GR_COR

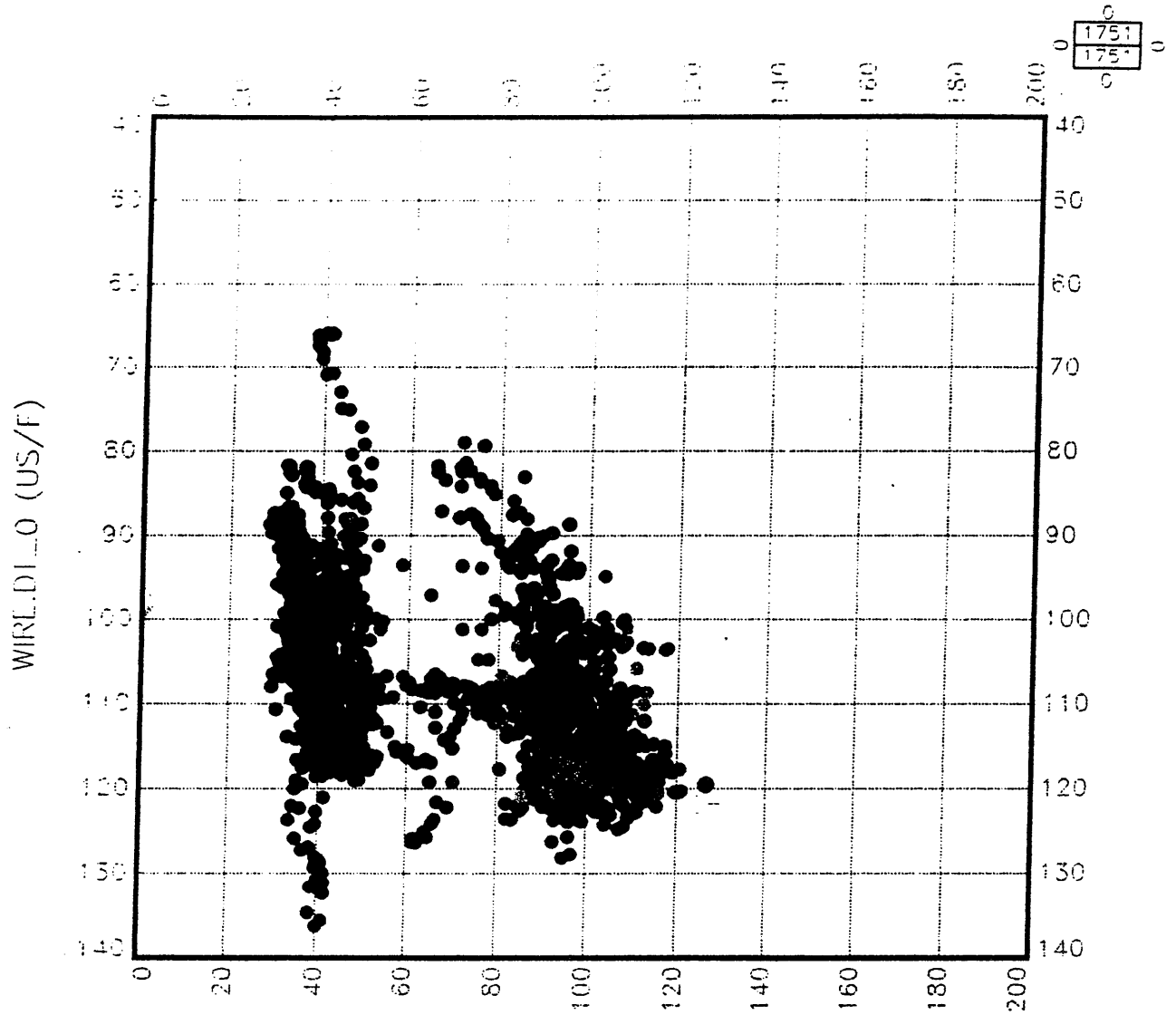
Functions:
 mi_cp1e_p : Pmaa from Litho-Density & CNL (Pf = 1.0 Cf = 0)
 mi_cp1e : Por & Lith determ from Lith-Density & CNL (Pf= 1.0 Cf= 0)

RHO vs. GR Crossplot
Well: SKULL_CREEK_NORTH_1
1095.0 - 1270.0 METRES
Filter:



Functions:

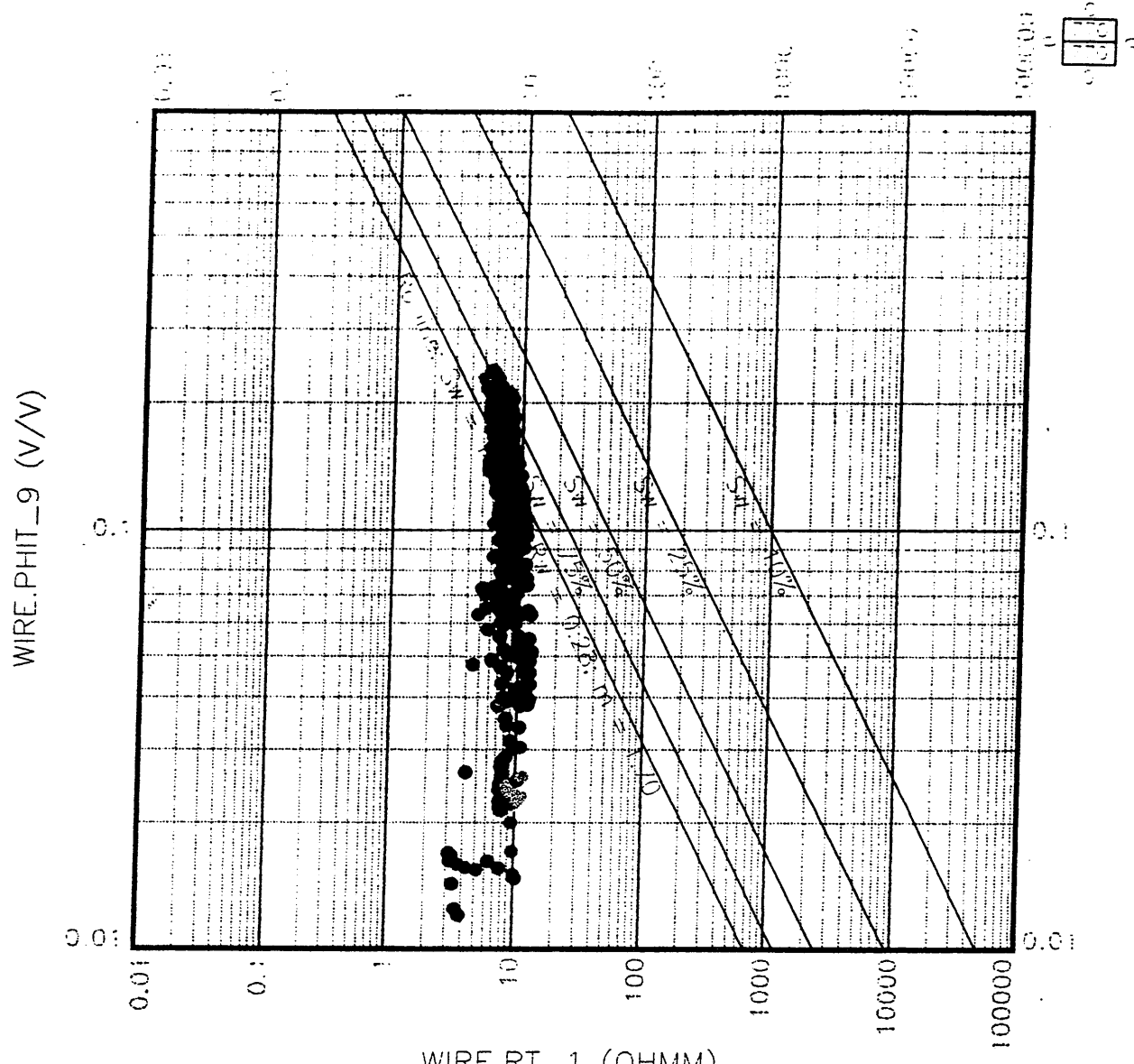
DT vs. GR Crossplot
Well: SKULL_CREEK_NORTH_1
1095.0 - 1270.0 METRES
Filter:



0 16
Color: CALI_DT

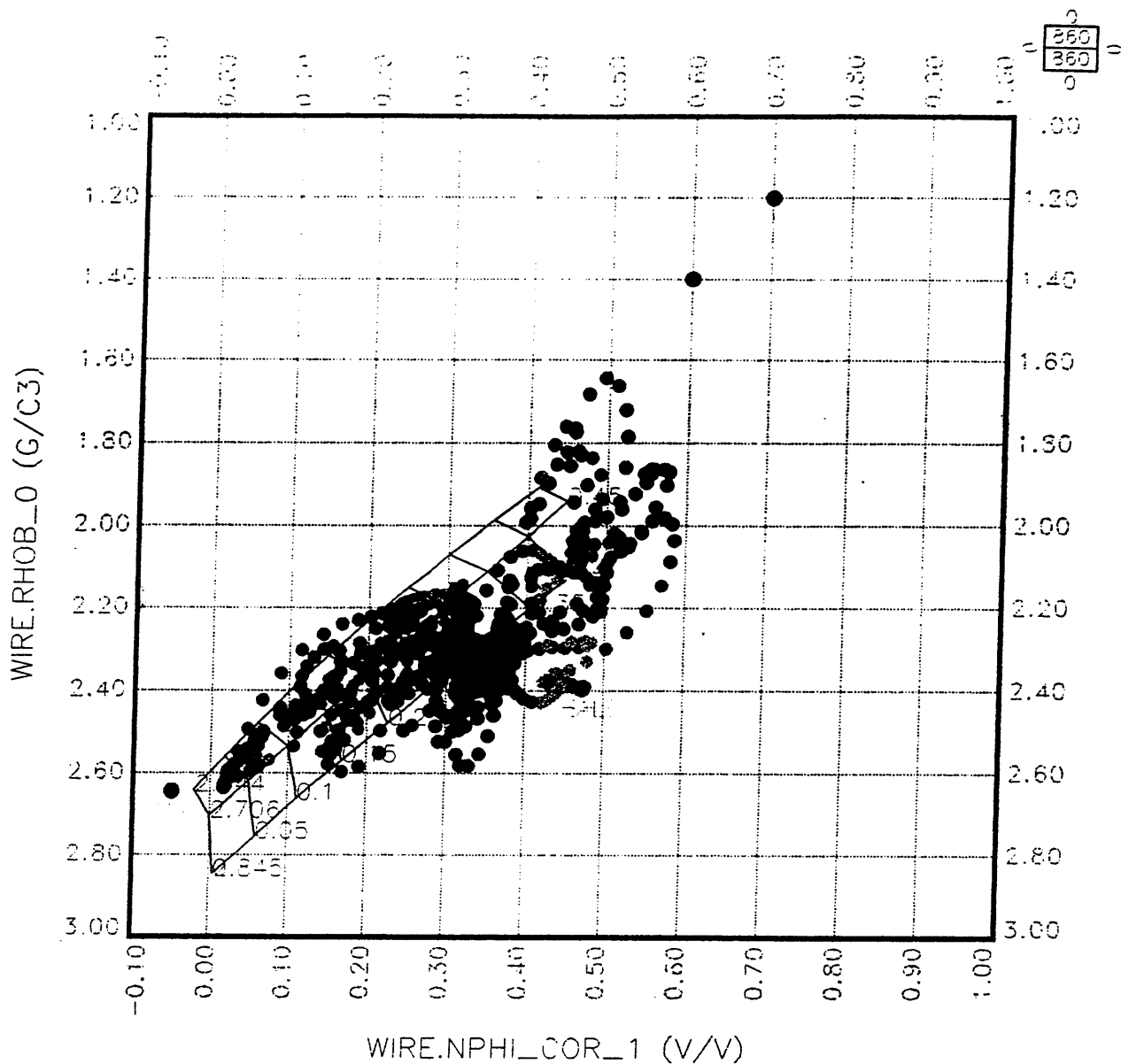
Functions:

PHIT vs. RT Crossplot
Well: SKULL_CREEK_NORTH_1
 Intervals: NULLAWARRE GREENSAND
 Filter:



0	100	0
0	100	0

RHO vs. NPHI Crossplot
Well: SKULL_CREEK_NORTH_1
 Intervals: WAARRE SANDSTONE
 Filter:



Functions:

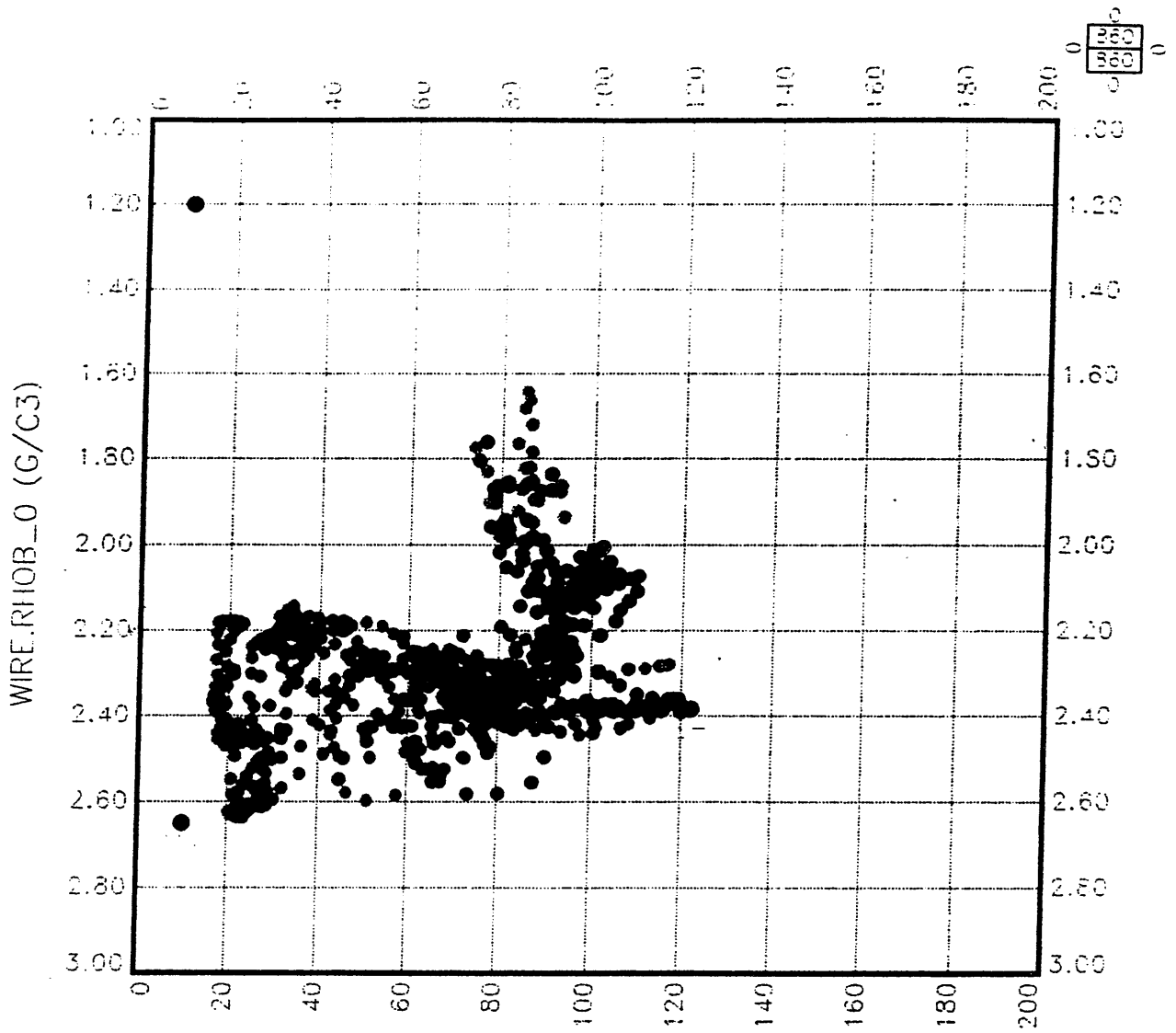
mi_cp1e_p


: Pmaa from Litho-Density & CNL (Pf = 1.0 Cf = 0)

mi_cp1e

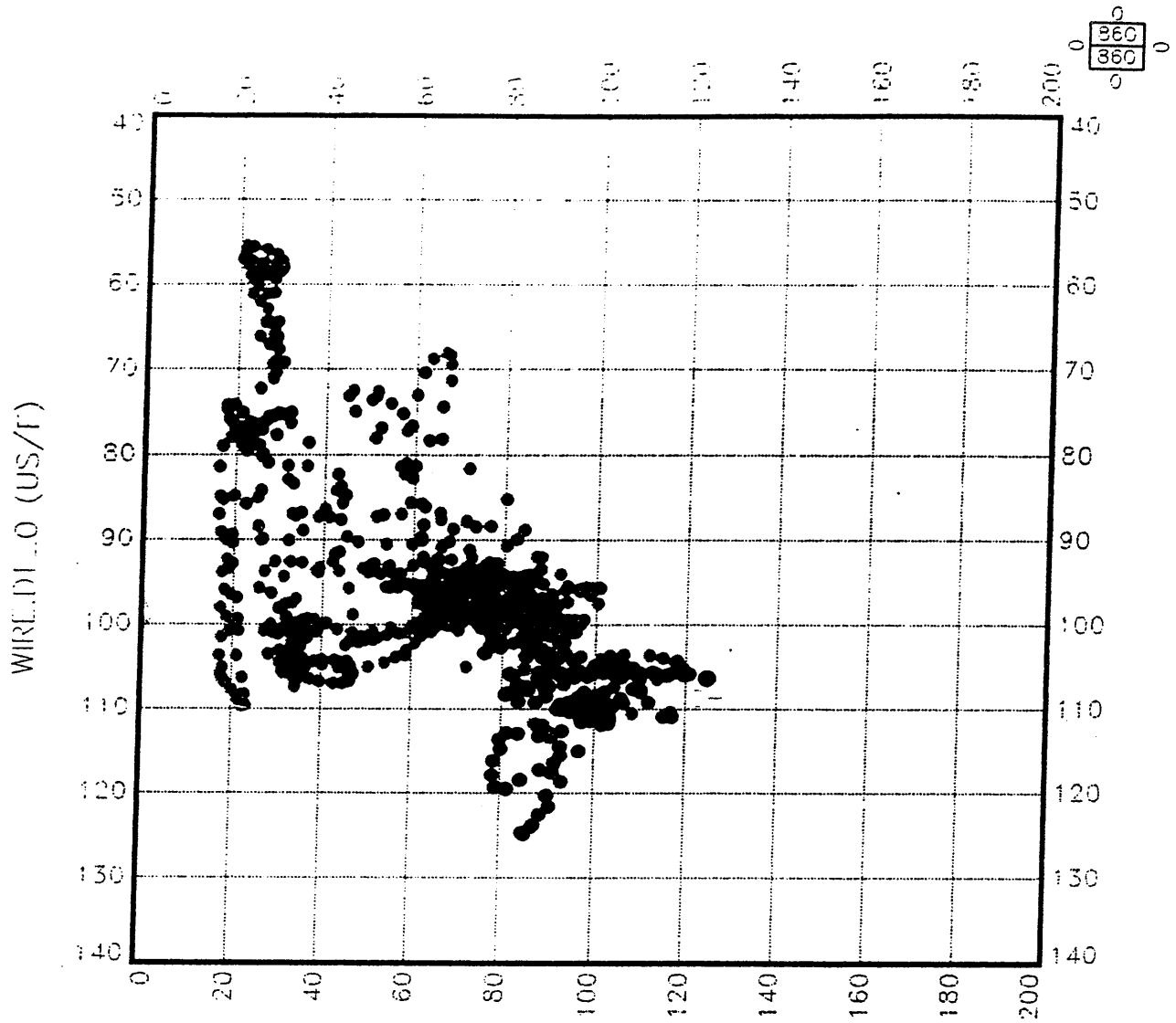
: Por & Lith determ from Lith-Density & CNL (Pf= 1.0 Cf= 0)

RHO vs. GR Crossplot
Well: SKULL_CREEK_NORTH_1
Intervals: WAARRE SANDSTONE
Filter:



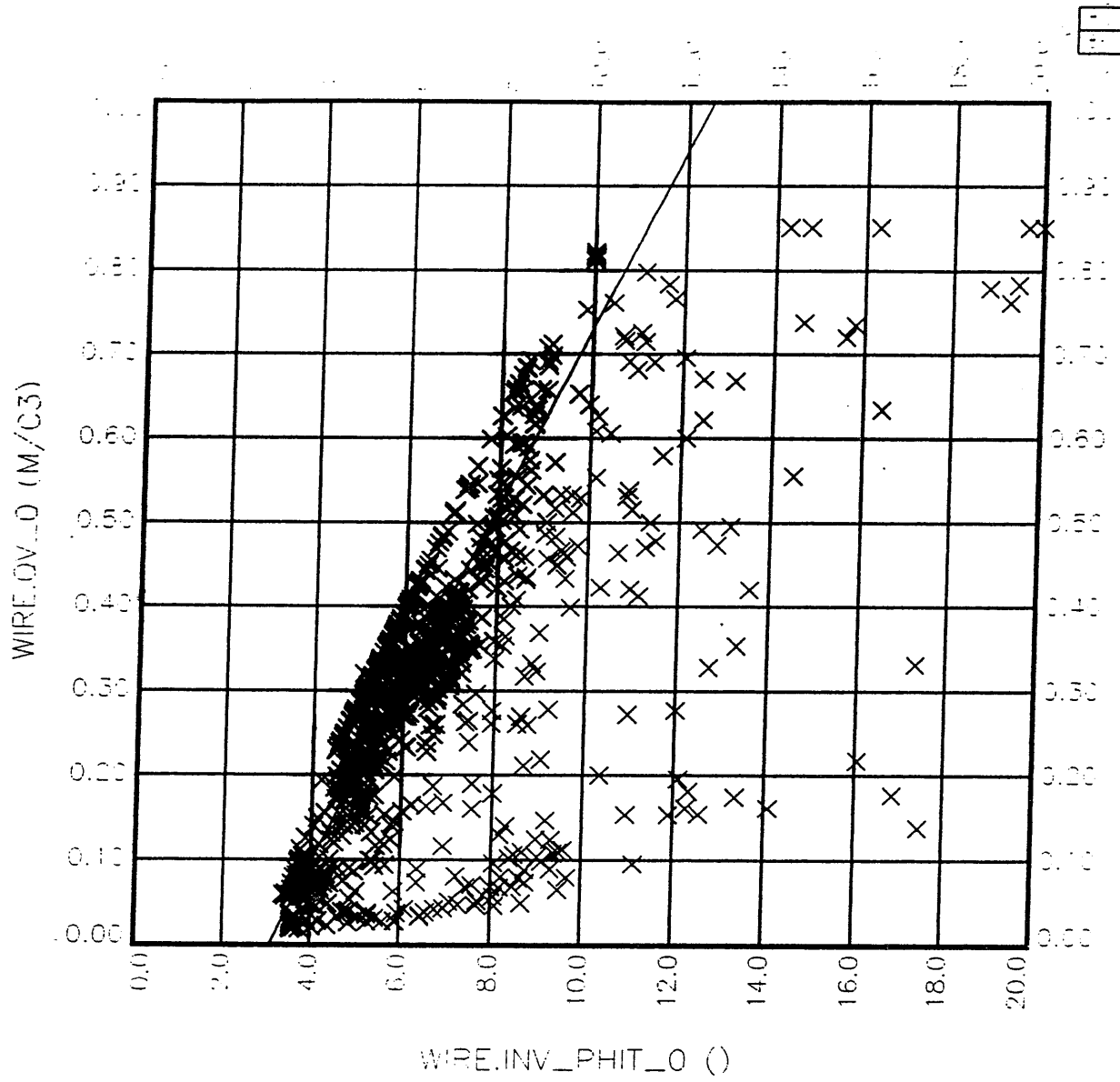
6  16
Color: CALI_NUC
Functions:

DT vs. GR Crossplot
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Intervals: WAARRE SANDSTONE
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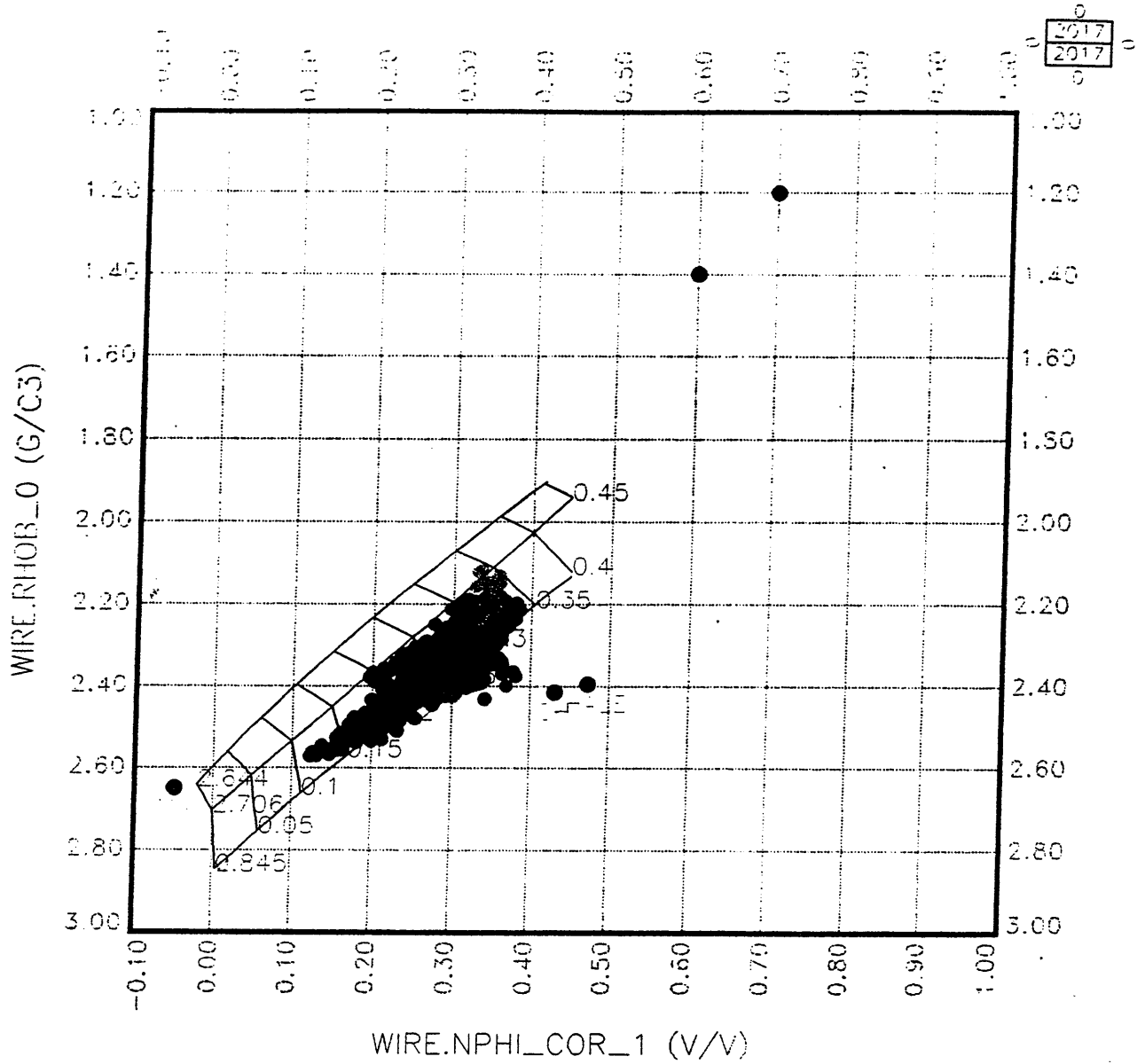



6  16
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Functions:



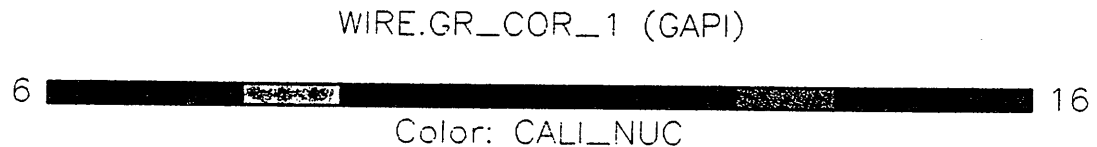
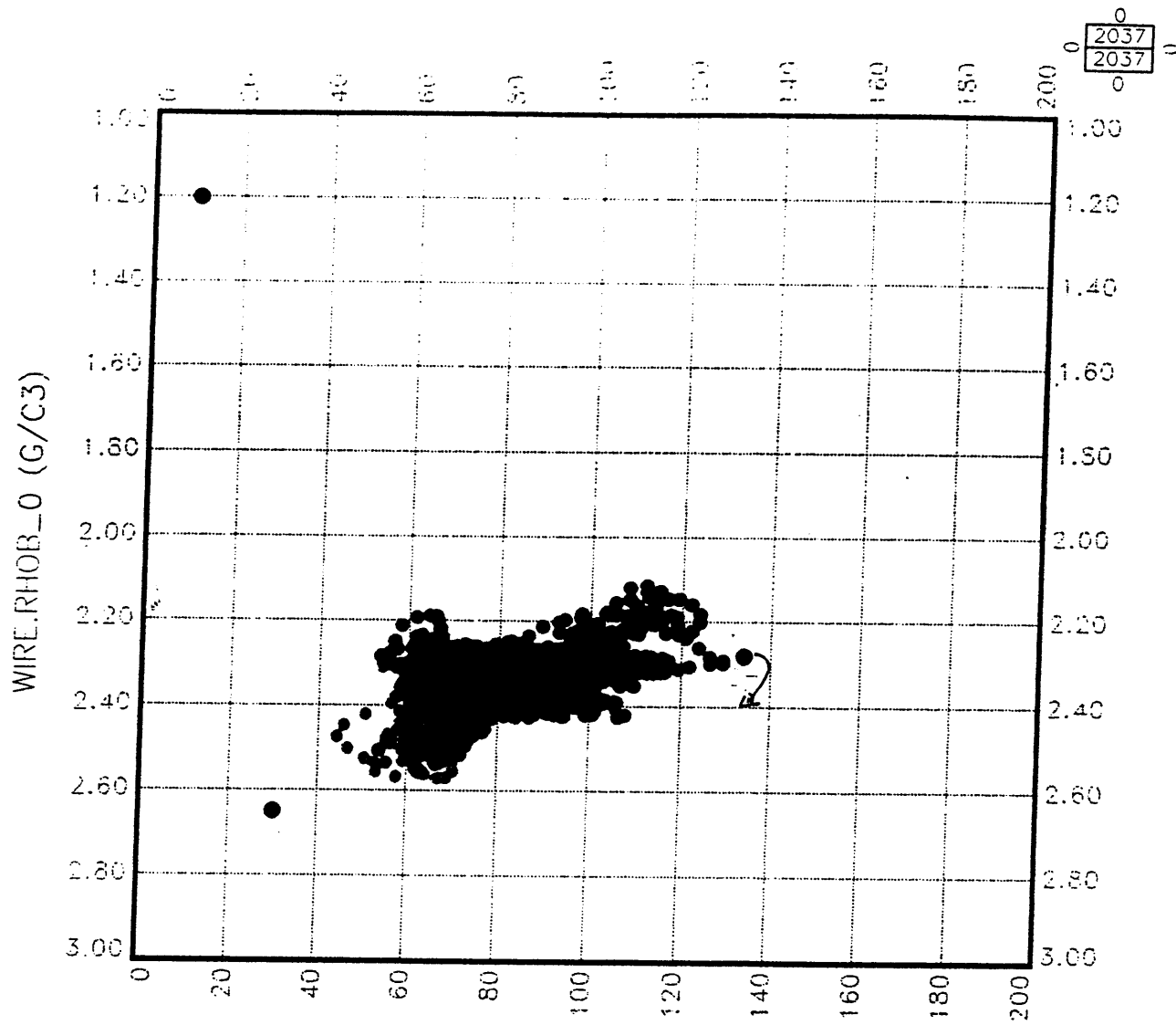
RHO vs. NPHI Crossplot
Well: SKULL_CREEK_NORTH_1
 Intervals: EUMERALLA FORMATION
 Filter:



0  150
 Color: GR_COR

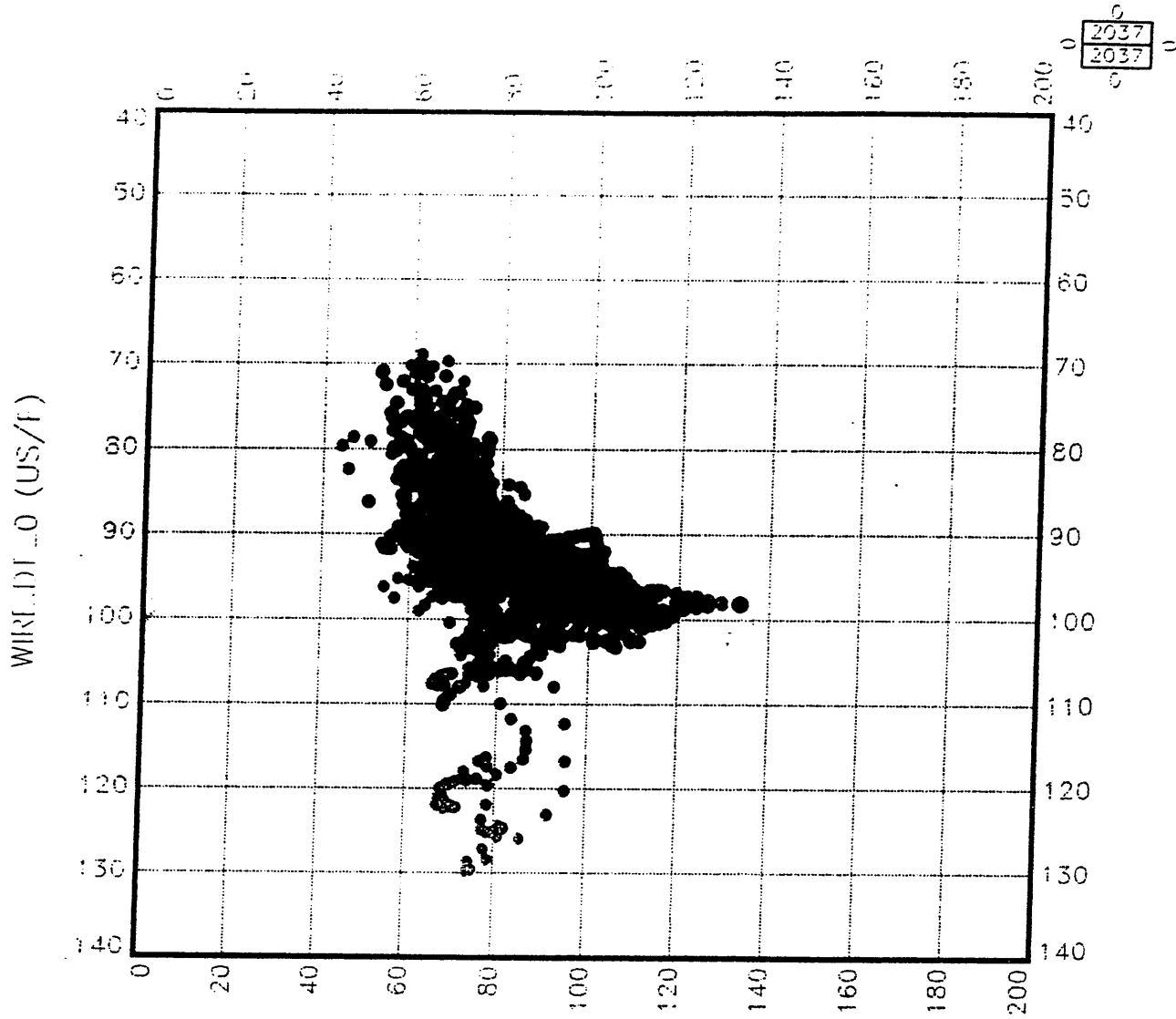
Functions:
 mi_cp1e_p : Pmaa from Lith-Density & CNL (Pf = 1.0 Cf = 0)
 mi_cp1e : Por & Lith determ from Lith-Density & CNL (Pf= 1.0 Cf= 0)


RHO vs. GR Crossplot
Well: SKULL_CREEK_NORTH_1
Intervals: EUMERALLA FORMATION
Filter:



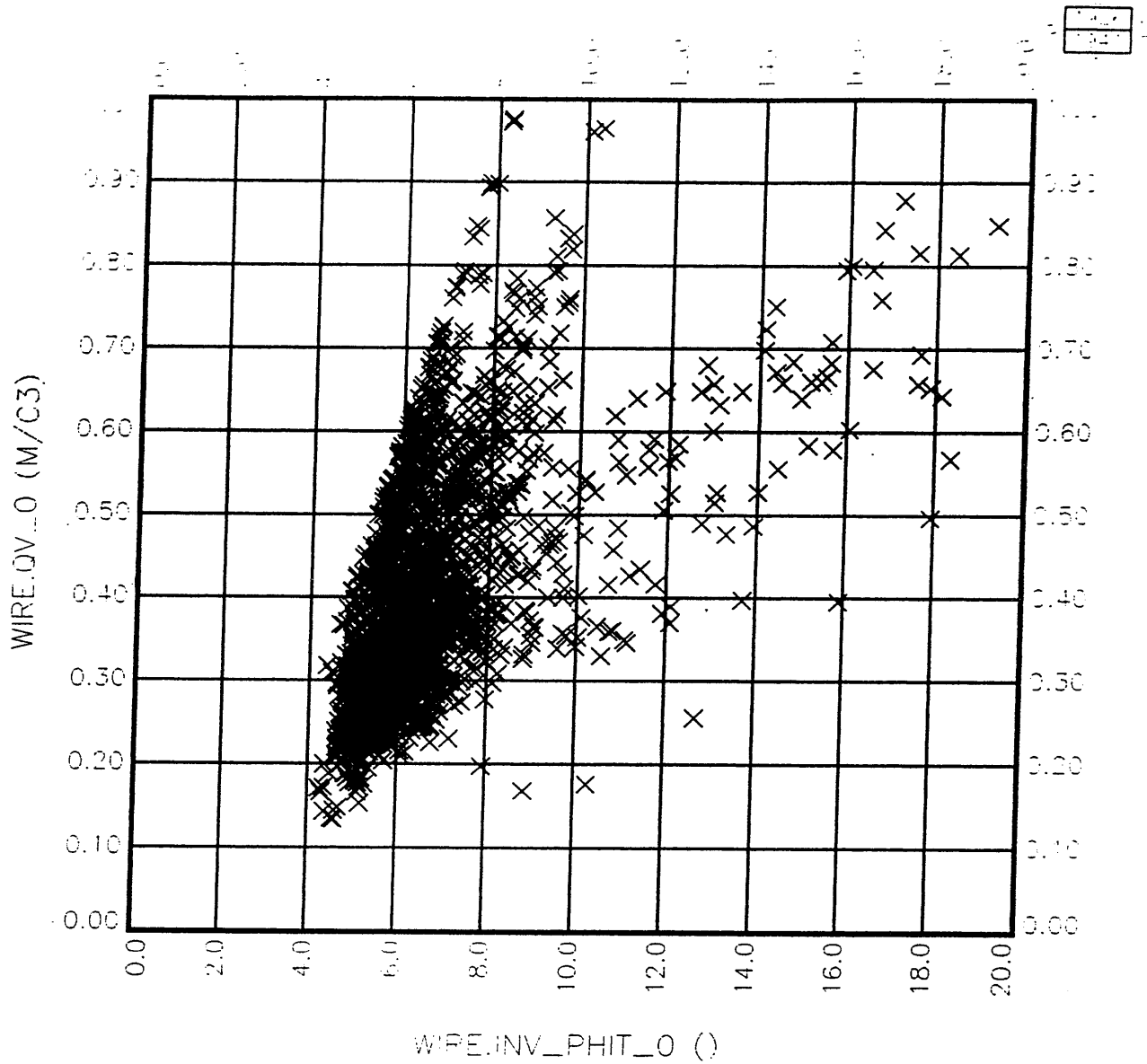
Functions:

DT vs. GR Crossplot
Well: SKULL_CREEK_NORTH_1
Intervals: EUMERALLA FORMATION
Filter:



6  16
Color: CALI_DT
Functions:

WIRE INV PHIT 0
WIRE OV 0 (M/C3)
1980 METR
1980



Functions:

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

APPENDIX 2: NET RESERVOIR DATA

*
* PAY SUMMARY REPORT *
*
* Project : PEP108 *
* User id : minprj *
* Date : 27-Feb-98 13:03:39 *
*

NULL AWARD

WELL: SKULL_CREEK_NORTH_1

Interval name : MULLAWARRE GREENSAND
 Interval top : 1105.000000 METRES
 Interval bottom : 1182.000000 METRES

Cutoff Expression:
 phit>=0.1 & vsh<=0.4

Minimum pay thickness : 1.000000 METRES

Maximum pay separation : 1.000000 METRES

Depth listing for pay depths.
 Summation type is zone.

Depth	Cutoff Logs			Summation			Averages		
	PHIT	SWT	VSH	PHIT	BVW	VSH	PHIT	SWT	VSH
1114.500	0.113	1.000	0.321	0.011	0.011	0.032	0.113	1.000	0.321
1114.600	0.123	1.000	0.300	0.024	0.024	0.062	0.118	1.000	0.311
1114.700	0.128	1.000	0.288	0.036	0.036	0.091	0.121	1.000	0.303
1114.800	0.130	1.000	0.282	0.049	0.049	0.119	0.124	1.000	0.298
1114.900	0.131	1.000	0.279	0.063	0.063	0.147	0.125	1.000	0.294
1115.000	0.130	1.000	0.281	0.076	0.076	0.175	0.126	1.000	0.292
1115.100	0.130	1.000	0.279	0.089	0.089	0.203	0.126	1.000	0.290
1115.200	0.131	1.000	0.277	0.102	0.102	0.231	0.127	1.000	0.288
1115.300	0.130	1.000	0.281	0.115	0.115	0.259	0.127	1.000	0.287
1115.400	0.125	1.000	0.299	0.127	0.127	0.289	0.127	1.000	0.289
1115.500	0.115	1.000	0.330	0.139	0.139	0.322	0.126	1.000	0.292
1115.600	0.098	1.000	0.382	0.149	0.149	0.360	0.124	1.000	0.300
1115.700	0.080	1.000	0.435	0.157	0.157	0.403	0.120	1.000	0.310
1115.800	0.067	1.000	0.476	0.163	0.163	0.451	0.117	1.000	0.322
1115.900	0.064	1.000	0.486	0.170	0.170	0.499	0.113	1.000	0.333
1116.000	0.068	1.000	0.475	0.176	0.176	0.547	0.110	1.000	0.342
1116.100	0.080	1.000	0.444	0.184	0.184	0.591	0.108	1.000	0.348
1116.200	0.094	1.000	0.404	0.194	0.194	0.632	0.108	1.000	0.351
1116.300	0.108	1.000	0.368	0.205	0.205	0.669	0.108	1.000	0.352
1116.400	0.117	1.000	0.347	0.216	0.216	0.703	0.108	1.000	0.352
1116.500	0.124	1.000	0.331	0.229	0.229	0.736	0.109	1.000	0.351
1116.600	0.132	1.000	0.315	0.242	0.242	0.768	0.110	1.000	0.349
1116.700	0.141	1.000	0.293	0.256	0.256	0.797	0.111	1.000	0.347
1116.800	0.146	1.000	0.279	0.271	0.271	0.825	0.113	1.000	0.344
1116.900	0.147	1.000	0.268	0.285	0.285	0.852	0.114	1.000	0.341
1117.000	0.138	1.000	0.279	0.299	0.299	0.880	0.115	1.000	0.338
1117.100	0.123	1.000	0.306	0.311	0.311	0.910	0.115	1.000	0.337
1117.200	0.103	1.000	0.346	0.322	0.322	0.945	0.115	1.000	0.337
2.800				0.322	0.322	0.945	0.115	1.000	0.337
1124.700	0.145	0.912	0.397	0.336	0.335	0.985	0.116	0.996	0.340
1124.800	0.153	0.892	0.371	0.351	0.349	1.022	0.117	0.992	0.341
1124.900	0.163	0.867	0.341	0.368	0.363	1.056	0.119	0.986	0.341
1125.000	0.173	0.831	0.310	0.385	0.377	1.087	0.120	0.979	0.340

1125.100	0.184	0.782	0.278	0.403	0.391	1.115	0.122	0.970	0.338
1125.200	0.195	0.736	0.248	0.423	0.406	1.139	0.124	0.959	0.335
1125.300	0.202	0.706	0.230	0.443	0.420	1.162	0.127	0.948	0.332
1125.400	0.204	0.689	0.224	0.464	0.434	1.185	0.129	0.936	0.329
1125.500	0.203	0.683	0.227	0.484	0.448	1.207	0.131	0.926	0.326
1125.600	0.204	0.680	0.228	0.504	0.462	1.230	0.133	0.916	0.324
1125.700	0.204	0.682	0.235	0.525	0.476	1.254	0.135	0.907	0.321
1125.800	0.207	0.681	0.239	0.545	0.490	1.278	0.136	0.898	0.319
1125.900	0.210	0.686	0.246	0.566	0.504	1.302	0.138	0.890	0.318
1126.000	0.212	0.693	0.248	0.588	0.519	1.327	0.140	0.883	0.316
1126.100	0.214	0.705	0.250	0.609	0.534	1.352	0.142	0.877	0.314
1126.200	0.214	0.715	0.247	0.630	0.549	1.377	0.143	0.871	0.313
1126.300	0.213	0.726	0.240	0.652	0.565	1.401	0.145	0.867	0.311
1126.400	0.210	0.736	0.234	0.673	0.580	1.424	0.146	0.863	0.310
1126.500	0.204	0.748	0.235	0.693	0.596	1.448	0.147	0.859	0.308
1126.600	0.198	0.758	0.243	0.713	0.611	1.472	0.149	0.856	0.307
1126.700	0.191	0.764	0.260	0.732	0.625	1.498	0.149	0.854	0.306
1126.800	0.179	0.783	0.292	0.750	0.639	1.527	0.150	0.852	0.305
1126.900	0.167	0.816	0.329	0.767	0.653	1.560	0.150	0.852	0.306
1127.000	0.150	0.879	0.370	0.782	0.666	1.597	0.150	0.852	0.307
1127.100	0.133	0.968	0.407	0.795	0.679	1.638	0.150	0.854	0.309
1127.200	0.115	1.000	0.444	0.806	0.690	1.682	0.149	0.856	0.312
1127.300	0.102	1.000	0.471	0.817	0.701	1.729	0.148	0.858	0.314
1127.400	0.096	1.000	0.487	0.826	0.710	1.778	0.148	0.860	0.317
1127.500	0.098	1.000	0.490	0.836	0.720	1.827	0.147	0.861	0.321
1127.600	0.104	1.000	0.479	0.846	0.730	1.875	0.146	0.863	0.323
1127.700	0.113	1.000	0.456	0.858	0.742	1.920	0.145	0.865	0.325
1127.800	0.120	1.000	0.431	0.870	0.754	1.964	0.145	0.867	0.327
1127.900	0.125	1.000	0.408	0.882	0.766	2.004	0.145	0.868	0.329
1128.000	0.131	1.000	0.382	0.895	0.779	2.043	0.144	0.870	0.329
1128.100	0.137	0.995	0.359	0.909	0.793	2.078	0.144	0.872	0.330
1128.200	0.144	0.960	0.340	0.923	0.807	2.112	0.144	0.874	0.330
1128.300	0.151	0.918	0.321	0.938	0.820	2.145	0.144	0.874	0.330
1128.400	0.158	0.883	0.304	0.954	0.834	2.175	0.145	0.874	0.330
1128.500	0.163	0.862	0.288	0.970	0.848	2.204	0.145	0.874	0.329
1128.600	0.166	0.851	0.275	0.987	0.863	2.231	0.145	0.874	0.328
1128.700	0.168	0.846	0.262	1.004	0.877	2.258	0.145	0.873	0.327
1128.800	0.167	0.854	0.257	1.020	0.891	2.283	0.146	0.873	0.326
1128.900	0.163	0.873	0.265	1.037	0.905	2.310	0.146	0.873	0.325
1129.000	0.158	0.894	0.283	1.053	0.919	2.338	0.146	0.873	0.325
1129.100	0.152	0.917	0.304	1.068	0.933	2.368	0.146	0.874	0.324
1129.200	0.145	0.949	0.323	1.082	0.947	2.401	0.146	0.875	0.324
1129.300	0.138	0.982	0.337	1.096	0.961	2.434	0.146	0.876	0.325
1129.400	0.132	1.000	0.347	1.109	0.974	2.469	0.146	0.878	0.325
1129.500	0.127	1.000	0.351	1.122	0.986	2.504	0.146	0.879	0.325
1129.600	0.121	1.000	0.362	1.134	0.999	2.540	0.145	0.881	0.326
1129.700	0.121	1.000	0.365	1.146	1.011	2.577	0.145	0.882	0.326
1129.800	0.123	1.000	0.368	1.159	1.023	2.614	0.145	0.883	0.327
1129.900	0.131	1.000	0.356	1.172	1.036	2.649	0.145	0.884	0.327
1130.000	0.139	1.000	0.342	1.186	1.050	2.683	0.145	0.886	0.327
1130.100	0.150	0.946	0.311	1.201	1.064	2.714	0.145	0.886	0.327
1130.200	0.159	0.894	0.283	1.217	1.079	2.743	0.145	0.887	0.327
1130.300	0.169	0.846	0.253	1.233	1.093	2.768	0.145	0.886	0.326
1130.400	0.176	0.821	0.236	1.251	1.107	2.792	0.145	0.885	0.325
1130.500	0.183	0.804	0.226	1.269	1.122	2.814	0.146	0.884	0.323

WELL: SKULL_CREEK_NORTH_1

1130.600	0.187	0.795	0.229	1.288	1.137	2.837	0.146	0.883	0.322
1130.700	0.189	0.792	0.243	1.307	1.152	2.861	0.147	0.881	0.322
1130.800	0.189	0.797	0.256	1.326	1.167	2.887	0.147	0.880	0.321
1130.900	0.187	0.806	0.262	1.344	1.182	2.913	0.148	0.879	0.320
1131.000	0.183	0.814	0.261	1.363	1.197	2.939	0.148	0.878	0.319
1131.100	0.179	0.825	0.259	1.381	1.212	2.965	0.148	0.878	0.319
1131.200	0.175	0.843	0.257	1.398	1.226	2.991	0.149	0.877	0.318
1131.300	0.173	0.854	0.259	1.416	1.241	3.017	0.149	0.877	0.318
1131.400	0.170	0.863	0.267	1.433	1.256	3.043	0.149	0.877	0.317
1131.500	0.167	0.872	0.277	1.449	1.270	3.071	0.149	0.877	0.317
1131.600	0.162	0.893	0.286	1.466	1.285	3.100	0.150	0.877	0.316
1131.700	0.156	0.924	0.295	1.481	1.299	3.129	0.150	0.877	0.316
1131.800	0.150	0.956	0.302	1.496	1.314	3.159	0.150	0.878	0.316
1131.900	0.147	0.977	0.305	1.511	1.328	3.190	0.150	0.879	0.316
1132.000	0.148	0.987	0.304	1.526	1.343	3.220	0.150	0.880	0.316
1132.100	0.148	0.997	0.308	1.540	1.357	3.251	0.150	0.881	0.316
1132.200	0.149	0.995	0.310	1.555	1.372	3.282	0.150	0.882	0.316
1132.300	0.148	1.000	0.314	1.570	1.387	3.313	0.150	0.883	0.316
1132.400	0.147	1.000	0.317	1.585	1.402	3.345	0.150	0.884	0.316
1132.500	0.146	1.000	0.318	1.599	1.416	3.377	0.149	0.886	0.316
1132.600	0.147	1.000	0.312	1.614	1.431	3.408	0.149	0.887	0.316
1132.700	0.147	1.000	0.304	1.629	1.446	3.439	0.149	0.888	0.315
1132.800	0.143	1.000	0.304	1.643	1.460	3.469	0.149	0.889	0.315
1132.900	0.137	1.000	0.312	1.657	1.474	3.500	0.149	0.890	0.315
1133.000	0.131	1.000	0.323	1.670	1.487	3.533	0.149	0.890	0.315
1133.100	0.126	1.000	0.333	1.682	1.499	3.566	0.149	0.891	0.316
1133.200	0.126	1.000	0.339	1.695	1.512	3.600	0.149	0.892	0.316
1133.300	0.133	1.000	0.331	1.708	1.525	3.633	0.149	0.893	0.316
1133.400	0.145	1.000	0.310	1.723	1.540	3.664	0.149	0.894	0.316
1133.500	0.155	0.978	0.286	1.738	1.555	3.693	0.149	0.894	0.316
1133.600	0.160	0.957	0.270	1.754	1.570	3.720	0.149	0.895	0.315
1133.700	0.158	0.967	0.267	1.770	1.586	3.746	0.149	0.896	0.315
1133.800	0.150	1.000	0.278	1.785	1.601	3.774	0.149	0.897	0.314
1133.900	0.139	1.000	0.294	1.799	1.614	3.803	0.149	0.897	0.314
1134.000	0.126	1.000	0.316	1.812	1.627	3.835	0.148	0.898	0.314
1134.100	0.117	1.000	0.332	1.823	1.639	3.868	0.148	0.899	0.314
1134.200	0.112	1.000	0.340	1.835	1.650	3.902	0.148	0.899	0.315
1134.300	0.113	1.000	0.339	1.846	1.661	3.936	0.148	0.900	0.315
1134.400	0.117	1.000	0.329	1.858	1.673	3.969	0.147	0.901	0.315
1134.500	0.123	1.000	0.316	1.870	1.685	4.001	0.147	0.901	0.315
1134.600	0.129	1.000	0.300	1.883	1.698	4.031	0.147	0.902	0.315
1134.700	0.136	1.000	0.282	1.896	1.712	4.059	0.147	0.903	0.315
1134.800	0.138	1.000	0.275	1.910	1.725	4.086	0.147	0.903	0.314
1134.900	0.137	1.000	0.277	1.924	1.739	4.114	0.147	0.904	0.314
1135.000	0.132	1.000	0.290	1.937	1.752	4.143	0.147	0.905	0.314
1135.100	0.128	1.000	0.301	1.950	1.765	4.173	0.147	0.905	0.314
1135.200	0.127	1.000	0.303	1.962	1.778	4.203	0.146	0.906	0.314
1135.300	0.136	1.000	0.283	1.976	1.791	4.232	0.146	0.907	0.313
1135.400	0.147	0.999	0.262	1.991	1.806	4.258	0.146	0.907	0.313
1135.500	0.157	0.950	0.247	2.007	1.821	4.283	0.146	0.908	0.313
1135.600	0.161	0.925	0.249	2.023	1.836	4.308	0.147	0.908	0.312
1135.700	0.159	0.924	0.261	2.038	1.851	4.334	0.147	0.908	0.312
1135.800	0.152	0.956	0.282	2.054	1.865	4.362	0.147	0.908	0.312
1135.900	0.148	0.975	0.296	2.069	1.880	4.391	0.147	0.909	0.311
1136.000	0.146	0.984	0.308	2.083	1.894	4.422	0.147	0.909	0.311

WELL: SKULL_CREEK_NORTH_1

1136.100	0.149	0.969	0.306	2.098	1.908	4.453	0.147	0.910	0.311
1136.200	0.147	0.993	0.318	2.113	1.923	4.485	0.147	0.910	0.311
1136.300	0.142	1.000	0.334	2.127	1.937	4.518	0.147	0.911	0.312
1136.400	0.136	1.000	0.350	2.141	1.951	4.553	0.147	0.911	0.312
1136.500	0.133	1.000	0.355	2.154	1.964	4.589	0.147	0.912	0.312
1136.600	0.131	1.000	0.359	2.167	1.977	4.624	0.146	0.912	0.312
1136.700	0.131	1.000	0.365	2.180	1.990	4.661	0.146	0.913	0.313
1136.800	0.131	1.000	0.375	2.193	2.003	4.698	0.146	0.914	0.313
1136.900	0.125	1.000	0.398	2.206	2.016	4.738	0.146	0.914	0.314
1137.000	0.113	1.000	0.437	2.217	2.027	4.782	0.146	0.914	0.315
1137.100	0.098	1.000	0.479	2.227	2.037	4.830	0.146	0.915	0.316
1137.200	0.092	1.000	0.496	2.236	2.046	4.879	0.145	0.915	0.317
1137.300	0.095	1.000	0.491	2.245	2.056	4.929	0.145	0.916	0.318
1137.400	0.109	1.000	0.460	2.256	2.067	4.975	0.145	0.916	0.319
1137.500	0.130	1.000	0.417	2.269	2.080	5.016	0.145	0.916	0.320
1137.600	0.151	0.967	0.374	2.284	2.094	5.054	0.145	0.917	0.320
1137.700	0.164	0.928	0.356	2.301	2.109	5.089	0.145	0.917	0.320
1137.800	0.169	0.919	0.353	2.318	2.125	5.125	0.145	0.917	0.320
1137.900	0.168	0.940	0.367	2.334	2.141	5.161	0.145	0.917	0.321
1138.000	0.163	0.970	0.377	2.351	2.157	5.199	0.145	0.917	0.321
1138.100	0.160	0.992	0.379	2.367	2.172	5.237	0.145	0.918	0.321
1138.200	0.162	0.984	0.363	2.383	2.188	5.273	0.145	0.918	0.322
1138.300	0.164	0.977	0.346	2.399	2.204	5.308	0.145	0.919	0.322
1138.400	0.167	0.965	0.329	2.416	2.221	5.341	0.146	0.919	0.322
1138.500	0.168	0.953	0.321	2.433	2.237	5.373	0.146	0.919	0.322
1138.600	0.163	0.962	0.334	2.449	2.252	5.406	0.146	0.920	0.322
1138.700	0.149	1.000	0.376	2.464	2.267	5.444	0.146	0.920	0.322
14.100				2.142	1.945	4.499	0.152	0.908	0.319
1141.400	0.134	0.985	0.397	2.478	2.280	5.484	0.146	0.920	0.323
1141.500	0.137	0.941	0.364	2.491	2.293	5.520	0.146	0.921	0.323
1141.600	0.141	0.916	0.340	2.505	2.306	5.554	0.146	0.920	0.323
1141.700	0.146	0.902	0.326	2.520	2.319	5.587	0.146	0.920	0.323
1141.800	0.150	0.904	0.324	2.535	2.333	5.619	0.146	0.920	0.323
1141.900	0.150	0.931	0.336	2.550	2.347	5.653	0.146	0.920	0.323
1142.000	0.150	0.947	0.338	2.565	2.361	5.687	0.146	0.921	0.323
1142.100	0.153	0.948	0.333	2.580	2.376	5.720	0.146	0.921	0.323
1142.200	0.159	0.928	0.317	2.596	2.390	5.752	0.146	0.921	0.323
1142.300	0.165	0.902	0.301	2.613	2.405	5.782	0.146	0.921	0.323
1142.400	0.171	0.873	0.285	2.630	2.420	5.810	0.146	0.920	0.323
1142.500	0.173	0.852	0.281	2.647	2.435	5.838	0.146	0.920	0.323
1142.600	0.171	0.845	0.289	2.664	2.449	5.867	0.146	0.919	0.322
1142.700	0.163	0.858	0.312	2.681	2.463	5.898	0.146	0.919	0.322
1142.800	0.154	0.865	0.335	2.696	2.477	5.932	0.147	0.919	0.322
1142.900	0.143	0.885	0.365	2.710	2.489	5.968	0.147	0.919	0.323
1143.000	0.134	0.910	0.388	2.724	2.502	6.007	0.146	0.918	0.323
1143.100	0.121	0.979	0.416	2.736	2.514	6.049	0.146	0.919	0.323
1143.200	0.109	1.000	0.442	2.747	2.524	6.093	0.146	0.919	0.324
1143.300	0.101	1.000	0.459	2.757	2.535	6.139	0.146	0.919	0.325
1143.400	0.104	1.000	0.453	2.767	2.545	6.184	0.146	0.920	0.325
1143.500	0.116	1.000	0.424	2.779	2.557	6.227	0.145	0.920	0.326
1143.600	0.138	0.940	0.373	2.793	2.570	6.264	0.145	0.920	0.326
1143.700	0.162	0.840	0.319	2.809	2.583	6.296	0.146	0.920	0.326

WELL: SKULL_CREEK_NORTH_1

1143.800	0.179	0.789	0.284	2.827	2.597	6.324	0.146	0.919	0.326
1143.900	0.180	0.802	0.288	2.845	2.612	6.353	0.146	0.918	0.326
1144.000	0.167	0.868	0.323	2.862	2.626	6.385	0.146	0.918	0.326
1144.100	0.147	0.975	0.372	2.876	2.641	6.422	0.146	0.918	0.326
1144.200	0.127	1.000	0.416	2.889	2.653	6.464	0.146	0.918	0.326
1144.300	0.117	1.000	0.432	2.901	2.665	6.507	0.146	0.919	0.327
1144.400	0.117	1.000	0.425	2.912	2.677	6.550	0.146	0.919	0.327
1144.500	0.124	1.000	0.403	2.925	2.689	6.590	0.146	0.919	0.328
1144.600	0.135	1.000	0.374	2.938	2.703	6.627	0.145	0.920	0.328
1144.700	0.146	1.000	0.351	2.953	2.717	6.662	0.145	0.920	0.328
1144.800	0.151	1.000	0.339	2.968	2.732	6.696	0.145	0.921	0.328
1144.900	0.154	1.000	0.335	2.984	2.748	6.730	0.146	0.921	0.328
1145.000	0.158	1.000	0.329	2.999	2.764	6.763	0.146	0.921	0.328
1145.100	0.161	0.999	0.325	3.015	2.780	6.795	0.146	0.922	0.328
1145.200	0.165	0.981	0.316	3.032	2.796	6.827	0.146	0.922	0.328
1145.300	0.169	0.963	0.307	3.049	2.812	6.858	0.146	0.922	0.328
1145.400	0.170	0.954	0.302	3.066	2.828	6.888	0.146	0.923	0.328
1145.500	0.169	0.961	0.307	3.083	2.845	6.918	0.146	0.923	0.328
1145.600	0.167	0.973	0.313	3.099	2.861	6.950	0.146	0.923	0.328
1145.700	0.167	0.980	0.317	3.116	2.877	6.981	0.146	0.923	0.328
1145.800	0.166	0.990	0.320	3.133	2.894	7.013	0.146	0.924	0.328
1145.900	0.169	0.974	0.313	3.150	2.910	7.045	0.146	0.924	0.328
1146.000	0.175	0.947	0.304	3.167	2.927	7.075	0.147	0.924	0.328
1146.100	0.177	0.931	0.303	3.185	2.943	7.105	0.147	0.924	0.327
1146.200	0.171	0.953	0.319	3.202	2.960	7.137	0.147	0.924	0.327
1146.300	0.159	1.000	0.343	3.218	2.975	7.172	0.147	0.925	0.327
1146.400	0.141	1.000	0.374	3.232	2.990	7.209	0.147	0.925	0.328

5.100				0.768	0.722	1.765	0.151	0.941	0.346
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1149.800	0.139	1.000	0.392	3.246	3.004	7.248	0.147	0.925	0.328
1149.900	0.147	0.978	0.368	3.261	3.018	7.285	0.147	0.926	0.328
1150.000	0.154	0.957	0.348	3.276	3.033	7.320	0.147	0.926	0.328
1150.100	0.160	0.941	0.328	3.292	3.048	7.353	0.147	0.926	0.328
1150.200	0.163	0.937	0.319	3.308	3.063	7.384	0.147	0.926	0.328
1150.300	0.170	0.915	0.306	3.325	3.079	7.415	0.147	0.926	0.328
1150.400	0.176	0.891	0.303	3.343	3.094	7.445	0.147	0.926	0.328
1150.500	0.183	0.860	0.294	3.361	3.110	7.475	0.147	0.925	0.328
1150.600	0.183	0.854	0.298	3.380	3.126	7.505	0.148	0.925	0.328
1150.700	0.181	0.856	0.297	3.398	3.141	7.534	0.148	0.924	0.328
1150.800	0.174	0.881	0.300	3.415	3.156	7.564	0.148	0.924	0.327
1150.900	0.166	0.915	0.298	3.432	3.172	7.594	0.148	0.924	0.327
1151.000	0.159	0.949	0.291	3.448	3.187	7.623	0.148	0.924	0.327
1151.100	0.155	0.980	0.281	3.463	3.202	7.651	0.148	0.925	0.327
1151.200	0.151	1.000	0.271	3.478	3.217	7.679	0.148	0.925	0.327
1151.300	0.146	1.000	0.272	3.493	3.232	7.706	0.148	0.925	0.327
1151.400	0.141	1.000	0.283	3.507	3.246	7.734	0.148	0.926	0.326
1151.500	0.126	1.000	0.311	3.519	3.258	7.765	0.148	0.926	0.326
1151.600	0.107	1.000	0.345	3.530	3.269	7.800	0.148	0.926	0.326

1.900				0.298	0.279	0.591	0.157	0.937	0.311
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1156.700	0.152	0.958	0.385	3.545	3.283	7.838	0.148	0.926	0.327
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WELL: SKULL_CREEK_NORTH_1

1156.800	0.150	0.960	0.377	3.560	3.298	7.876	0.148	0.926	0.327
1156.900	0.144	0.985	0.379	3.575	3.312	7.914	0.148	0.927	0.327
1157.000	0.135	1.000	0.388	3.588	3.325	7.952	0.148	0.927	0.327
1157.100	0.130	1.000	0.393	3.601	3.338	7.992	0.148	0.927	0.328
1157.200	0.133	1.000	0.383	3.614	3.352	8.030	0.148	0.927	0.328
1157.300	0.144	0.935	0.355	3.629	3.365	8.066	0.148	0.927	0.328
1157.400	0.161	0.849	0.315	3.645	3.379	8.097	0.148	0.927	0.328
1157.500	0.177	0.788	0.280	3.663	3.393	8.125	0.148	0.926	0.328
1157.600	0.188	0.754	0.264	3.681	3.407	8.151	0.148	0.925	0.327
1157.700	0.193	0.741	0.276	3.701	3.421	8.179	0.148	0.924	0.327
1157.800	0.192	0.739	0.306	3.720	3.436	8.210	0.148	0.924	0.327
1157.900	0.190	0.745	0.343	3.739	3.450	8.244	0.148	0.923	0.327
1158.000	0.186	0.755	0.373	3.758	3.464	8.281	0.149	0.922	0.327
1158.100	0.182	0.767	0.390	3.776	3.478	8.320	0.149	0.921	0.328
1158.200	0.179	0.775	0.392	3.794	3.492	8.359	0.149	0.920	0.328
1158.300	0.179	0.780	0.387	3.812	3.505	8.398	0.149	0.920	0.328
1158.400	0.182	0.775	0.377	3.830	3.520	8.436	0.149	0.919	0.328
1158.500	0.186	0.764	0.370	3.848	3.534	8.473	0.149	0.918	0.328
1158.600	0.191	0.749	0.362	3.867	3.548	8.509	0.149	0.917	0.329
1158.700	0.194	0.742	0.356	3.887	3.562	8.545	0.149	0.917	0.329
1158.800	0.195	0.747	0.350	3.906	3.577	8.580	0.150	0.916	0.329
1158.900	0.189	0.778	0.354	3.925	3.592	8.615	0.150	0.915	0.329
1159.000	0.183	0.810	0.357	3.944	3.607	8.651	0.150	0.915	0.329
1159.100	0.176	0.853	0.366	3.961	3.622	8.687	0.150	0.914	0.329
1159.200	0.171	0.882	0.372	3.978	3.637	8.725	0.150	0.914	0.329
1159.300	0.164	0.909	0.383	3.995	3.651	8.763	0.150	0.914	0.329
1159.400	0.159	0.918	0.390	4.010	3.666	8.802	0.150	0.914	0.330
1159.500	0.153	0.930	0.401	4.026	3.680	8.842	0.150	0.914	0.330
1159.600	0.151	0.924	0.401	4.041	3.694	8.882	0.150	0.914	0.330
1159.700	0.152	0.915	0.398	4.056	3.708	8.922	0.150	0.914	0.330
1159.800	0.161	0.880	0.375	4.072	3.722	8.959	0.150	0.914	0.331
1159.900	0.174	0.840	0.346	4.090	3.737	8.994	0.150	0.914	0.331
1160.000	0.188	0.800	0.312	4.108	3.752	9.025	0.150	0.913	0.331
1160.100	0.200	0.771	0.284	4.128	3.768	9.054	0.151	0.913	0.330
1160.200	0.206	0.754	0.271	4.149	3.783	9.081	0.151	0.912	0.330
1160.300	0.207	0.744	0.272	4.170	3.798	9.108	0.151	0.911	0.330
1160.400	0.205	0.731	0.277	4.190	3.813	9.136	0.151	0.910	0.330
1160.500	0.202	0.726	0.286	4.211	3.828	9.164	0.151	0.909	0.330
1160.600	0.200	0.724	0.297	4.231	3.843	9.194	0.152	0.908	0.330
1160.700	0.198	0.723	0.308	4.250	3.857	9.225	0.152	0.907	0.329
1160.800	0.198	0.724	0.316	4.270	3.871	9.256	0.152	0.907	0.329
1160.900	0.199	0.733	0.319	4.290	3.886	9.288	0.152	0.906	0.329
1161.000	0.200	0.744	0.321	4.310	3.901	9.320	0.152	0.905	0.329
1161.100	0.200	0.756	0.324	4.330	3.916	9.353	0.152	0.904	0.329
1161.200	0.200	0.771	0.322	4.350	3.931	9.385	0.153	0.904	0.329
1161.300	0.195	0.798	0.329	4.370	3.947	9.418	0.153	0.903	0.329
1161.400	0.179	0.849	0.362	4.387	3.962	9.454	0.153	0.903	0.329

4.800				0.857	0.693	1.655	0.179	0.808	0.345
1163.000	0.164	0.888	0.357	4.404	3.977	9.490	0.153	0.903	0.330
1163.100	0.187	0.802	0.324	4.423	3.992	9.522	0.153	0.903	0.329
1163.200	0.201	0.756	0.309	4.443	4.007	9.553	0.153	0.902	0.329
1163.300	0.206	0.740	0.316	4.463	4.022	9.585	0.153	0.901	0.329

WELL: SKULL_CREEK_NORTH_1

1163.400	0.206	0.738	0.330	4.484	4.037	9.618	0.154	0.900	0.329
1163.500	0.205	0.737	0.342	4.504	4.052	9.652	0.154	0.900	0.329
1163.600	0.204	0.743	0.351	4.525	4.068	9.687	0.154	0.899	0.329
1163.700	0.205	0.751	0.349	4.545	4.083	9.722	0.154	0.898	0.330
1163.800	0.206	0.763	0.344	4.566	4.099	9.756	0.154	0.898	0.330
1163.900	0.210	0.764	0.330	4.587	4.115	9.789	0.154	0.897	0.330
1164.000	0.210	0.777	0.329	4.608	4.131	9.822	0.155	0.897	0.330
1164.100	0.200	0.822	0.353	4.628	4.148	9.858	0.155	0.896	0.330
1164.200	0.174	0.931	0.408	4.645	4.164	9.898	0.155	0.896	0.330
1164.300	0.135	1.000	0.492	4.659	4.177	9.948	0.155	0.897	0.330
1164.400	0.095	1.000	0.575	4.668	4.187	10.005	0.155	0.897	0.331
1164.500	0.066	1.000	0.624	4.675	4.193	10.068	0.154	0.897	0.332
1164.600	0.060	1.000	0.621	4.681	4.199	10.130	0.154	0.897	0.333
1164.700	0.078	1.000	0.571	4.689	4.207	10.187	0.154	0.897	0.334
1164.800	0.113	1.000	0.489	4.700	4.218	10.236	0.154	0.898	0.335
1164.900	0.149	1.000	0.410	4.715	4.233	10.277	0.154	0.898	0.335
1165.000	0.175	0.890	0.360	4.732	4.249	10.313	0.154	0.898	0.335
1165.100	0.188	0.823	0.340	4.751	4.264	10.347	0.154	0.898	0.335
1165.200	0.192	0.795	0.343	4.770	4.280	10.381	0.154	0.897	0.335
1165.300	0.192	0.788	0.355	4.790	4.295	10.416	0.154	0.897	0.335
1165.400	0.189	0.791	0.371	4.809	4.310	10.454	0.154	0.896	0.335
1165.500	0.190	0.797	0.372	4.828	4.325	10.491	0.154	0.896	0.335
1165.600	0.194	0.806	0.361	4.847	4.341	10.527	0.154	0.896	0.335
1165.700	0.195	0.818	0.346	4.866	4.356	10.562	0.154	0.895	0.335
1165.800	0.190	0.835	0.341	4.886	4.372	10.596	0.155	0.895	0.335
1165.900	0.176	0.878	0.356	4.903	4.388	10.631	0.155	0.895	0.335
1166.000	0.151	0.969	0.398	4.918	4.402	10.671	0.155	0.895	0.336
1166.100	0.124	1.000	0.443	4.931	4.415	10.715	0.155	0.895	0.336
1166.200	0.107	1.000	0.471	4.941	4.426	10.762	0.154	0.896	0.336
1166.300	0.105	1.000	0.467	4.952	4.436	10.809	0.154	0.896	0.337
1166.400	0.114	1.000	0.446	4.963	4.447	10.854	0.154	0.896	0.337
1166.500	0.130	1.000	0.416	4.976	4.460	10.895	0.154	0.896	0.337
1166.600	0.144	0.980	0.401	4.991	4.475	10.935	0.154	0.897	0.338
1166.700	0.153	0.942	0.404	5.006	4.489	10.976	0.154	0.897	0.338
1166.800	0.158	0.920	0.415	5.022	4.504	11.017	0.154	0.897	0.338
1166.900	0.162	0.903	0.421	5.038	4.518	11.059	0.154	0.897	0.338
1167.000	0.169	0.861	0.405	5.055	4.533	11.100	0.154	0.897	0.338
1167.100	0.178	0.821	0.378	5.073	4.547	11.138	0.154	0.896	0.339
1167.200	0.186	0.792	0.344	5.091	4.562	11.172	0.154	0.896	0.339
1167.300	0.190	0.785	0.321	5.110	4.577	11.204	0.154	0.896	0.338
1167.400	0.193	0.776	0.306	5.130	4.592	11.235	0.155	0.895	0.338
1167.500	0.194	0.773	0.302	5.149	4.607	11.265	0.155	0.895	0.338
1167.600	0.195	0.767	0.298	5.169	4.622	11.295	0.155	0.894	0.338
1167.700	0.192	0.767	0.301	5.188	4.637	11.325	0.155	0.894	0.338
1167.800	0.189	0.765	0.302	5.207	4.651	11.355	0.155	0.893	0.338
1167.900	0.184	0.767	0.306	5.225	4.665	11.386	0.155	0.893	0.338
1168.000	0.183	0.760	0.306	5.243	4.679	11.416	0.155	0.892	0.338
1168.100	0.182	0.748	0.310	5.262	4.693	11.447	0.155	0.892	0.338
1168.200	0.185	0.738	0.313	5.280	4.706	11.478	0.155	0.891	0.338
1168.300	0.191	0.729	0.315	5.299	4.720	11.510	0.155	0.891	0.338
1168.400	0.199	0.719	0.310	5.319	4.735	11.541	0.156	0.890	0.337
1168.500	0.208	0.711	0.301	5.340	4.749	11.571	0.156	0.889	0.337
1168.600	0.216	0.711	0.288	5.361	4.765	11.600	0.156	0.889	0.337
1168.700	0.219	0.722	0.282	5.383	4.781	11.628	0.156	0.888	0.337
1168.800	0.218	0.744	0.282	5.405	4.797	11.656	0.156	0.887	0.337

WELL: SKULL_CREEK_NORTH_1

1168.900	0.215	0.761	0.279	5.427	4.813	11.684	0.156	0.887	0.337
1169.000	0.211	0.770	0.278	5.448	4.829	11.712	0.157	0.887	0.337
1169.100	0.209	0.773	0.272	5.469	4.846	11.739	0.157	0.886	0.336
1169.200	0.207	0.776	0.270	5.489	4.862	11.766	0.157	0.886	0.336
1169.300	0.206	0.774	0.267	5.510	4.878	11.793	0.157	0.885	0.336
1169.400	0.202	0.781	0.278	5.530	4.893	11.821	0.157	0.885	0.336
1169.500	0.196	0.799	0.295	5.550	4.909	11.850	0.157	0.885	0.336
1169.600	0.187	0.833	0.319	5.568	4.924	11.882	0.157	0.884	0.336
1169.700	0.181	0.858	0.338	5.586	4.940	11.916	0.157	0.884	0.336
1169.800	0.179	0.860	0.345	5.604	4.955	11.950	0.157	0.884	0.336
1169.900	0.181	0.850	0.342	5.622	4.971	11.984	0.157	0.884	0.336
1170.000	0.185	0.846	0.334	5.641	4.986	12.018	0.158	0.884	0.336
1170.100	0.188	0.842	0.332	5.660	5.002	12.051	0.158	0.884	0.336
1170.200	0.190	0.836	0.331	5.679	5.018	12.084	0.158	0.884	0.336
1170.300	0.189	0.845	0.339	5.698	5.034	12.118	0.158	0.884	0.336
1170.400	0.187	0.854	0.348	5.716	5.050	12.153	0.158	0.883	0.336
1170.500	0.185	0.856	0.354	5.735	5.066	12.188	0.158	0.883	0.336
1170.600	0.184	0.841	0.351	5.753	5.081	12.223	0.158	0.883	0.336
1170.700	0.183	0.826	0.341	5.771	5.097	12.257	0.158	0.883	0.336
1170.800	0.179	0.829	0.340	5.789	5.111	12.291	0.158	0.883	0.336
1170.900	0.174	0.844	0.346	5.807	5.126	12.326	0.158	0.883	0.336
1171.000	0.167	0.865	0.363	5.823	5.141	12.362	0.158	0.883	0.336
1171.100	0.163	0.884	0.381	5.840	5.155	12.400	0.158	0.883	0.336
1171.200	0.159	0.905	0.405	5.856	5.169	12.441	0.158	0.883	0.336
1171.300	0.160	0.909	0.422	5.872	5.184	12.483	0.158	0.883	0.336
1171.400	0.163	0.897	0.433	5.888	5.198	12.526	0.158	0.883	0.337
1171.500	0.172	0.869	0.429	5.905	5.213	12.569	0.158	0.883	0.337
1171.600	0.182	0.849	0.416	5.923	5.229	12.611	0.158	0.883	0.337
1171.700	0.193	0.828	0.391	5.943	5.245	12.650	0.158	0.883	0.337
1171.800	0.205	0.804	0.359	5.963	5.261	12.686	0.159	0.882	0.337
1171.900	0.213	0.787	0.327	5.985	5.278	12.719	0.159	0.882	0.337
1172.000	0.218	0.782	0.303	6.006	5.295	12.749	0.159	0.882	0.337
1172.100	0.219	0.780	0.290	6.028	5.312	12.778	0.159	0.881	0.337
1172.200	0.215	0.778	0.295	6.050	5.329	12.807	0.159	0.881	0.337
1172.300	0.209	0.780	0.311	6.071	5.345	12.838	0.159	0.881	0.337
1172.400	0.200	0.793	0.339	6.090	5.361	12.872	0.159	0.880	0.337
1172.500	0.192	0.806	0.364	6.110	5.377	12.909	0.160	0.880	0.337
1172.600	0.188	0.808	0.385	6.129	5.392	12.947	0.160	0.880	0.337
1172.700	0.191	0.793	0.392	6.148	5.407	12.987	0.160	0.880	0.337
1172.800	0.198	0.772	0.391	6.167	5.422	13.026	0.160	0.879	0.337
1172.900	0.205	0.752	0.382	6.188	5.438	13.064	0.160	0.879	0.338
1173.000	0.211	0.730	0.369	6.209	5.453	13.101	0.160	0.878	0.338
1173.100	0.212	0.719	0.350	6.230	5.468	13.136	0.160	0.878	0.338
1173.200	0.212	0.717	0.325	6.251	5.484	13.168	0.160	0.877	0.338
1173.300	0.214	0.713	0.293	6.273	5.499	13.197	0.160	0.877	0.338
1173.400	0.220	0.708	0.263	6.295	5.514	13.224	0.161	0.876	0.337
1173.500	0.228	0.703	0.237	6.318	5.530	13.248	0.161	0.875	0.337
1173.600	0.235	0.709	0.226	6.341	5.547	13.270	0.161	0.875	0.337
1173.700	0.237	0.727	0.232	6.365	5.564	13.293	0.161	0.874	0.337
1173.800	0.231	0.750	0.257	6.388	5.582	13.319	0.161	0.874	0.336
1173.900	0.218	0.779	0.294	6.410	5.599	13.348	0.161	0.873	0.336
1174.000	0.202	0.812	0.335	6.430	5.615	13.382	0.162	0.873	0.336
1174.100	0.187	0.843	0.373	6.449	5.631	13.419	0.162	0.873	0.336
1174.200	0.179	0.851	0.400	6.467	5.646	13.459	0.162	0.873	0.336
1174.300	0.178	0.850	0.412	6.485	5.661	13.500	0.162	0.873	0.337

WELL: SKULL_CREEK_NORTH_1

1174.400	0.186	0.835	0.405	6.503	5.677	13.541	0.162	0.873	0.337
1174.500	0.199	0.805	0.381	6.523	5.693	13.579	0.162	0.873	0.337
1174.600	0.214	0.768	0.348	6.545	5.709	13.614	0.162	0.872	0.337
1174.700	0.226	0.742	0.312	6.567	5.726	13.645	0.162	0.872	0.337
1174.800	0.232	0.728	0.287	6.590	5.743	13.674	0.162	0.871	0.337
1174.900	0.233	0.718	0.280	6.614	5.760	13.702	0.163	0.871	0.337
1175.000	0.233	0.711	0.291	6.637	5.776	13.731	0.163	0.870	0.337
1175.100	0.232	0.715	0.312	6.660	5.793	13.762	0.163	0.870	0.336
1175.200	0.233	0.718	0.331	6.684	5.810	13.795	0.163	0.869	0.336
1175.300	0.236	0.718	0.335	6.707	5.827	13.829	0.163	0.869	0.336
1175.400	0.239	0.716	0.326	6.731	5.844	13.861	0.163	0.868	0.336
1175.500	0.237	0.721	0.311	6.755	5.861	13.892	0.164	0.868	0.336
1175.600	0.226	0.734	0.309	6.777	5.877	13.923	0.164	0.867	0.336
1175.700	0.205	0.778	0.331	6.798	5.893	13.956	0.164	0.867	0.336
1175.800	0.174	0.877	0.386	6.815	5.909	13.995	0.164	0.867	0.336
1175.900	0.145	1.000	0.443	6.830	5.923	14.039	0.164	0.867	0.337
1176.000	0.125	1.000	0.483	6.842	5.936	14.088	0.164	0.867	0.337
1176.100	0.119	1.000	0.487	6.854	5.948	14.136	0.164	0.868	0.337
1176.200	0.124	1.000	0.459	6.867	5.960	14.182	0.163	0.868	0.338
1176.300	0.138	1.000	0.409	6.880	5.974	14.223	0.163	0.868	0.338
1176.400	0.152	0.999	0.357	6.896	5.989	14.259	0.163	0.869	0.338
1176.500	0.162	0.956	0.325	6.912	6.004	14.291	0.163	0.869	0.338
1176.600	0.166	0.935	0.310	6.928	6.020	14.322	0.163	0.869	0.338
1176.700	0.167	0.923	0.313	6.945	6.035	14.354	0.163	0.869	0.338
1176.800	0.171	0.904	0.317	6.962	6.051	14.385	0.163	0.869	0.338
1176.900	0.173	0.889	0.334	6.979	6.066	14.419	0.163	0.869	0.338
1177.000	0.177	0.869	0.349	6.997	6.081	14.454	0.163	0.869	0.338
1177.100	0.182	0.851	0.363	7.015	6.097	14.490	0.164	0.869	0.338
1177.200	0.187	0.841	0.370	7.034	6.113	14.527	0.164	0.869	0.338
1177.300	0.195	0.826	0.369	7.053	6.129	14.564	0.164	0.869	0.338
1177.400	0.204	0.813	0.362	7.074	6.145	14.600	0.164	0.869	0.338
1177.500	0.211	0.803	0.355	7.095	6.162	14.635	0.164	0.869	0.338
1177.600	0.212	0.808	0.352	7.116	6.179	14.671	0.164	0.868	0.338
1177.700	0.208	0.816	0.364	7.137	6.196	14.707	0.164	0.868	0.338
1177.800	0.200	0.826	0.383	7.157	6.213	14.745	0.164	0.868	0.338
1177.900	0.192	0.838	0.402	7.176	6.229	14.785	0.164	0.868	0.338
1178.000	0.187	0.851	0.406	7.195	6.245	14.826	0.164	0.868	0.338
1178.100	0.189	0.859	0.396	7.214	6.261	14.866	0.164	0.868	0.339
1178.200	0.199	0.847	0.359	7.233	6.278	14.902	0.164	0.868	0.339
1178.300	0.213	0.826	0.303	7.255	6.295	14.932	0.165	0.868	0.339
1178.400	0.225	0.815	0.246	7.277	6.314	14.957	0.165	0.868	0.338
1178.500	0.229	0.814	0.214	7.300	6.332	14.978	0.165	0.867	0.338
1178.600	0.215	0.842	0.239	7.322	6.351	15.002	0.165	0.867	0.338
1178.700	0.186	0.921	0.315	7.340	6.368	15.033	0.165	0.868	0.338
1178.800	0.143	1.000	0.430	7.355	6.382	15.076	0.165	0.868	0.338
1178.900	0.104	1.000	0.538	7.365	6.392	15.130	0.165	0.868	0.338
1179.000	0.080	1.000	0.605	7.373	6.400	15.191	0.165	0.868	0.339
1179.100	0.083	1.000	0.602	7.381	6.409	15.251	0.164	0.868	0.340
1179.200	0.106	1.000	0.543	7.392	6.419	15.305	0.164	0.868	0.340
1179.300	0.142	1.000	0.455	7.406	6.433	15.351	0.164	0.869	0.340
1179.400	0.172	0.931	0.381	7.423	6.449	15.389	0.164	0.869	0.340
1179.500	0.190	0.874	0.338	7.442	6.466	15.423	0.164	0.869	0.340
1179.600	0.195	0.861	0.324	7.462	6.483	15.455	0.164	0.869	0.340
1179.700	0.193	0.861	0.331	7.481	6.499	15.488	0.164	0.869	0.340
1179.800	0.193	0.851	0.336	7.500	6.516	15.522	0.164	0.869	0.340

WELL: SKULL_CREEK_NORTH_1

1179.900	0.194	0.847	0.344	7.520	6.532	15.556	0.165	0.869	0.340
1180.000	0.196	0.840	0.347	7.539	6.549	15.591	0.165	0.869	0.340
1180.100	0.196	0.838	0.352	7.559	6.565	15.626	0.165	0.869	0.340
1180.200	0.199	0.831	0.343	7.579	6.582	15.660	0.165	0.868	0.340
1180.300	0.198	0.841	0.333	7.599	6.598	15.693	0.165	0.868	0.340
1180.400	0.201	0.843	0.315	7.619	6.615	15.725	0.165	0.868	0.340
1180.500	0.199	0.847	0.304	7.639	6.632	15.755	0.165	0.868	0.340
1180.600	0.199	0.842	0.294	7.658	6.649	15.785	0.165	0.868	0.340
1180.700	0.196	0.850	0.297	7.678	6.666	15.814	0.165	0.868	0.340
1180.800	0.192	0.856	0.313	7.697	6.682	15.846	0.165	0.868	0.340
1180.900	0.187	0.861	0.335	7.716	6.698	15.879	0.165	0.868	0.340
1181.000	0.185	0.858	0.350	7.735	6.714	15.914	0.165	0.868	0.340
1181.100	0.183	0.858	0.361	7.753	6.730	15.950	0.165	0.868	0.340
1181.200	0.182	0.857	0.369	7.771	6.745	15.987	0.165	0.868	0.340
1181.300	0.177	0.883	0.391	7.789	6.761	16.026	0.165	0.868	0.340

18.400				3.401	2.799	6.572	0.185	0.823	0.357

WELL: SKULL_CREEK_NORTH_1

Totals for interval : NULLAWARRE GREENSAND
Interval top : 1105.000000 METRES
Interval bottom : 1182.000000 METRES

Net pay thickness : 47.100000
Gross thickness : 77.000000
Ratio (net/gross) : 0.611688

			Summation			Averages		
Thickness	Hydrocarbon		PHIT	BWV	VSH	PHIT	SWT	VSH
47.100	1.028		7.789	6.761	16.026	0.165	0.868	0.340

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*  
*      PAY SUMMARY REPORT      *  
*  
*      *** End of Report ***   *  
*  
*      Project : PEP108        *  
*      User id  : minprj       *  
*      Date    : 27-Feb-98 13:03:43 *  
*      Pages   : 12            *  
*  
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*  
*          PAY SUMMARY REPORT          *  
*  
*   Project : PEP108                   *  
*   User id  : minprj                   *  
*   Date    : 27-Feb-98 09:34:06      *  
*  
*****
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LOANPRG

WELL: SKULL_CREEK_NORTH_1

Interval name : WAARRE SANDSTONE
 Interval top : 1270.000000 METRES
 Interval bottom : 1356.000000 METRES

Cutoff Expression:
 phit>=0.1 & vsh<=0.4

Minimum pay thickness : 1.000000 METRES

Maximum pay separation : 1.000000 METRES

Depth listing for pay depths.
 Summation type is zone.

Depth	Cutoff Logs			Summation			Averages		
	PHIT	SWT_WS	VSH	PHIT	BVW	VSH	PHIT	SWT_WS	VSH
1278.400	0.202	0.816	0.361	0.020	0.016	0.036	0.202	0.816	0.361
1278.500	0.201	0.834	0.337	0.040	0.033	0.070	0.202	0.825	0.349
1278.600	0.193	0.869	0.319	0.060	0.050	0.102	0.199	0.839	0.339
1278.700	0.178	0.926	0.320	0.077	0.066	0.134	0.193	0.859	0.335
1278.800	0.161	1.003	0.311	0.093	0.083	0.165	0.187	0.884	0.330
1278.900	0.145	1.098	0.284	0.108	0.098	0.193	0.180	0.913	0.322
1279.000	0.133	1.165	0.249	0.121	0.114	0.218	0.173	0.940	0.312
1279.100	0.121	1.245	0.198	0.133	0.129	0.238	0.167	0.968	0.297
1279.200	0.115	1.312	0.148	0.145	0.144	0.253	0.161	0.995	0.281
1279.300	0.116	1.339	0.107	0.156	0.160	0.263	0.156	1.021	0.263
1279.400	0.122	1.300	0.097	0.169	0.176	0.273	0.153	1.041	0.248
1279.500	0.125	1.284	0.100	0.181	0.192	0.283	0.151	1.058	0.236
1279.600	0.122	1.329	0.113	0.193	0.208	0.294	0.149	1.075	0.227
1279.700	0.114	1.416	0.118	0.205	0.224	0.306	0.146	1.094	0.219
1279.800	0.107	1.507	0.112	0.216	0.240	0.318	0.144	1.115	0.212
1279.900	0.103	1.565	0.097	0.226	0.256	0.327	0.141	1.135	0.204
1280.000	0.105	1.559	0.081	0.236	0.273	0.335	0.139	1.154	0.197
1280.100	0.115	1.498	0.067	0.248	0.290	0.342	0.138	1.170	0.190
1280.200	0.124	1.452	0.067	0.260	0.308	0.349	0.137	1.184	0.183
1280.300	0.130	1.388	0.071	0.273	0.326	0.356	0.137	1.193	0.178
1280.400	0.130	1.357	0.079	0.286	0.344	0.364	0.136	1.201	0.173
1280.500	0.124	1.348	0.082	0.299	0.361	0.372	0.136	1.207	0.169
1280.600	0.114	1.336	0.098	0.310	0.376	0.382	0.135	1.212	0.166
1280.700	0.110	1.262	0.126	0.321	0.390	0.394	0.134	1.213	0.164
1280.800	0.111	1.173	0.163	0.332	0.403	0.411	0.133	1.212	0.164
1280.900	0.122	1.095	0.186	0.345	0.416	0.429	0.133	1.208	0.165
1281.000	0.144	1.007	0.197	0.359	0.431	0.449	0.133	1.200	0.166
1281.100	0.177	0.929	0.195	0.377	0.447	0.468	0.135	1.187	0.167
1281.200	0.212	0.885	0.186	0.398	0.466	0.487	0.137	1.171	0.168
1281.300	0.242	0.871	0.174	0.422	0.487	0.504	0.141	1.154	0.168
1281.400	0.265	0.855	0.178	0.449	0.510	0.522	0.145	1.136	0.168
1281.500	0.279	0.853	0.188	0.476	0.533	0.541	0.149	1.119	0.169
1281.600	0.281	0.871	0.188	0.505	0.558	0.560	0.153	1.106	0.170
1281.700	0.267	0.893	0.178	0.531	0.582	0.578	0.156	1.095	0.170
1281.800	0.238	0.925	0.156	0.555	0.604	0.593	0.159	1.088	0.169
1281.900	0.199	0.957	0.146	0.575	0.623	0.608	0.160	1.083	0.169

WELL: SKULL_CREEK_NORTH_1

1282.000	0.157	1.002	0.135	0.591	0.639	0.621	0.160	1.081	0.168
1282.100	0.124	1.029	0.140	0.603	0.651	0.635	0.159	1.080	0.167
1282.200	0.106	1.017	0.135	0.614	0.662	0.649	0.157	1.079	0.166
1282.300	0.104	0.930	0.137	0.624	0.672	0.663	0.156	1.076	0.166
1282.400	0.111	0.860	0.134	0.635	0.681	0.676	0.155	1.073	0.165
1282.500	0.119	0.832	0.143	0.647	0.691	0.690	0.154	1.068	0.164
1282.600	0.118	0.879	0.147	0.659	0.702	0.705	0.153	1.065	0.164
1282.700	0.108	0.980	0.156	0.670	0.712	0.721	0.152	1.063	0.164
1282.800	0.091	1.133	0.165	0.679	0.722	0.737	0.151	1.064	0.164
1282.900	0.081	1.228	0.172	0.687	0.732	0.754	0.149	1.066	0.164
1283.000	0.083	1.165	0.190	0.695	0.742	0.773	0.148	1.067	0.165
1283.100	0.097	0.982	0.227	0.705	0.752	0.796	0.147	1.066	0.166
1283.200	0.115	0.840	0.286	0.716	0.761	0.825	0.146	1.063	0.168
1283.300	0.134	0.743	0.376	0.730	0.771	0.862	0.146	1.057	0.172

5.000				0.730	0.771	0.862	0.146	1.057	0.172
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1291.300	0.132	0.307	0.110	0.743	0.775	0.873	0.146	1.043	0.171
1291.400	0.171	0.405	0.125	0.760	0.782	0.886	0.146	1.029	0.170
1291.500	0.205	0.487	0.129	0.781	0.792	0.899	0.147	1.015	0.170
1291.600	0.228	0.553	0.129	0.803	0.805	0.912	0.149	1.002	0.169
1291.700	0.243	0.607	0.129	0.828	0.819	0.924	0.150	0.990	0.168
1291.800	0.249	0.672	0.138	0.852	0.836	0.938	0.152	0.981	0.168
1291.900	0.253	0.735	0.145	0.878	0.855	0.953	0.154	0.974	0.167
1292.000	0.257	0.778	0.159	0.903	0.875	0.969	0.156	0.968	0.167
1292.100	0.263	0.795	0.174	0.930	0.896	0.986	0.158	0.963	0.167
1292.200	0.267	0.800	0.188	0.956	0.917	1.005	0.159	0.959	0.167
1292.300	0.269	0.806	0.195	0.983	0.939	1.024	0.161	0.955	0.168
1292.400	0.270	0.807	0.201	1.010	0.961	1.044	0.163	0.951	0.168
1292.500	0.270	0.805	0.201	1.037	0.982	1.065	0.165	0.947	0.169
1292.600	0.271	0.797	0.205	1.064	1.004	1.085	0.166	0.943	0.170
1292.700	0.271	0.789	0.201	1.092	1.025	1.105	0.168	0.939	0.170
1292.800	0.274	0.777	0.204	1.119	1.047	1.126	0.170	0.935	0.171
1292.900	0.278	0.766	0.197	1.147	1.068	1.145	0.171	0.931	0.171
1293.000	0.281	0.760	0.196	1.175	1.089	1.165	0.173	0.927	0.171
1293.100	0.282	0.762	0.185	1.203	1.111	1.183	0.174	0.923	0.172
1293.200	0.283	0.762	0.181	1.231	1.132	1.201	0.176	0.919	0.172
1293.300	0.284	0.764	0.184	1.260	1.154	1.220	0.177	0.916	0.172
1293.400	0.283	0.765	0.195	1.288	1.176	1.239	0.179	0.913	0.172
1293.500	0.280	0.767	0.206	1.316	1.197	1.260	0.180	0.910	0.173
1293.600	0.276	0.767	0.212	1.344	1.218	1.281	0.182	0.907	0.173
1293.700	0.271	0.764	0.228	1.371	1.239	1.304	0.183	0.904	0.174
1293.800	0.266	0.760	0.232	1.397	1.259	1.327	0.184	0.901	0.175
1293.900	0.261	0.752	0.248	1.423	1.279	1.352	0.185	0.898	0.176
1294.000	0.259	0.735	0.262	1.449	1.298	1.378	0.186	0.895	0.177
1294.100	0.258	0.718	0.287	1.475	1.316	1.407	0.187	0.892	0.178
1294.200	0.259	0.710	0.298	1.501	1.335	1.437	0.188	0.889	0.180
1294.300	0.260	0.698	0.316	1.527	1.353	1.468	0.189	0.886	0.181
1294.400	0.262	0.687	0.319	1.553	1.371	1.500	0.189	0.883	0.183
1294.500	0.263	0.680	0.323	1.580	1.389	1.533	0.190	0.879	0.185
1294.600	0.266	0.671	0.313	1.606	1.407	1.564	0.191	0.876	0.186
1294.700	0.267	0.658	0.316	1.633	1.424	1.595	0.192	0.872	0.188
1294.800	0.270	0.651	0.303	1.660	1.442	1.626	0.193	0.869	0.189
1294.900	0.273	0.652	0.284	1.687	1.460	1.654	0.194	0.865	0.190

WELL: SKULL_CREEK_NORTH_1

1295.000	0.278	0.661	0.257	1.715	1.478	1.680	0.195	0.862	0.191
1295.100	0.281	0.680	0.238	1.743	1.497	1.704	0.196	0.859	0.191
1295.200	0.282	0.711	0.214	1.771	1.517	1.725	0.197	0.856	0.192
1295.300	0.274	0.756	0.199	1.799	1.538	1.745	0.198	0.855	0.192
1295.400	0.258	0.802	0.198	1.824	1.558	1.765	0.198	0.854	0.192
1295.500	0.232	0.847	0.207	1.848	1.578	1.786	0.199	0.854	0.192
1295.600	0.206	0.885	0.218	1.868	1.596	1.807	0.199	0.854	0.192
1295.700	0.188	0.896	0.218	1.887	1.613	1.829	0.199	0.855	0.193
1295.800	0.187	0.843	0.215	1.906	1.629	1.851	0.199	0.855	0.193
1295.900	0.201	0.771	0.203	1.926	1.644	1.871	0.199	0.854	0.193
1296.000	0.226	0.712	0.191	1.948	1.661	1.890	0.199	0.852	0.193
1296.100	0.254	0.676	0.183	1.974	1.678	1.908	0.199	0.850	0.193
1296.200	0.279	0.657	0.189	2.002	1.696	1.927	0.200	0.847	0.193
1296.300	0.293	0.665	0.197	2.031	1.715	1.947	0.201	0.845	0.193
1296.400	0.297	0.682	0.207	2.061	1.736	1.968	0.202	0.842	0.193
1296.500	0.292	0.693	0.208	2.090	1.756	1.989	0.203	0.840	0.193
1296.600	0.277	0.692	0.213	2.118	1.775	2.010	0.204	0.838	0.193
1296.700	0.255	0.704	0.211	2.143	1.793	2.031	0.204	0.837	0.193
1296.800	0.235	0.711	0.218	2.167	1.810	2.053	0.204	0.835	0.194
1296.900	0.225	0.688	0.239	2.189	1.825	2.077	0.205	0.834	0.194
1297.000	0.227	0.649	0.269	2.212	1.840	2.103	0.205	0.832	0.195
1297.100	0.239	0.629	0.290	2.236	1.855	2.132	0.205	0.830	0.196
1297.200	0.256	0.625	0.307	2.261	1.871	2.163	0.206	0.827	0.197
1297.300	0.269	0.645	0.311	2.288	1.888	2.194	0.206	0.825	0.198
1297.400	0.268	0.704	0.293	2.315	1.907	2.224	0.207	0.824	0.199
1297.500	0.248	0.805	0.262	2.340	1.927	2.250	0.207	0.824	0.199
1297.600	0.218	0.916	0.230	2.362	1.947	2.273	0.207	0.825	0.199
1297.700	0.184	1.018	0.200	2.380	1.966	2.293	0.207	0.826	0.199
1297.800	0.157	1.093	0.165	2.396	1.983	2.309	0.207	0.828	0.199
1297.900	0.139	1.105	0.131	2.410	1.999	2.323	0.206	0.829	0.199
1298.000	0.134	1.041	0.107	2.423	2.013	2.333	0.205	0.831	0.198
1298.100	0.141	0.954	0.083	2.437	2.026	2.342	0.205	0.831	0.197
1298.200	0.155	0.867	0.063	2.453	2.039	2.348	0.204	0.831	0.196
1298.300	0.170	0.803	0.055	2.470	2.053	2.353	0.204	0.831	0.194
1298.400	0.183	0.781	0.067	2.488	2.067	2.360	0.204	0.831	0.193
1298.500	0.197	0.778	0.076	2.508	2.083	2.368	0.204	0.830	0.192
1298.600	0.208	0.781	0.093	2.529	2.099	2.377	0.204	0.830	0.192
1298.700	0.212	0.801	0.096	2.550	2.116	2.387	0.204	0.830	0.191
1298.800	0.205	0.847	0.097	2.570	2.133	2.396	0.204	0.830	0.190
1298.900	0.190	0.915	0.079	2.589	2.151	2.404	0.204	0.831	0.189
1299.000	0.169	0.989	0.073	2.606	2.167	2.411	0.204	0.832	0.188
1299.100	0.152	1.013	0.068	2.621	2.183	2.418	0.203	0.833	0.187
1299.200	0.144	0.987	0.072	2.636	2.197	2.425	0.203	0.834	0.187
1299.300	0.148	0.923	0.072	2.650	2.211	2.433	0.202	0.834	0.186
1299.400	0.164	0.839	0.081	2.667	2.224	2.441	0.202	0.834	0.185
1299.500	0.189	0.756	0.083	2.686	2.239	2.449	0.202	0.834	0.184
1299.600	0.217	0.706	0.083	2.708	2.254	2.457	0.202	0.832	0.183
1299.700	0.239	0.702	0.079	2.731	2.271	2.465	0.202	0.831	0.183
1299.800	0.256	0.709	0.087	2.757	2.289	2.474	0.203	0.830	0.182
1299.900	0.267	0.717	0.094	2.784	2.308	2.483	0.203	0.829	0.181
1300.000	0.273	0.725	0.105	2.811	2.328	2.494	0.204	0.828	0.181
1300.100	0.276	0.744	0.111	2.839	2.348	2.505	0.204	0.827	0.180
1300.200	0.277	0.763	0.113	2.867	2.370	2.516	0.205	0.827	0.180
1300.300	0.280	0.768	0.106	2.895	2.391	2.527	0.205	0.826	0.179
1300.400	0.282	0.774	0.097	2.923	2.413	2.536	0.206	0.826	0.179

WELL: SKULL_CREEK_NORTH_1

1300.500	0.282	0.784	0.085	2.951	2.435	2.545	0.206	0.825	0.178
1300.600	0.283	0.792	0.072	2.979	2.457	2.552	0.207	0.825	0.177
1300.700	0.282	0.801	0.067	3.007	2.480	2.559	0.207	0.825	0.176
1300.800	0.281	0.810	0.063	3.036	2.503	2.565	0.208	0.825	0.176
1300.900	0.276	0.827	0.067	3.063	2.526	2.572	0.208	0.825	0.175
1301.000	0.267	0.853	0.061	3.090	2.548	2.578	0.209	0.825	0.174
1301.100	0.249	0.893	0.064	3.115	2.571	2.584	0.209	0.825	0.173
1301.200	0.228	0.957	0.061	3.138	2.593	2.590	0.209	0.826	0.173
1301.300	0.206	1.037	0.063	3.158	2.614	2.597	0.209	0.828	0.172
1301.400	0.189	1.095	0.060	3.177	2.635	2.603	0.209	0.829	0.171
1301.500	0.178	1.119	0.057	3.195	2.654	2.608	0.209	0.831	0.170
1301.600	0.169	1.123	0.054	3.212	2.673	2.614	0.209	0.832	0.170
1301.700	0.155	1.140	0.060	3.227	2.691	2.620	0.208	0.834	0.169
1301.800	0.137	1.166	0.076	3.241	2.707	2.627	0.208	0.835	0.168
1301.900	0.118	1.227	0.095	3.253	2.722	2.637	0.207	0.837	0.168
1302.000	0.107	1.256	0.135	3.264	2.735	2.650	0.207	0.838	0.168
1302.100	0.109	1.196	0.188	3.274	2.748	2.669	0.206	0.839	0.168
1302.200	0.125	1.054	0.262	3.287	2.761	2.695	0.205	0.840	0.168
1302.300	0.150	0.939	0.328	3.302	2.775	2.728	0.205	0.841	0.169
1302.400	0.172	0.871	0.398	3.319	2.790	2.768	0.205	0.841	0.171
11.200				2.589	2.019	1.906	0.231	0.780	0.170
1327.100	0.260	0.864	0.383	3.345	2.813	2.806	0.205	0.841	0.172
1327.200	0.267	0.876	0.352	3.372	2.836	2.842	0.206	0.841	0.173
1327.300	0.271	0.885	0.306	3.399	2.860	2.872	0.206	0.841	0.174
1327.400	0.273	0.891	0.262	3.426	2.884	2.898	0.206	0.842	0.175
1327.500	0.272	0.904	0.223	3.453	2.909	2.921	0.207	0.842	0.175
1327.600	0.267	0.923	0.208	3.480	2.934	2.941	0.207	0.843	0.175
1327.700	0.263	0.927	0.209	3.506	2.958	2.962	0.207	0.844	0.175
1327.800	0.257	0.933	0.217	3.532	2.982	2.984	0.208	0.844	0.176
1327.900	0.251	0.946	0.229	3.557	3.006	3.007	0.208	0.845	0.176
1328.000	0.244	0.955	0.238	3.581	3.029	3.031	0.208	0.846	0.176
1328.100	0.237	0.949	0.245	3.605	3.051	3.055	0.208	0.846	0.177
1328.200	0.233	0.946	0.233	3.628	3.073	3.079	0.209	0.847	0.177
1328.300	0.230	0.943	0.223	3.651	3.095	3.101	0.209	0.848	0.177
1328.400	0.230	0.941	0.209	3.674	3.117	3.122	0.209	0.848	0.177
1328.500	0.233	0.932	0.195	3.698	3.139	3.141	0.209	0.849	0.177
1328.600	0.237	0.937	0.178	3.721	3.161	3.159	0.209	0.849	0.177
1328.700	0.241	0.945	0.165	3.746	3.184	3.176	0.209	0.850	0.177
1328.800	0.242	0.964	0.163	3.770	3.207	3.192	0.209	0.851	0.177
1328.900	0.242	0.988	0.155	3.794	3.231	3.207	0.210	0.852	0.177
1329.000	0.240	0.991	0.159	3.818	3.255	3.223	0.210	0.852	0.177
1329.100	0.239	0.963	0.189	3.842	3.278	3.242	0.210	0.853	0.177
1329.200	0.238	0.918	0.251	3.866	3.299	3.267	0.210	0.854	0.178
1329.300	0.240	0.856	0.334	3.890	3.320	3.301	0.210	0.854	0.178
2.300				0.571	0.530	0.533	0.248	0.928	0.232
1354.300	0.190	0.902	0.389	3.909	3.337	3.340	0.210	0.854	0.180
1354.400	0.190	0.916	0.339	3.928	3.355	3.373	0.210	0.854	0.180
1354.500	0.188	0.942	0.291	3.946	3.372	3.403	0.210	0.855	0.181
1354.600	0.184	0.968	0.251	3.965	3.390	3.428	0.210	0.855	0.181

WELL: SKULL_CREEK_NORTH_1

1354.700	0.178	0.995	0.246	3.983	3.408	3.452	0.210	0.856	0.182
1354.800	0.173	1.034	0.252	4.000	3.426	3.478	0.209	0.856	0.182
1354.900	0.172	1.051	0.280	4.017	3.444	3.505	0.209	0.857	0.183
1355.000	0.171	1.061	0.292	4.034	3.462	3.535	0.209	0.858	0.183
1355.100	0.166	1.079	0.306	4.051	3.480	3.565	0.209	0.859	0.184
1355.200	0.153	1.145	0.293	4.066	3.497	3.595	0.209	0.860	0.184
1355.300	0.133	1.240	0.295	4.079	3.514	3.624	0.208	0.861	0.185
1355.400	0.111	1.379	0.284	4.090	3.529	3.652	0.208	0.863	0.185

1.200				0.201	0.209	0.352	0.167	1.041	0.293

WELL: SKULL_CREEK_NORTH_1

Totals for interval : WAARRE SANDSTONE
Interval top : 1270.000000 METRES
Interval bottom : 1356.000000 METRES

Net pay thickness : 19.700000
Gross thickness : 86.000000
Ratio (net/gross) : 0.229070

Thickness	Hydrocarbon	Summation			Averages		
		PHIT	BVM	VSH	PHIT	SWT_WS	VSH
19.700	0.561	4.090	3.529	3.652	0.208	0.863	0.185

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*          PAY SUMMARY REPORT          *  
*  
*          *** End of Report ***      *  
*  
* Project : PEP108                    *  
* User id : minprj                   *  
* Date   : 27-Feb-98 09:34:17       *  
* Pages  : 7                         *  
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* PAY SUMMARY REPORT *
*
* Project : PEP108 *
* User id : minprj *
* Date : 27-Feb-98 09:37:12 *
*

EMERALDA

WELL: SKULL_CREEK_NORTH_1

Cutoff Expression:

phit>=0.1 & vsh<=0.4

Minimum pay thickness : 1.000000 METRES

Maximum pay separation : 1.000000 METRES

Depth listing for pay depths.
Summation type is zone.

Depth	Cutoff Logs			Summation			Averages		
	PHIT	SWT_WS	VSH	PHIT	BVM	VSH	PHIT	SWT_WS	VSH
1361.400	0.131	1.283	0.400	0.013	0.017	0.040	0.131	1.283	0.400
1361.500	0.122	1.352	0.365	0.025	0.033	0.076	0.126	1.316	0.382
1361.600	0.114	1.406	0.345	0.037	0.049	0.111	0.122	1.344	0.370
1361.700	0.107	1.434	0.339	0.047	0.065	0.145	0.118	1.364	0.362
1361.800	0.104	1.419	0.351	0.058	0.079	0.180	0.115	1.374	0.360
1361.900	0.105	1.349	0.368	0.068	0.093	0.217	0.114	1.370	0.361
1362.000	0.112	1.256	0.381	0.079	0.108	0.255	0.113	1.354	0.364
1362.100	0.120	1.177	0.393	0.091	0.122	0.294	0.114	1.331	0.368
1362.200	0.127	1.135	0.384	0.104	0.136	0.333	0.116	1.307	0.369
1362.300	0.128	1.138	0.366	0.117	0.151	0.369	0.117	1.289	0.369
1362.400	0.123	1.197	0.328	0.129	0.165	0.402	0.117	1.280	0.365
1362.500	0.113	1.282	0.298	0.141	0.180	0.432	0.117	1.280	0.360
1362.600	0.105	1.365	0.280	0.151	0.194	0.460	0.116	1.286	0.354
1362.700	0.100	1.401	0.270	0.161	0.208	0.487	0.115	1.293	0.348
1362.800	0.103	1.344	0.291	0.171	0.222	0.516	0.114	1.296	0.344
1362.900	0.111	1.272	0.320	0.183	0.236	0.548	0.114	1.295	0.342
1363.000	0.119	1.211	0.366	0.194	0.251	0.585	0.114	1.290	0.344
1363.100	0.128	1.173	0.377	0.207	0.266	0.622	0.115	1.282	0.346
1363.200	0.132	1.157	0.391	0.220	0.281	0.661	0.116	1.275	0.348
1363.300	0.133	1.163	0.379	0.234	0.297	0.699	0.117	1.268	0.350
1363.400	0.130	1.177	0.374	0.247	0.312	0.737	0.118	1.264	0.351
1363.500	0.128	1.194	0.343	0.260	0.327	0.771	0.118	1.260	0.350
1363.600	0.126	1.192	0.346	0.272	0.342	0.806	0.118	1.257	0.350
1363.700	0.123	1.207	0.358	0.284	0.357	0.841	0.119	1.255	0.351
1363.800	0.122	1.208	0.380	0.297	0.372	0.879	0.119	1.253	0.352
1363.900	0.125	1.202	0.374	0.309	0.387	0.917	0.119	1.251	0.353
1364.000	0.128	1.201	0.368	0.322	0.402	0.954	0.119	1.249	0.353
1364.100	0.130	1.205	0.357	0.335	0.418	0.989	0.120	1.247	0.353
1364.200	0.133	1.199	0.342	0.348	0.434	1.023	0.120	1.245	0.353
1364.300	0.139	1.170	0.333	0.362	0.450	1.057	0.121	1.242	0.352
1364.400	0.143	1.148	0.339	0.376	0.466	1.091	0.121	1.239	0.352
1364.500	0.147	1.114	0.364	0.391	0.483	1.127	0.122	1.234	0.352
1364.600	0.149	1.112	0.372	0.406	0.499	1.164	0.123	1.230	0.353
1364.700	0.150	1.114	0.373	0.421	0.516	1.202	0.124	1.226	0.353
1364.800	0.148	1.151	0.348	0.436	0.533	1.236	0.125	1.223	0.353
1364.900	0.146	1.178	0.326	0.450	0.550	1.269	0.125	1.222	0.352
1365.000	0.144	1.201	0.298	0.465	0.568	1.299	0.126	1.221	0.351
1365.100	0.146	1.187	0.290	0.479	0.585	1.328	0.126	1.220	0.349
1365.200	0.147	1.161	0.302	0.494	0.602	1.358	0.127	1.218	0.348
1365.300	0.147	1.149	0.324	0.509	0.619	1.390	0.127	1.216	0.348

WELL: SKULL_CREEK_NORTH_1

1365.400	0.145	1.151	0.349	0.523	0.636	1.425	0.128	1.214	0.348
1365.500	0.144	1.155	0.362	0.538	0.652	1.461	0.128	1.213	0.348
1365.600	0.144	1.155	0.378	0.552	0.669	1.499	0.128	1.211	0.349
1365.700	0.145	1.156	0.380	0.567	0.686	1.537	0.129	1.210	0.349
1365.800	0.149	1.141	0.381	0.582	0.703	1.575	0.129	1.208	0.350
1365.900	0.155	1.113	0.370	0.597	0.720	1.612	0.130	1.206	0.350
1366.000	0.157	1.100	0.373	0.613	0.737	1.650	0.130	1.203	0.351
1366.100	0.157	1.099	0.363	0.629	0.755	1.686	0.131	1.200	0.351
1366.200	0.153	1.116	0.360	0.644	0.772	1.722	0.131	1.198	0.351
1366.300	0.145	1.151	0.351	0.658	0.788	1.757	0.132	1.197	0.351
1366.400	0.129	1.233	0.352	0.671	0.804	1.792	0.132	1.198	0.351
1366.500	0.113	1.337	0.342	0.683	0.819	1.826	0.131	1.200	0.351
1366.600	0.103	1.395	0.334	0.693	0.834	1.860	0.131	1.203	0.351
1366.700	0.103	1.355	0.327	0.703	0.848	1.893	0.130	1.205	0.350
1366.800	0.112	1.248	0.330	0.715	0.862	1.926	0.130	1.206	0.350
1366.900	0.126	1.135	0.334	0.727	0.876	1.959	0.130	1.205	0.350
1367.000	0.142	1.063	0.334	0.741	0.891	1.992	0.130	1.202	0.350
1367.100	0.152	1.038	0.349	0.756	0.907	2.027	0.130	1.199	0.350
1367.200	0.155	1.052	0.363	0.772	0.923	2.064	0.131	1.196	0.350
1367.300	0.154	1.087	0.368	0.787	0.940	2.100	0.131	1.194	0.350
1367.400	0.154	1.108	0.352	0.803	0.957	2.136	0.132	1.192	0.350
1367.500	0.153	1.120	0.340	0.818	0.974	2.170	0.132	1.191	0.350
1367.600	0.150	1.135	0.324	0.833	0.991	2.202	0.132	1.190	0.350
1367.700	0.139	1.186	0.328	0.847	1.008	2.235	0.132	1.190	0.349
1367.800	0.123	1.287	0.340	0.859	1.024	2.269	0.132	1.191	0.349

6.500				0.859	1.024	2.269	0.132	1.191	0.349
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1401.600	0.142	0.980	0.385	0.874	1.038	2.307	0.132	1.188	0.350
1401.700	0.153	0.924	0.367	0.889	1.052	2.344	0.133	1.183	0.350
1401.800	0.169	0.874	0.333	0.906	1.066	2.377	0.133	1.177	0.350
1401.900	0.181	0.825	0.335	0.924	1.081	2.411	0.134	1.170	0.349
1402.000	0.190	0.799	0.332	0.943	1.097	2.444	0.135	1.163	0.349
1402.100	0.192	0.788	0.367	0.962	1.112	2.481	0.136	1.155	0.349
1402.200	0.192	0.800	0.369	0.981	1.127	2.518	0.136	1.149	0.350
1402.300	0.190	0.812	0.388	1.000	1.143	2.556	0.137	1.142	0.350
1402.400	0.187	0.848	0.365	1.019	1.158	2.593	0.138	1.137	0.350
1402.500	0.183	0.886	0.353	1.037	1.175	2.628	0.138	1.132	0.350
1402.600	0.183	0.922	0.317	1.056	1.192	2.660	0.139	1.129	0.350
1402.700	0.181	0.947	0.319	1.074	1.209	2.692	0.139	1.126	0.350
1402.800	0.180	0.957	0.325	1.092	1.226	2.724	0.140	1.123	0.349
1402.900	0.180	0.951	0.352	1.110	1.243	2.759	0.140	1.120	0.349
1403.000	0.185	0.921	0.366	1.128	1.260	2.796	0.141	1.117	0.350
1403.100	0.190	0.890	0.385	1.147	1.277	2.835	0.142	1.113	0.350
1403.200	0.194	0.864	0.395	1.167	1.294	2.874	0.142	1.109	0.351
1403.300	0.198	0.840	0.405	1.187	1.310	2.915	0.143	1.104	0.351
1403.400	0.203	0.820	0.405	1.207	1.327	2.955	0.144	1.100	0.352
1403.500	0.203	0.820	0.405	1.227	1.344	2.996	0.144	1.095	0.352
1403.600	0.200	0.838	0.404	1.247	1.360	3.036	0.145	1.091	0.353
1403.700	0.194	0.864	0.401	1.267	1.377	3.076	0.146	1.087	0.354
1403.800	0.190	0.890	0.384	1.286	1.394	3.115	0.146	1.084	0.354
1403.900	0.184	0.926	0.363	1.304	1.411	3.151	0.147	1.082	0.354
1404.000	0.179	0.950	0.342	1.322	1.428	3.185	0.147	1.080	0.354
1404.100	0.175	0.961	0.332	1.339	1.445	3.218	0.147	1.079	0.354

WELL: SKULL_CREEK_NORTH_1

1404.200	0.175	0.958	0.316	1.357	1.462	3.250	0.147	1.077	0.353
1404.300	0.175	0.945	0.319	1.374	1.478	3.282	0.148	1.076	0.353
1404.400	0.178	0.932	0.324	1.392	1.495	3.314	0.148	1.074	0.353
1404.500	0.178	0.926	0.337	1.410	1.511	3.348	0.148	1.072	0.352
1404.600	0.180	0.919	0.341	1.428	1.528	3.382	0.149	1.070	0.352
1404.700	0.179	0.918	0.354	1.446	1.544	3.417	0.149	1.068	0.352
1404.800	0.176	0.929	0.362	1.463	1.561	3.453	0.149	1.066	0.352
1404.900	0.173	0.934	0.385	1.481	1.577	3.492	0.150	1.065	0.353

3.400				0.621	0.553	1.223	0.183	0.890	0.360

1408.000	0.169	1.035	0.376	1.498	1.594	3.529	0.150	1.065	0.353
1408.100	0.171	1.048	0.329	1.515	1.612	3.562	0.150	1.064	0.353
1408.200	0.171	1.053	0.320	1.532	1.630	3.594	0.150	1.064	0.352
1408.300	0.169	1.057	0.334	1.549	1.648	3.628	0.150	1.064	0.352
1408.400	0.167	1.053	0.354	1.565	1.666	3.663	0.151	1.064	0.352
1408.500	0.167	1.047	0.358	1.582	1.683	3.699	0.151	1.064	0.352
1408.600	0.169	1.034	0.369	1.599	1.701	3.736	0.151	1.064	0.352
1408.700	0.169	1.023	0.385	1.616	1.718	3.774	0.151	1.063	0.353
1408.800	0.172	1.007	0.384	1.633	1.735	3.813	0.151	1.063	0.353
1408.900	0.175	0.989	0.372	1.651	1.753	3.850	0.151	1.062	0.353
1409.000	0.178	0.979	0.356	1.668	1.770	3.886	0.152	1.061	0.353
1409.100	0.179	0.972	0.348	1.686	1.787	3.920	0.152	1.060	0.353
1409.200	0.178	0.973	0.343	1.704	1.805	3.955	0.152	1.059	0.353
1409.300	0.176	0.979	0.344	1.722	1.822	3.989	0.152	1.058	0.353
1409.400	0.173	0.986	0.359	1.739	1.839	4.025	0.153	1.057	0.353
1409.500	0.170	0.990	0.373	1.756	1.856	4.062	0.153	1.057	0.353
1409.600	0.171	0.985	0.376	1.773	1.873	4.100	0.153	1.056	0.353
1409.700	0.174	0.981	0.354	1.790	1.890	4.135	0.153	1.055	0.353
1409.800	0.175	0.983	0.335	1.808	1.907	4.169	0.153	1.055	0.353
1409.900	0.174	0.990	0.321	1.825	1.924	4.201	0.153	1.054	0.353
1410.000	0.173	0.989	0.327	1.843	1.941	4.234	0.154	1.053	0.353
1410.100	0.171	0.988	0.336	1.860	1.958	4.267	0.154	1.053	0.353
1410.200	0.167	0.983	0.362	1.876	1.974	4.303	0.154	1.052	0.353
1410.300	0.164	0.976	0.374	1.893	1.990	4.341	0.154	1.052	0.353
1410.400	0.163	0.964	0.370	1.909	2.006	4.378	0.154	1.051	0.353
1410.500	0.163	0.956	0.354	1.925	2.022	4.413	0.154	1.050	0.353
1410.600	0.162	0.950	0.345	1.942	2.037	4.448	0.154	1.049	0.353
1410.700	0.162	0.943	0.342	1.958	2.052	4.482	0.154	1.048	0.353
1410.800	0.161	0.940	0.353	1.974	2.067	4.517	0.154	1.047	0.353
1410.900	0.161	0.936	0.383	1.990	2.083	4.556	0.154	1.047	0.353

3.000				0.509	0.506	1.064	0.170	0.993	0.355

1416.500	0.138	1.050	0.354	2.004	2.097	4.591	0.154	1.047	0.353
1416.600	0.142	1.041	0.321	2.018	2.112	4.623	0.154	1.047	0.353
1416.700	0.148	1.024	0.288	2.033	2.127	4.652	0.154	1.046	0.352
1416.800	0.154	0.988	0.296	2.048	2.142	4.682	0.154	1.046	0.352
1416.900	0.159	0.956	0.311	2.064	2.157	4.713	0.154	1.045	0.352
1417.000	0.160	0.927	0.351	2.080	2.172	4.748	0.154	1.044	0.352
1417.100	0.161	0.918	0.366	2.096	2.187	4.784	0.154	1.043	0.352
1417.200	0.160	0.915	0.390	2.112	2.202	4.823	0.154	1.042	0.352
1417.300	0.159	0.922	0.385	2.128	2.216	4.862	0.154	1.041	0.352

WELL: SKULL_CREEK_NORTH_1

1417.400	0.155	0.931	0.398	2.144	2.231	4.902	0.154	1.041	0.353
1.000				0.154	0.148	0.346	0.154	0.965	0.346
1418.700	0.229	0.702	0.361	2.166	2.247	4.938	0.155	1.037	0.353
1418.800	0.235	0.715	0.317	2.190	2.264	4.970	0.155	1.034	0.352
1418.900	0.233	0.737	0.306	2.213	2.281	5.000	0.156	1.031	0.352
1419.000	0.229	0.751	0.312	2.236	2.298	5.031	0.156	1.028	0.352
1419.100	0.223	0.762	0.333	2.258	2.315	5.065	0.157	1.025	0.352
1419.200	0.211	0.801	0.333	2.280	2.332	5.098	0.157	1.023	0.352
1419.300	0.198	0.844	0.334	2.299	2.349	5.131	0.157	1.021	0.351
1419.400	0.195	0.854	0.343	2.319	2.365	5.166	0.158	1.020	0.351
1419.500	0.189	0.868	0.361	2.338	2.382	5.202	0.158	1.019	0.351
1419.600	0.187	0.869	0.364	2.356	2.398	5.238	0.158	1.018	0.352
1419.700	0.188	0.862	0.357	2.375	2.414	5.274	0.158	1.016	0.352
1419.800	0.191	0.846	0.347	2.394	2.430	5.308	0.159	1.015	0.352
1419.900	0.198	0.825	0.325	2.414	2.446	5.341	0.159	1.013	0.351
1420.000	0.205	0.805	0.304	2.435	2.463	5.371	0.159	1.012	0.351
1420.100	0.207	0.794	0.308	2.455	2.479	5.402	0.159	1.010	0.351
1420.200	0.202	0.800	0.339	2.475	2.496	5.436	0.160	1.008	0.351
1420.300	0.194	0.816	0.368	2.495	2.511	5.473	0.160	1.007	0.351
1420.400	0.190	0.831	0.376	2.514	2.527	5.510	0.160	1.005	0.351
1420.500	0.187	0.840	0.373	2.533	2.543	5.548	0.160	1.004	0.351
1420.600	0.187	0.848	0.360	2.551	2.559	5.584	0.160	1.003	0.351
1420.700	0.189	0.847	0.338	2.570	2.575	5.617	0.161	1.002	0.351
1420.800	0.193	0.835	0.308	2.589	2.591	5.648	0.161	1.001	0.351
1420.900	0.193	0.829	0.305	2.609	2.607	5.679	0.161	0.999	0.351
1421.000	0.191	0.828	0.311	2.628	2.623	5.710	0.161	0.998	0.350
1421.100	0.185	0.833	0.332	2.646	2.638	5.743	0.161	0.997	0.350
1421.200	0.184	0.832	0.336	2.665	2.653	5.777	0.162	0.996	0.350
1421.300	0.180	0.836	0.356	2.683	2.669	5.812	0.162	0.995	0.350
1421.400	0.181	0.833	0.356	2.701	2.684	5.848	0.162	0.994	0.350
1421.500	0.181	0.833	0.359	2.719	2.699	5.884	0.162	0.993	0.350
1421.600	0.185	0.825	0.352	2.737	2.714	5.919	0.162	0.991	0.350
1421.700	0.184	0.825	0.365	2.756	2.729	5.955	0.162	0.990	0.350
1421.800	0.188	0.817	0.355	2.775	2.744	5.991	0.162	0.989	0.350
1421.900	0.193	0.809	0.337	2.794	2.760	6.025	0.162	0.988	0.350
1422.000	0.196	0.804	0.317	2.814	2.776	6.056	0.163	0.987	0.350
1422.100	0.198	0.802	0.302	2.833	2.792	6.087	0.163	0.985	0.350
1422.200	0.202	0.797	0.283	2.854	2.808	6.115	0.163	0.984	0.349
1422.300	0.192	0.834	0.277	2.873	2.824	6.143	0.163	0.983	0.349
1422.400	0.199	0.804	0.295	2.893	2.840	6.172	0.163	0.982	0.349
1422.500	0.197	0.804	0.322	2.912	2.856	6.204	0.164	0.981	0.349
1422.600	0.185	0.824	0.355	2.931	2.871	6.240	0.164	0.980	0.349
1422.700	0.161	0.881	0.381	2.947	2.885	6.278	0.164	0.979	0.349
1422.800	0.132	0.972	0.401	2.960	2.898	6.318	0.164	0.979	0.349
1422.900	0.107	1.091	0.392	2.971	2.910	6.357	0.163	0.979	0.349
1423.000	0.105	1.053	0.367	2.981	2.921	6.394	0.163	0.980	0.349
1423.100	0.125	0.883	0.339	2.994	2.932	6.428	0.163	0.979	0.349
1423.200	0.160	0.729	0.306	3.010	2.943	6.458	0.163	0.978	0.349
1423.300	0.195	0.652	0.272	3.029	2.956	6.486	0.163	0.976	0.349
1423.400	0.228	0.608	0.258	3.052	2.970	6.511	0.163	0.973	0.348
1423.500	0.164	0.851	0.272	3.069	2.984	6.539	0.163	0.972	0.348
1423.600	0.173	0.854	0.305	3.086	2.999	6.569	0.163	0.972	0.348

WELL: SKULL_CREEK_NORTH_1

1423.700	0.181	0.847	0.333	3.104	3.014	6.602	0.163	0.971	0.347
1423.800	0.189	0.831	0.348	3.123	3.030	6.637	0.164	0.970	0.347
1423.900	0.194	0.817	0.351	3.142	3.046	6.672	0.164	0.969	0.348
1424.000	0.195	0.810	0.356	3.162	3.061	6.708	0.164	0.968	0.348
1424.100	0.198	0.805	0.338	3.182	3.077	6.742	0.164	0.967	0.348
1424.200	0.199	0.808	0.322	3.202	3.093	6.774	0.164	0.966	0.347
1424.300	0.198	0.816	0.309	3.221	3.110	6.805	0.164	0.965	0.347
1424.400	0.195	0.827	0.309	3.241	3.126	6.836	0.165	0.964	0.347
1424.500	0.196	0.831	0.296	3.261	3.142	6.865	0.165	0.964	0.347
1424.600	0.197	0.831	0.282	3.280	3.158	6.893	0.165	0.963	0.346
1424.700	0.197	0.830	0.278	3.300	3.175	6.921	0.165	0.962	0.346
1424.800	0.170	0.923	0.297	3.317	3.190	6.951	0.165	0.962	0.346
1424.900	0.176	0.877	0.311	3.334	3.206	6.982	0.165	0.961	0.346
1425.000	0.181	0.841	0.324	3.353	3.221	7.014	0.165	0.961	0.346
1425.100	0.196	0.785	0.317	3.372	3.237	7.046	0.165	0.960	0.345
1425.200	0.204	0.762	0.295	3.393	3.252	7.076	0.165	0.959	0.345
1425.300	0.217	0.744	0.248	3.414	3.268	7.100	0.166	0.957	0.345
1425.400	0.220	0.750	0.234	3.436	3.285	7.124	0.166	0.956	0.344
1425.500	0.217	0.771	0.230	3.458	3.302	7.147	0.166	0.955	0.344
1425.600	0.213	0.787	0.249	3.479	3.318	7.172	0.166	0.954	0.343
1425.700	0.194	0.853	0.264	3.499	3.335	7.198	0.167	0.953	0.343
1425.800	0.178	0.907	0.296	3.517	3.351	7.228	0.167	0.953	0.343
1425.900	0.165	0.953	0.322	3.533	3.367	7.260	0.167	0.953	0.342
1426.000	0.157	0.982	0.333	3.549	3.382	7.293	0.167	0.953	0.342
1426.100	0.151	1.000	0.343	3.564	3.397	7.328	0.167	0.953	0.342
1426.200	0.177	0.859	0.360	3.582	3.412	7.364	0.167	0.953	0.342
1426.300	0.164	0.905	0.372	3.598	3.427	7.401	0.167	0.953	0.343
1426.400	0.154	0.948	0.372	3.613	3.442	7.438	0.167	0.953	0.343
1426.500	0.149	0.970	0.371	3.628	3.456	7.475	0.166	0.953	0.343
1426.600	0.147	0.977	0.367	3.643	3.471	7.512	0.166	0.953	0.343
1426.700	0.148	0.976	0.358	3.658	3.485	7.547	0.166	0.953	0.343
1426.800	0.149	0.971	0.361	3.673	3.500	7.584	0.166	0.953	0.343
1426.900	0.149	0.984	0.348	3.688	3.514	7.618	0.166	0.953	0.343
1427.000	0.149	0.979	0.354	3.703	3.529	7.654	0.166	0.953	0.343
1427.100	0.147	0.994	0.345	3.717	3.543	7.688	0.166	0.953	0.343
1427.200	0.144	0.992	0.364	3.732	3.558	7.725	0.166	0.953	0.343
1427.300	0.143	0.998	0.353	3.746	3.572	7.760	0.166	0.954	0.343
1427.400	0.146	0.979	0.348	3.761	3.586	7.795	0.166	0.954	0.343
1427.500	0.150	0.952	0.348	3.776	3.601	7.830	0.166	0.954	0.343
1427.600	0.156	0.911	0.374	3.791	3.615	7.867	0.166	0.954	0.344
9.000				1.648	1.384	2.965	0.183	0.840	0.329
1436.100	0.166	0.868	0.392	3.808	3.629	7.906	0.166	0.953	0.344
1436.200	0.171	0.874	0.362	3.825	3.644	7.942	0.166	0.953	0.344
1436.300	0.175	0.869	0.356	3.842	3.659	7.978	0.166	0.952	0.344
1436.400	0.178	0.868	0.347	3.860	3.675	8.013	0.166	0.952	0.344
1436.500	0.180	0.860	0.354	3.878	3.690	8.048	0.166	0.952	0.344
1436.600	0.180	0.859	0.357	3.896	3.706	8.084	0.166	0.951	0.344
1436.700	0.178	0.862	0.361	3.914	3.721	8.120	0.166	0.951	0.344
1436.800	0.174	0.873	0.369	3.931	3.736	8.157	0.166	0.950	0.344
1436.900	0.169	0.886	0.378	3.948	3.751	8.195	0.166	0.950	0.344
1437.000	0.163	0.902	0.392	3.964	3.766	8.234	0.166	0.950	0.345
1437.100	0.157	0.927	0.394	3.980	3.780	8.273	0.166	0.950	0.345

WELL: SKULL_CREEK_NORTH_1

1437.200	0.153	0.943	0.392	3.995	3.795	8.312	0.166	0.950	0.345
1437.300	0.152	0.951	0.374	4.010	3.809	8.350	0.166	0.950	0.345
1437.400	0.154	0.938	0.373	4.026	3.824	8.387	0.166	0.950	0.345
1437.500	0.159	0.919	0.384	4.042	3.838	8.426	0.166	0.950	0.345
1437.600	0.164	0.890	0.414	4.058	3.853	8.467	0.166	0.949	0.346
1437.700	0.168	0.870	0.444	4.075	3.867	8.511	0.166	0.949	0.346
1437.800	0.169	0.862	0.465	4.092	3.882	8.558	0.166	0.949	0.346
1437.900	0.167	0.870	0.476	4.109	3.897	8.606	0.166	0.948	0.347
1438.000	0.163	0.886	0.467	4.125	3.911	8.652	0.166	0.948	0.347
1438.100	0.158	0.901	0.450	4.141	3.925	8.697	0.166	0.948	0.348
1438.200	0.156	0.908	0.418	4.156	3.939	8.739	0.166	0.948	0.348
1438.300	0.155	0.904	0.397	4.172	3.953	8.779	0.166	0.948	0.348
1438.400	0.157	0.886	0.377	4.187	3.967	8.816	0.166	0.947	0.348
1438.500	0.159	0.877	0.363	4.203	3.981	8.853	0.165	0.947	0.349
1438.600	0.161	0.870	0.340	4.219	3.995	8.887	0.165	0.947	0.348
1438.700	0.162	0.871	0.333	4.236	4.009	8.920	0.165	0.947	0.348
1438.800	0.161	0.875	0.336	4.252	4.023	8.954	0.165	0.946	0.348
1438.900	0.159	0.876	0.362	4.268	4.037	8.990	0.165	0.946	0.348
1439.000	0.159	0.861	0.393	4.283	4.051	9.029	0.165	0.946	0.349
3.000				0.492	0.436	1.162	0.164	0.886	0.387
1467.500	0.179	0.874	0.375	4.301	4.067	9.066	0.165	0.945	0.349
1467.600	0.180	0.874	0.364	4.319	4.082	9.103	0.165	0.945	0.349
1467.700	0.179	0.880	0.348	4.337	4.098	9.138	0.166	0.945	0.349
1467.800	0.177	0.878	0.361	4.355	4.114	9.174	0.166	0.945	0.349
1467.900	0.177	0.873	0.356	4.373	4.129	9.209	0.166	0.944	0.349
1468.000	0.179	0.858	0.354	4.390	4.144	9.245	0.166	0.944	0.349
1468.100	0.184	0.833	0.345	4.409	4.160	9.279	0.166	0.944	0.349
1468.200	0.187	0.807	0.365	4.427	4.175	9.316	0.166	0.943	0.349
1468.300	0.189	0.785	0.381	4.446	4.190	9.354	0.166	0.942	0.349
1468.400	0.185	0.779	0.397	4.465	4.204	9.394	0.166	0.942	0.349
1468.500	0.177	0.783	0.420	4.483	4.218	9.436	0.166	0.941	0.349
1468.600	0.167	0.799	0.434	4.499	4.231	9.479	0.166	0.940	0.350
1468.700	0.159	0.810	0.430	4.515	4.244	9.522	0.166	0.940	0.350
1468.800	0.155	0.827	0.404	4.531	4.257	9.562	0.166	0.940	0.350
1468.900	0.155	0.828	0.390	4.546	4.270	9.601	0.166	0.939	0.350
1469.000	0.157	0.827	0.380	4.562	4.283	9.639	0.166	0.939	0.351
1469.100	0.163	0.820	0.372	4.578	4.296	9.677	0.166	0.938	0.351
1469.200	0.167	0.829	0.363	4.595	4.310	9.713	0.166	0.938	0.351
1469.300	0.171	0.841	0.357	4.612	4.324	9.749	0.166	0.938	0.351
1469.400	0.176	0.854	0.339	4.629	4.339	9.782	0.166	0.937	0.351
1469.500	0.180	0.854	0.331	4.647	4.355	9.816	0.166	0.937	0.351
1469.600	0.185	0.846	0.327	4.666	4.370	9.848	0.166	0.937	0.350
1469.700	0.186	0.833	0.341	4.685	4.386	9.882	0.166	0.936	0.350
1469.800	0.187	0.818	0.358	4.703	4.401	9.918	0.166	0.936	0.350
1469.900	0.187	0.806	0.383	4.722	4.416	9.957	0.166	0.935	0.351
1470.000	0.186	0.801	0.394	4.741	4.431	9.996	0.166	0.935	0.351
1470.100	0.185	0.805	0.397	4.759	4.446	10.036	0.166	0.934	0.351
1470.200	0.185	0.815	0.381	4.778	4.461	10.074	0.166	0.934	0.351
1470.300	0.183	0.835	0.370	4.796	4.476	10.111	0.167	0.933	0.351
1470.400	0.180	0.856	0.363	4.814	4.492	10.147	0.167	0.933	0.351
1470.500	0.173	0.888	0.372	4.831	4.507	10.184	0.167	0.933	0.351
1470.600	0.163	0.930	0.389	4.847	4.522	10.223	0.167	0.933	0.351

WELL: SKULL_CREEK_NORTH_1

1470.700	0.146	0.999	0.410	4.862	4.537	10.264	0.167	0.933	0.352
1470.800	0.124	1.111	0.411	4.874	4.551	10.305	0.166	0.934	0.352
1470.900	0.097	1.306	0.403	4.884	4.563	10.346	0.166	0.934	0.352
1471.000	0.070	1.633	0.370	4.891	4.575	10.383	0.166	0.935	0.352
1471.100	0.047	2.088	0.352	4.896	4.584	10.418	0.165	0.936	0.352
1471.200	0.038	2.346	0.320	4.900	4.593	10.450	0.165	0.938	0.352
1471.300	0.043	2.003	0.309	4.904	4.602	10.481	0.165	0.938	0.352
1471.400	0.062	1.492	0.297	4.910	4.611	10.510	0.164	0.939	0.352
1471.500	0.088	1.161	0.301	4.919	4.621	10.540	0.164	0.940	0.351
1471.600	0.114	1.008	0.293	4.930	4.633	10.570	0.164	0.940	0.351
1471.700	0.135	0.958	0.291	4.944	4.646	10.599	0.164	0.940	0.351
1471.800	0.149	0.948	0.287	4.959	4.660	10.628	0.164	0.940	0.351
1471.900	0.155	0.942	0.302	4.974	4.674	10.658	0.164	0.940	0.351
1472.000	0.156	0.940	0.319	4.990	4.689	10.690	0.164	0.940	0.350
1472.100	0.154	0.928	0.357	5.005	4.703	10.725	0.164	0.940	0.351
1472.200	0.150	0.918	0.399	5.020	4.717	10.765	0.164	0.940	0.351
1472.300	0.146	0.907	0.445	5.035	4.730	10.810	0.163	0.940	0.351
1472.400	0.142	0.916	0.463	5.049	4.743	10.856	0.163	0.940	0.351
1472.500	0.141	0.925	0.461	5.063	4.756	10.902	0.163	0.939	0.352
1472.600	0.140	0.946	0.441	5.077	4.770	10.946	0.163	0.939	0.352
1472.700	0.142	0.953	0.425	5.091	4.783	10.989	0.163	0.940	0.352
1472.800	0.144	0.960	0.411	5.105	4.797	11.030	0.163	0.940	0.352
1472.900	0.148	0.955	0.399	5.120	4.811	11.070	0.163	0.940	0.353
1473.000	0.150	0.946	0.405	5.135	4.825	11.110	0.163	0.940	0.353
1473.100	0.151	0.939	0.409	5.150	4.839	11.151	0.163	0.940	0.353
1473.200	0.151	0.939	0.413	5.165	4.854	11.192	0.163	0.940	0.353
1473.300	0.152	0.942	0.399	5.181	4.868	11.232	0.163	0.940	0.353
1473.400	0.153	0.935	0.399	5.196	4.882	11.272	0.163	0.940	0.353
1473.500	0.155	0.921	0.402	5.211	4.897	11.313	0.163	0.940	0.354
1473.600	0.159	0.901	0.409	5.227	4.911	11.353	0.163	0.939	0.354
1473.700	0.161	0.890	0.416	5.243	4.925	11.395	0.163	0.939	0.354
1473.800	0.163	0.872	0.439	5.260	4.939	11.439	0.163	0.939	0.354
1473.900	0.163	0.863	0.466	5.276	4.953	11.486	0.163	0.939	0.354
1474.000	0.164	0.863	0.465	5.292	4.968	11.532	0.163	0.939	0.355
1474.100	0.166	0.866	0.454	5.309	4.982	11.577	0.163	0.938	0.355
1474.200	0.170	0.866	0.424	5.326	4.997	11.620	0.163	0.938	0.355
1474.300	0.173	0.871	0.401	5.343	5.012	11.660	0.163	0.938	0.355
1474.400	0.176	0.881	0.375	5.361	5.027	11.698	0.163	0.938	0.356
1474.500	0.175	0.899	0.370	5.378	5.043	11.734	0.163	0.938	0.356
1474.600	0.173	0.909	0.383	5.396	5.059	11.773	0.163	0.938	0.356
1474.700	0.169	0.926	0.409	5.412	5.074	11.814	0.163	0.938	0.356
1474.800	0.167	0.940	0.421	5.429	5.090	11.856	0.163	0.938	0.356
1474.900	0.164	0.968	0.409	5.445	5.106	11.897	0.163	0.938	0.356
1475.000	0.160	0.999	0.388	5.462	5.122	11.936	0.163	0.938	0.356
1475.100	0.156	1.035	0.370	5.477	5.138	11.973	0.163	0.938	0.356
1475.200	0.150	1.075	0.353	5.492	5.154	12.008	0.163	0.938	0.356
1475.300	0.141	1.125	0.352	5.506	5.170	12.043	0.163	0.939	0.356
1475.400	0.130	1.185	0.364	5.519	5.185	12.079	0.163	0.940	0.356
1475.500	0.116	1.267	0.391	5.531	5.200	12.119	0.163	0.940	0.356

8.100				1.247	1.149	3.090	0.154	0.921	0.381
1477.300	0.152	0.959	0.392	5.546	5.215	12.158	0.163	0.940	0.357
1477.400	0.149	0.985	0.367	5.561	5.229	12.194	0.163	0.940	0.357

WELL: SKULL_CREEK_NORTH_1

1477.500	0.147	0.991	0.351	5.576	5.244	12.229	0.163	0.940	0.357
1477.600	0.148	0.986	0.340	5.590	5.258	12.263	0.163	0.941	0.356
1477.700	0.151	0.962	0.337	5.606	5.273	12.297	0.162	0.941	0.356
1477.800	0.154	0.939	0.342	5.621	5.287	12.331	0.162	0.941	0.356
1477.900	0.155	0.924	0.351	5.637	5.302	12.367	0.162	0.941	0.356
1478.000	0.154	0.933	0.348	5.652	5.316	12.401	0.162	0.941	0.356
1478.100	0.152	0.947	0.343	5.667	5.331	12.436	0.162	0.941	0.356
1478.200	0.148	0.965	0.345	5.682	5.345	12.470	0.162	0.941	0.356
1478.300	0.145	0.978	0.369	5.696	5.359	12.507	0.162	0.941	0.356

1.100				0.166	0.159	0.388	0.151	0.960	0.353

1481.100	0.133	1.100	0.376	5.710	5.374	12.545	0.162	0.941	0.356
1481.200	0.122	1.164	0.366	5.722	5.388	12.581	0.162	0.942	0.356
1481.300	0.113	1.220	0.374	5.733	5.402	12.619	0.162	0.942	0.356
1481.400	0.106	1.254	0.392	5.744	5.415	12.658	0.162	0.943	0.357
1481.500	0.106	1.251	0.394	5.754	5.428	12.697	0.162	0.943	0.357
1481.600	0.109	1.206	0.400	5.765	5.441	12.737	0.161	0.944	0.357
1481.700	0.116	1.151	0.390	5.777	5.455	12.776	0.161	0.944	0.357
1481.800	0.121	1.119	0.364	5.789	5.468	12.813	0.161	0.945	0.357
1481.900	0.127	1.087	0.336	5.802	5.482	12.846	0.161	0.945	0.357
1482.000	0.131	1.055	0.326	5.815	5.496	12.879	0.161	0.945	0.357
1482.100	0.136	1.017	0.325	5.828	5.510	12.911	0.161	0.945	0.357
1482.200	0.140	0.991	0.316	5.842	5.524	12.943	0.161	0.945	0.357
1482.300	0.147	0.952	0.316	5.857	5.538	12.975	0.161	0.945	0.356
1482.400	0.153	0.922	0.323	5.872	5.552	13.007	0.161	0.945	0.356
1482.500	0.159	0.905	0.335	5.888	5.566	13.040	0.161	0.945	0.356
1482.600	0.159	0.913	0.354	5.904	5.581	13.076	0.161	0.945	0.356
1482.700	0.155	0.934	0.390	5.920	5.595	13.115	0.161	0.945	0.356

1.700				0.223	0.236	0.608	0.131	1.057	0.357

1497.600	0.202	0.850	0.384	5.940	5.612	13.153	0.161	0.945	0.356
1497.700	0.204	0.849	0.362	5.960	5.629	13.189	0.161	0.945	0.356
1497.800	0.206	0.844	0.357	5.981	5.647	13.225	0.161	0.944	0.356
1497.900	0.207	0.832	0.373	6.002	5.664	13.262	0.161	0.944	0.357
1498.000	0.210	0.815	0.391	6.022	5.681	13.301	0.161	0.943	0.357
1498.100	0.212	0.806	0.399	6.044	5.698	13.341	0.162	0.943	0.357
1498.200	0.214	0.799	0.399	6.065	5.715	13.381	0.162	0.942	0.357
1498.300	0.215	0.797	0.389	6.087	5.733	13.420	0.162	0.942	0.357
1498.400	0.216	0.799	0.374	6.108	5.750	13.457	0.162	0.941	0.357
1498.500	0.214	0.804	0.368	6.130	5.767	13.494	0.162	0.941	0.357
1498.600	0.212	0.808	0.364	6.151	5.784	13.531	0.162	0.940	0.357
1498.700	0.209	0.804	0.379	6.172	5.801	13.569	0.162	0.940	0.357
1498.800	0.207	0.799	0.395	6.192	5.817	13.608	0.163	0.939	0.357

1.300				0.273	0.222	0.493	0.210	0.816	0.380

1545.000	0.148	0.911	0.397	6.207	5.831	13.648	0.162	0.939	0.357
1545.100	0.155	0.884	0.378	6.223	5.845	13.686	0.162	0.939	0.357
1545.200	0.160	0.862	0.364	6.239	5.858	13.722	0.162	0.939	0.357
1545.300	0.164	0.857	0.323	6.255	5.872	13.754	0.162	0.939	0.357

WELL: SKULL_CREEK_NORTH_1

1545.400	0.166	0.856	0.298	6.272	5.887	13.784	0.162	0.939	0.357
1545.500	0.165	0.864	0.281	6.288	5.901	13.812	0.162	0.938	0.357
1545.600	0.158	0.871	0.299	6.304	5.915	13.842	0.162	0.938	0.357
1545.700	0.148	0.896	0.301	6.319	5.928	13.872	0.162	0.938	0.357
1545.800	0.136	0.931	0.314	6.332	5.941	13.904	0.162	0.938	0.357
1545.900	0.125	0.965	0.319	6.345	5.953	13.936	0.162	0.938	0.356
1546.000	0.120	0.974	0.321	6.357	5.964	13.968	0.162	0.938	0.356
1546.100	0.121	0.955	0.315	6.369	5.976	13.999	0.162	0.938	0.356
1546.200	0.129	0.899	0.321	6.382	5.987	14.032	0.162	0.938	0.356
1546.300	0.141	0.838	0.335	6.396	5.999	14.065	0.162	0.938	0.356
1546.400	0.155	0.785	0.348	6.411	6.011	14.100	0.162	0.938	0.356
1546.500	0.167	0.757	0.348	6.428	6.024	14.135	0.162	0.937	0.356
1546.600	0.175	0.744	0.353	6.445	6.037	14.170	0.162	0.937	0.356
1546.700	0.180	0.743	0.356	6.463	6.050	14.205	0.162	0.936	0.356
1546.800	0.180	0.745	0.370	6.481	6.064	14.242	0.162	0.936	0.356
1546.900	0.179	0.748	0.376	6.499	6.077	14.280	0.162	0.935	0.356
1547.000	0.177	0.752	0.390	6.517	6.090	14.319	0.162	0.935	0.356
1547.100	0.175	0.758	0.397	6.535	6.104	14.359	0.162	0.934	0.356

2.200				0.342	0.286	0.751	0.156	0.837	0.341

1549.300	0.132	0.967	0.379	6.548	6.116	14.397	0.162	0.934	0.356
1549.400	0.135	0.961	0.366	6.561	6.129	14.433	0.162	0.934	0.356
1549.500	0.135	0.962	0.353	6.575	6.142	14.469	0.162	0.934	0.356
1549.600	0.132	0.965	0.360	6.588	6.155	14.505	0.162	0.934	0.356
1549.700	0.128	0.977	0.363	6.601	6.168	14.541	0.162	0.934	0.356
1549.800	0.125	0.983	0.366	6.613	6.180	14.578	0.162	0.934	0.356
1549.900	0.126	0.985	0.352	6.626	6.192	14.613	0.162	0.935	0.356
1550.000	0.130	0.961	0.351	6.639	6.205	14.648	0.162	0.935	0.356

0.800				0.104	0.101	0.289	0.130	0.970	0.361

WELL: SKULL_CREEK_NORTH_1

Totals for well SKULL_CREEK_NORTH_1

Net pay thickness : 41.100000
Gross thickness : 194.100000
Ratio (net/gross) : 0.211747

			Summation			Averages		
Thickness	Hydrocarbon	PHIT	BVW	VSH	PHIT	SWT_WS	VSH	
41.100	0.434	6.639	6.205	14.648	0.162	0.935	0.356	

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

Appendix 3 Summary

APPENDIX 3: NET SAND DATA

NET SAND DATA

```

*****
*
*           PAY SUMMARY REPORT
*
*   Project : PEP108
*   User id  : minprj
*   Date    : 27-Feb-98 13:05:03
*
*****

```

Page 1

WELL: SKULL_CREEK_NORTH_1

```

Interval name      : NULLAWARRE GREENSAND
Interval top       : 1105.000000 METRES
Interval bottom    : 1182.000000 METRES

```

```

Cutoff Expression:
  phit>=0.03 & vsh<=0.4

```

Minimum pay thickness : 1.000000 METRES

Maximum pay separation : 1.000000 METRES

WELL: SKULL_CREEK_NORTH_1

Totals for well SKULL_CREEK_NORTH_1

```

Net pay thickness : 49.000000
Gross thickness   : 77.000000
Ratio (net/gross) : 0.636364

```

Thickness	Hydrocarbon	Summation			Averages		
		PHIT	BVW	VSH	PHIT	SWT	VSH
49.000	1.030	7.984	6.954	16.544	0.163	0.871	0.338

1

```

*****
*                                     *
*           PAY SUMMARY REPORT       *
*                                     *
*   Project : PEP108                 *
*   User id  : minprj                 *
*   Date    : 27-Feb-98 09:34:58    *
*                                     *
*****

```

1

Page 1

WELL: SKULL_CREEK_NORTH_1

Interval name : WAARRE SANDSTONE
Interval top : 1270.000000 METRES
Interval bottom : 1356.000000 METRES

Cutoff Expression:
phit>=0.03 & vsh<=0.4

Minimum pay thickness : 1.000000 METRES

Maximum pay separation : 1.000000 METRES

WELL: SKULL_CREEK_NORTH_1

Totals for well SKULL_CREEK_NORTH_1

Net pay thickness : 22.700000
Gross thickness : 86.000000
Ratio (net/gross) : 0.263953

		Summation			Averages		
Thickness	Hydrocarbon	PHIT	BVW	VSH	PHIT	SWT_WS	VSH
22.700	0.551	4.243	3.691	4.126	0.187	0.870	0.182


```

*****
*                                     *
*           PAY SUMMARY REPORT         *
*                                     *
*   Project : PEP108                   *
*   User id  : minprj                   *
*   Date    : 27-Feb-98 09:37:48      *
*                                     *
*****

```

Page 1

WELL: SKULL_CREEK_NORTH_1

Cutoff Expression:
phit>=0.03 & vsh<=0.4

Minimum pay thickness : 1.000000 METRES

Maximum pay separation : 1.000000 METRES

WELL: SKULL_CREEK_NORTH_1

Totals for well SKULL_CREEK_NORTH_1

Net pay thickness : 54.100000
 Gross thickness : 194.100000
 Ratio (net/gross) : 0.278722

Thickness	Hydrocarbon	Summation			Averages		
		PHIT	BW	VSH	PHIT	SWT_WS	VSH
54.100	0.116	8.126	8.011	18.993	0.150	0.986	0.351

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

APPENDIX 4: MUDLOG SHOWS

SCN-1

1	C1 ppm 10000
1	C2 ppm 10000
1	C3 ppm 10000
1	C4 ppm 10000
1	C5 ppm 10000

NULLAWARRE GREENSAND

TOTAL GAS (units) CHROMATOGRAPHY (ppm)

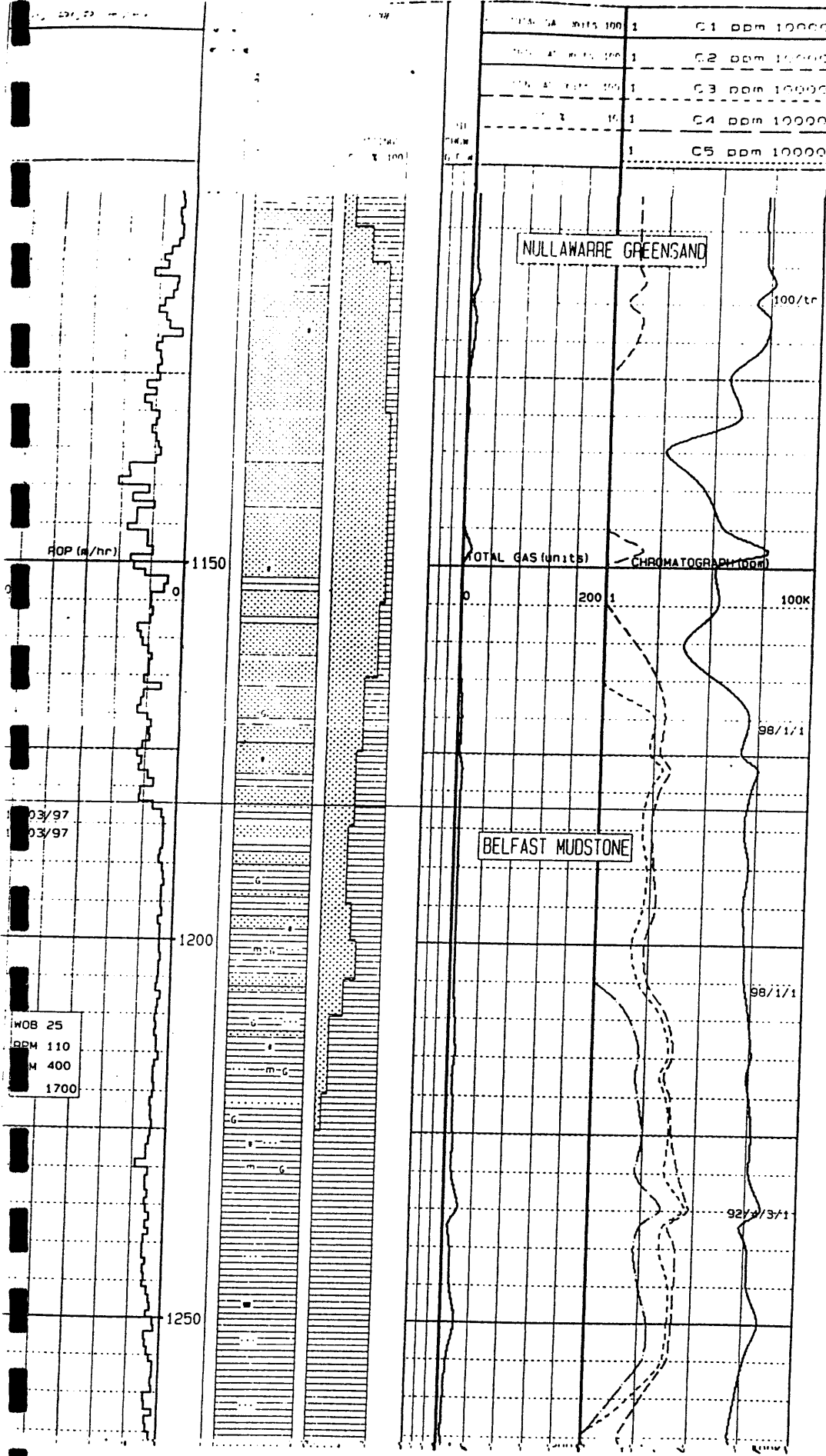
BELFAST MUDSTONE

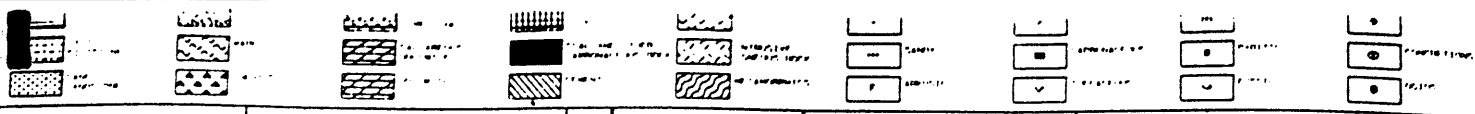
SANDSTONE: lt-med yel gn. vi-med. dom f. sbang. p srt. wk-mod sil cmt. abun wh-med gn arg mtx. mtx supported clr-ye1 orng qtz gr. tr pyr. frs-mod nd. vo-p vis por. n fluor.

SANDSTONE: lt gn. clr-transl. w srt. pred f-med gr. occ crs. sb ang-sb rnd. com pa gn lt gy arg mtx. yel/brn/lt gn stn qtz gr. tr blk carb mat. tr pyr. p vis por. n/s.

CLAYSTONE: lt-med oliv/gy. lt gy/gn. sft. v disp. slty. intrbdd vf sd gr. abun dk gn- blk glauc. tr pyr nod. micrmic

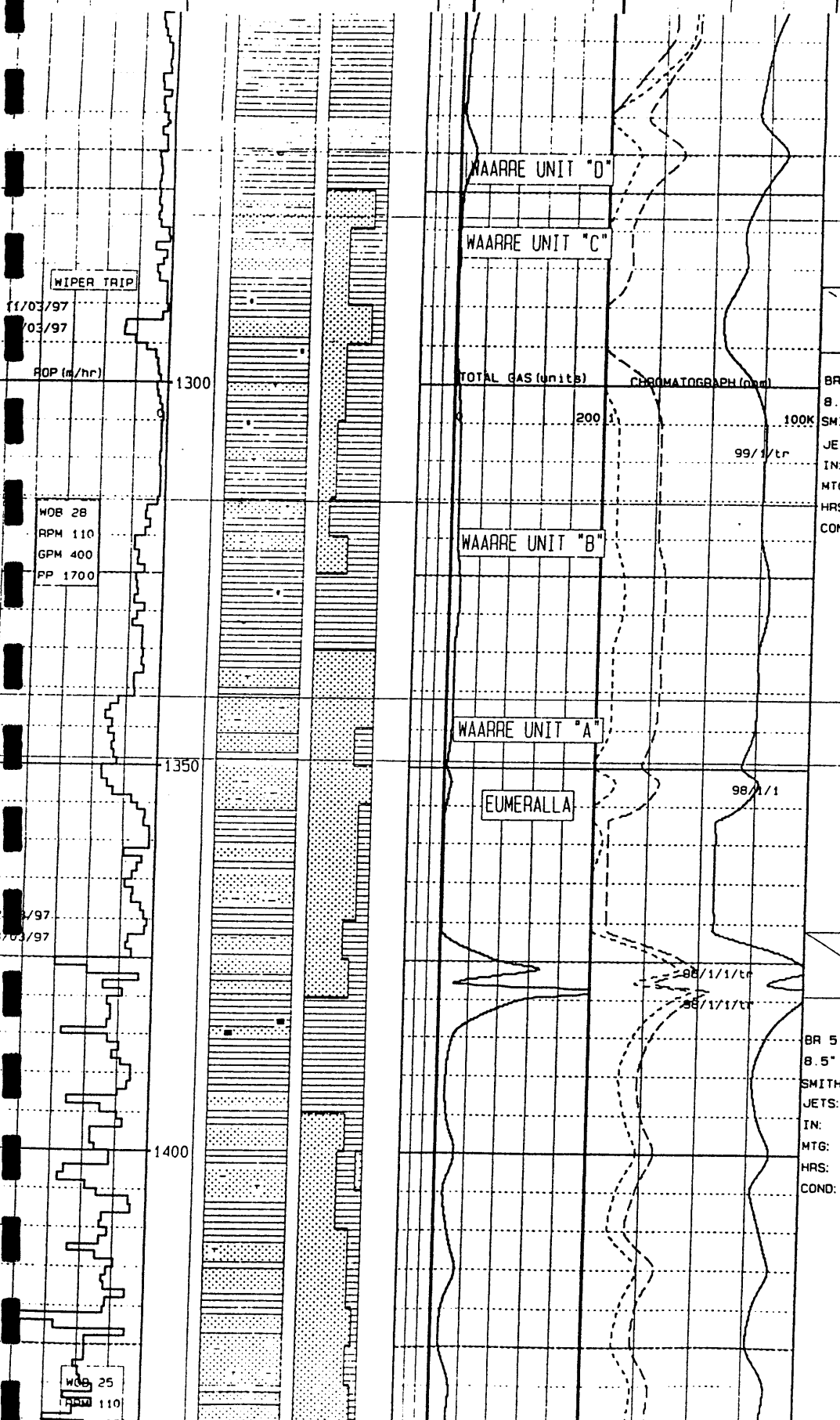
CLAYSTONE: dk gy. lt-med gy/brn. med brn. slty 1/p. sft-frn. v disp. tr pyr. tr carb mat. tr glauc.





SCN-1

1	C1	DDM 10000
1	C2	DDM 10000
1	C3	DDM 10000
1	C4	DDM 10000
1	C5	DDM 10000



CLAYSTONE: off wh, lt brn, occ
dff, arg, com assoc pyr, disp,
amorph.

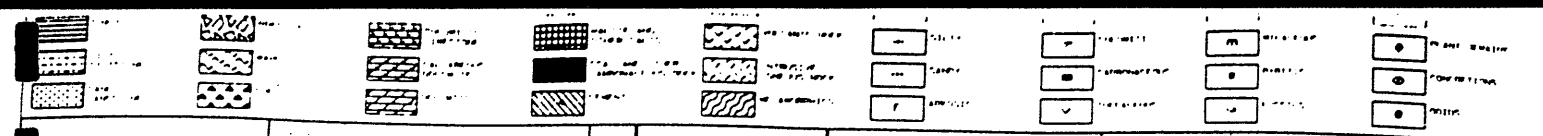
SANDSTONE: clr, trns1, med-crs,
mod-p srt, ang-sbrnd, pred lse
qtz gr, fr-gd vis & inf por.

SANDSTONE: off wh-lt gy, fn, wl
srt, sbang-sbrnd, com wk calc
cmt, abun off wh arg mtx, sft-
frm, p vis por.

SANDSTONE: lt-med gn gy, vf-med
dom med, ang-sub rnd, mod srt,
mod calc & wk sil cmt, abun
wh -lt gy arg mtx, abun alt
feld gr & gy gn lith, tr rd
brn lith, tr blk coal dtrl,
tr crs brn & gn mic flk, tr
pyr, mod hd, vp vis por, n/s.

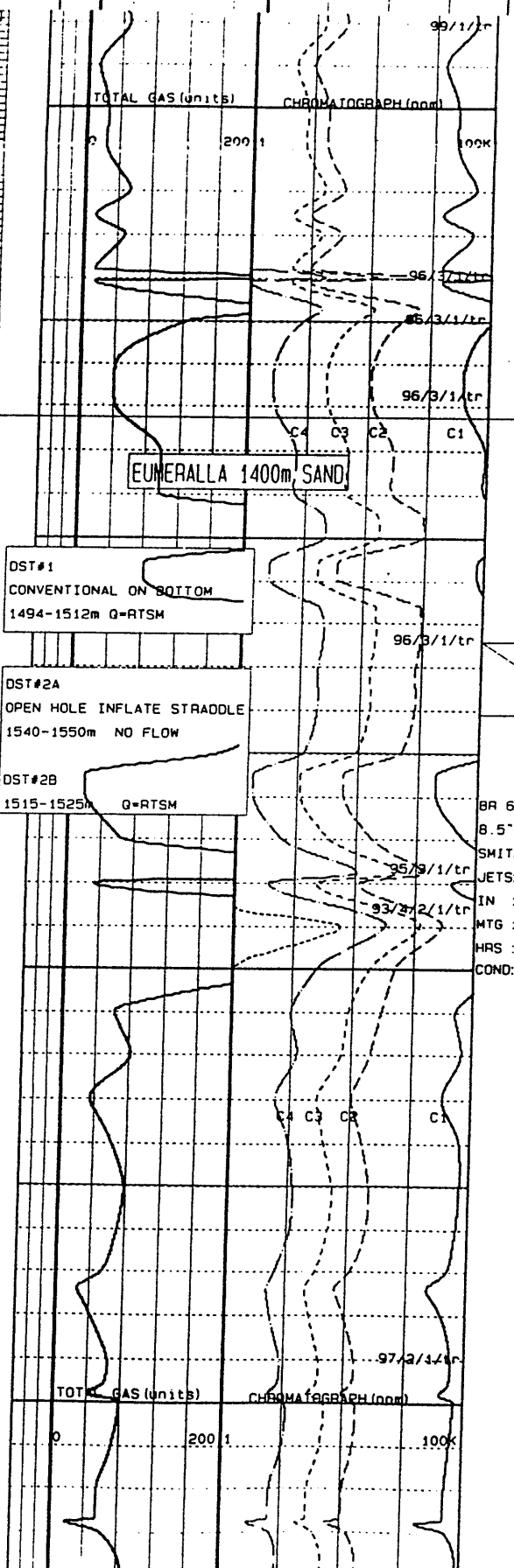
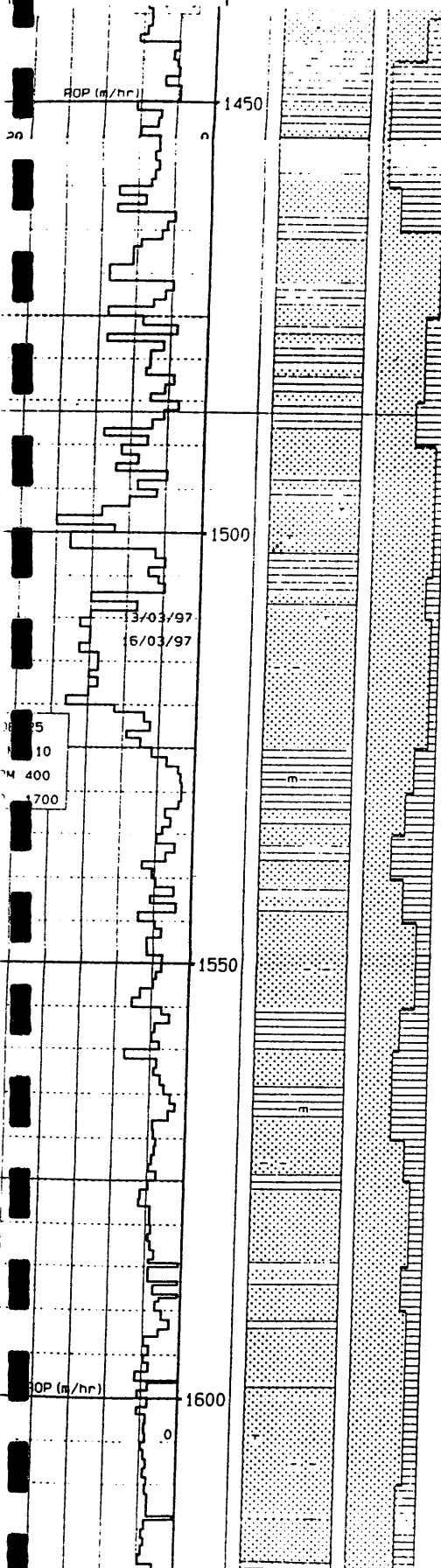
CLAYSTONE: lt gn gy-med gn gy,
off wh-lt brn gy, non-occ v
silty, tr vf sl alt fld gr i/p,
tr blk coaly dtrl, tr
micmic, frm, non fiss.

MUD DATA @ 1416
W 9.2, FV 42, PV 13, YP 22,
GEL 4/10, F 6.8, Ck 1, Sd 0 25,
O/W/S 0/94, 6/5 4, pH 8.6,
C1 12.5k, Ca 380, %KCL 2.4



1	C1	DDM	10000
1	C2	DDM	10000
1	C3	DDM	10000
1	C4	DDM	10000
1	C5	DDM	10000

471
 170
SCN-1



CLAYSTONE off wh-lt brn. occ
 lt gy. arg. slty i.p. disp-srt.
 amorph.

SANDSTONE: off wh-lt gy. trnsl.
 gn gy i.p. pred med. occ crs.
 p-mod srt. ang-sbang. occ pyr.
 com calc spks. pred lse. p-fr
 vis por.

MUD DATA @ 1512m
 W 9.25, FV 43, PV 12, YP 18.
 GEL 4/9, F 5.0, Ck 1, Sd 0.25.
 O/W/S 0/94, 3/5, 7, pH 8.5.
 C1 13.0k, Ca 380, %KCL 2.50.

CLAYSTONE: off wh-lt gn gy.
 occ lt brn. occ v slty. occ vf
 aren. tr crs brn & gn mic
 flks. tr micrmic. rr blk carb
 mat. frm sl disp. sbfiss.

SANDSTONE: med gn gy. vf-crs.
 dom med-crs. ang-sub rnd.
 mod-w srt. mod sil & wk calc
 cmt. com-abun wh arg mtx. abun
 gy gn lith. abun off wh pt
 alt feld gr. com rd-brn lith
 tr crs clr & brn mic flk. rr
 blk carb dtr1. fra-mod hd.
 n-vp vis por. n/s.

MUD DATA @ 1598m
 W 9.35, FV 39, PV 9.0, YP 18.
 GEL 3/8, F 5.0, Ck 1, Sd 0.25.
 O/W/S 0/93, 9/6, 1, pH 8.7.
 C1 18k, Ca 440, %KCL 3.57

CLAYSTONE off wh-lt gn-lt

EUMERALLA 1400m SAND

DST#1
 CONVENTIONAL ON BOTTOM
 1494-1512m Q=RTSM

DST#2A
 OPEN HOLE INFLATE STRADDLE
 1540-1550m NO FLOW

DST#2B
 1515-1525m Q=RTSM

BR 6 NB 5
 8.5" (RR)
 SMITH ME05
 JETS: 3x12
 IN : 1512m
 MTG : 0
 HRS : 2
 COND: 1-1-BT
 N2-E-1
 NO-CP

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

APPENDIX 5: FIELD ELECTRIC LOG REPORT

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

APPENDIX 6: RFS DATA

RFT LOG - 19/20 March

strain/HF - P
HA cables 30/9

DECE
20/3/97

- 23:30 TEST tool OK @ casing shoe.
- 23:58 corroborate on depth.
- 00:04 #1 - good PBU - sticky.
- 00:25 pulled free with 4000 lb overpull.
- 00:35 -- cable diff. stuck @ 600 m. (cf. skull creek. 1)
- 00:48 continue to #2 - plan to slack off on seat.
- 00:53 reconfirm on depth.
- 01:02 #2 - moderate/good PBU - free with 1800 lbs. of
- 01:10 tight spot @ 1366 m. - 1370 m
- #3 - tight - no buildup.
- 01:20 -- cable diff. stuck @ 600 m.
- 01:24 pulled free with 3000 lb. overpull.
- 01:27 #4 - no seat (suspect tool slipping down hole)
- 01:35 #5 - tight - no buildup. (cable not slackened off)
- 01:42 -- cable diff. stuck @ 600 m.
- 01:50 pulled free with 3000 lb overpull.
- #6 - tight
- 02:03 -- cable stuck - pull free @ 1700 lbs dp.
- #7 - mod. buildup - low perm
- 02:17 -- pulled free @ 1500 lb dp.
- #8 - mod. buildup - low perm.
- 02:30 -- cable stuck - pull free @ 2500 lbs. dp.
- #9 - mod. buildup - low perm
- 02:40 -- cable stuck - pull free @ 4000 lbs. dp.

Terminate job!

fi.

stabilisation times compromised
by "time-on-seat" considerations.

SCN #1 RFT POINTS

<u>#</u>	<u>INTERVAL</u>	<u>M. RT</u>	
1	Waare C	1293.5	✓
2	..	1301.0	
3	Waare A	1354.0	✓
4	-	1355.0	
5	Emeralia	1376.0	✓
6	..	1378.5	✓
7		1469.6	✓
8		1473.9	
9		1495.2	
10		1501.5	✓
11		1511.7	✓
12		1515.6	✓
13		1519.5	
14		1523.0	
15		1538.7	
16		1543.0	
17		1546.5	
18		1547.0	
19		1550.9	
20		1552.6	
21		1629.8	

Skull Creek North 1 RFS Data

Depth	Pressure	Gradient psi/metre	Gradient psi/ft
1293.50 1354.00	1728.80 1826.50	1.615	0.492
1501.50 1511.70 1515.60	2159.70 2358.80 2361.20	0.615	0.188

SKULL CREEK NORTH 1 PETROPHYSICAL INTERPRETATION

APPENDIX 7: KEY EVALUATION PARAMETERS & TECHNIQUES

KEY EVALUATION PARAMETERS & TECHNIQUES

NULLAWARRE GREENSAND

	Nullawarre Greensand	Source
Interval	1285 - 1326	
Vsh equation	neutron-density	
Nphi shale	0.50	Xplot
Phit shale	0.1	logs
Rho shale	2.4 g/cc	Xplot
Porosity equation	Density	
Rho matrix	2.65 g/cc	quartz
Rho fluid	1.008 g/cc	filtrate
Bad hole Porosity	Wyllie	
DT fluid	189 us/ft	
DT matrix	55.5 us/ft	quartz
DT shale	120 us/ft	Xplot
Sw equation	Archie	
Rw	0.28 ohm-m @ 110C	Pickett Plot
a	1	standard
m	1.70	SCW#1 Waarre SCAL
n	1.85	SCW#1 Waarre SCAL
Cutoff Parameters		
Vsh cutoff	0.4	
Net sand porosity cutoff	0.03	
Net res porosity cutoff	0.10	
Sw cutoff	0.7	
Min net sand	1 metre	
Min net reservoir	1 metre	
Min net pay	1 metre	

KEY EVALUATION PARAMETERS & TECHNIQUES

WAARRE FORMATION

	Waarre Formation	Source
Interval	1270 - 1356	
Vsh equation	GR	
GR matrix	10 API	Xplot
GR shale	125 API	Xplot
Porosity equation	Density	
Rho matrix	2.65 g/cc	quartz
Rho shale	2.40 g/cc	logs
Rho fluid	1.008 g/cc	filtrate
Bad hole Porosity	Wyllie	
DT fluid	189 us/ft	
DT matrix	55.5 us/ft	quartz
DT shale	106 us/ft	Xplot
Sw equation	Waxman-Smiths	
Rw	0.4 ohm-m @ 25C	DST 2
CEC	0.037 meq/g	SCW#1 SCAL
a	1	standard
m	1.70	SCW#1 SCAL
n	1.85	SCW#1 SCAL
Cutoff Parameters		
Vsh cutoff	0.4	
Net sand porosity cutoff	0.03	
Net res porosity cutoff	0.10	
Sw cutoff	0.7	
Min net sand	1 metre	
Min net reservoir	1 metre	
Min net pay	1 metre	

KEY EVALUATION PARAMETERS & TECHNIQUES

EUMERALLA FORMATION

	Eumeralla Formation	Source
Interval	1356 - 1550	
Vsh equation	GR	
GR matrix	30 API	Xplot
GR shale	135 API	Xplot
Porosity equation	Density	
Rho matrix	2.65 g/cc	quartz
Rho shale	2.40 g/cc	Xplot
Rho fluid	1.008 g/cc	filtrate
Bad hole Porosity	Wyllie	
DT fluid	189 us/ft	
DT matrix	55.5 us/ft	quartz
DT shale	98 us/ft	Xplot
Sw equation	Waxman-Smiths	
Rw	0.4 ohm-m @ 25C	SCW#1 Waarre DST 2
CEC	0.055 meq/g	SCW#1 SCAL
a	1	standard
m	1.82	SCW#1 SCAL
n	2.09	SCW#1 SCAL
Cutoff Parameters		
Vsh cutoff	0.3	
Net sand porosity cutoff	0.03	
Net res porosity cutoff	0.10	
Sw cutoff	0.7	
Min net sand	1 metre	
Min net reservoir	1 metre	
Min net pay	1 metre	

APPENDIX 3
DRILLING SUMMARY

CULTUS PETROLEUM NL

SKULL CREEK NORTH #1

The location of the well is X: 673 917.62 E, Y: 5 730 168.00 N in Block PPL 1, Onshore Otway Basin, Victoria. Skull Creek North #1 was an exploration well, spudded at 0930 hours on 6th March 1997 by O.D.&E. Rig #30. RT was 4.7 m.

12-1/4" hole was drilled through the Port Campbell Limestone using a gel spud mud. At 6m RT the Gellibrand Marl was encountered and at 10m RT the hole was displaced with Alum / KCL Brine. At 41m RT a mud ring formed and blocked the flowline. The flowline was unblocked and periodic SAPP pills circulated downhole. Drilled into the Clifton Formation at 210m RT and increased mud weight to 8.9 ppg using drill solids. Continued drilling to the Narrawaturk Formation 240m RT and ceased adding KCL. Drilled from 240m to 306m RT. Circulated hole clean with Gel mud. Ran wiper trip and experienced tight hole in the lower Clifton Formation from 237m to 228m RT. Circulated and conditioned the hole prior to running casing. Ran 3 surveys over the interval with the last deviation at 0.20°

Ran 9-5/8" casing with the shoe set at 304m RT. 356sx Class G cement with 2% CaCl₂ at 12.5 ppg and 25sx Class G cement with 2% CaCl₂ at 15.8ppg was displaced and pumped to surface. The plug was bumped, the casing tested to 2000psi and the float held when pressure was released. Installed Bradenhead and nipped up BOP's and Choke manifold. Flushed manifold and function tested BOP's. Cleared blocked pipe ram control line. Pressure tested BOP's, choke manifold and valves, casing, kelly cocks and standpipe to 300/2000psi. Tested annular to 300/1500psi.

Made up 8-1/2" BHA, RIH and tagged cement at 290m RT. Drilled out cement, shoe and 3m of open hole to 309m RT. Displaced hole with a KCL/PHPA Polymer mud at 8.7ppg. Ran FIT to 255psi with 8.7ppg mud equating to 13.5 ppg EMW.

8-1/2" hole was drilled from 309m RT through the Mepunga, Dilwyn, Pember, Pebble Point and the Paaratte Formations to 918m RT. Ran wiper trip to the shoe and experienced tight hole between the Paaratte and Pember Formations with 15 - 20K drag. RIH with no fill. Continued drilling 8-1/2" hole through the Paaratte and into the Skull Creek Formation from 918m to 1034m RT with downhole fluid loss between 0 - 5 bbls/hr. Conditioned well, ran survey and pulled bit due to slow ROP.

Picked up new bit and RIH to 1020m RT. Washed and reamed 1020m to 1034m RT. Drilling 8-1/2" hole through the Nullawarre and into the Belfast Formation from 1034m to 1122m RT. Checked for flow. Continued drilling through the Belfast and into the Waarre Formation from 1122m to 1287m RT. Circulated bottoms up and pulled bit due to slow ROP. Pumped out of hole in the Belfast Formation between 1190m to 1181m RT. Experienced tight hole through the Nullawarre and Skull Creek Formations with drag between 25 - 45K overpull.

Picked up new bit and RIH to 991m RT. Reamed through the Skull Creek Formation from 991m to 1076m and the Waarre Formation 1225m to 1287m RT. Drilled 8-1/2" hole from 1287m to 1295m RT. Checked for flow. Continued drilling from 1295m to 1342m RT. ROP increased, checked for flow. Drilled from 1342m to 1354m RT. ROP increased, checked for flow. Drilled from 1354m to 1371m RT. Circulated bottoms up and pulled bit due to slow ROP. Experienced tight hole through the Belfast and Skull Creek Formations with drag between 15 - 25K.

Picked up new bit and RIH to 1352m RT. Washed and reamed from 1352m to 1371m RT. Drilled 8-1/2" hole from 1371m to 1512m RT. Increased gas readings, circulated and conditioned hole. POH with no drag.

RIH with DST #1 and set packers at 1493.8 - 1492.4m RT in the Eumeralla Formation. Opened tool and conducted test. Dropped bar, reverse circulated and recovered rathole mud. POOH and lay down test tool.

Ran wiper trip to condition hole prior to attempting to core. RIH with core barrel but unable to reach bottom due to tight hole. Attempted reaming through the Paaratte Formation from 733m to 795m RT and 806m to 982m RT. POOH and lay down core barrel.

Picked up bit and RIH to 915m RT. Worked tight hole from 915m to 1162m RT with 30K down weight. Washed and reamed from 1162m to 1512m RT. Drilled 8-1/2" hole from 1512m to Original TD at 1710m RT reached on day 12 at 00:30 hours on 17th March 1997. Ran wiper trip and reamed from 1693m to 1710m RT with 15m fill. Continued drilling from 1710m to 1810m RT. Circulated well, checked for flow and ran wiper trip with 3m fill. Conditioned well, ran survey and strapped out of the hole. Ran 5 surveys over the interval 309m to 1810m RT with the last deviation at 3.30°.

Rigged up and ran the following:

- (1) Electric log#1 DLS-MLL-ML-SP-CAL-SONIC-GR
- (2) Electric log#2 LSS
- (3) Electric log#3 Velocity Survey

Ran conditioning trip.

- (4) Electric log#4 PDS_CNL-GR_CAL.
- (5) Electric log#5 RFS at 1516 - 1293m RT, 8 points. All invalid.
- (6) Electric log#6 Dipmeter.

Ran conditioning trip.

RIH with DST #2A and attempted to run GR correlation log. Set packers at 1550 - 1540m RT in the Eumeralla Formation. Conducted test but no flow to surface. Unseated packers and reset packers at 1525 - 1515m RT for DST #2B. Conducted test and flared gas. Dropped bar, reverse circulated, POOH and lay down test tool.

Ran open ended drillpipe and set abandonment plug #1 from 1350m to 1250m RT with 126sx Class G cement. Slowly POH to 334m RT and set abandonment plug #2 from 334m to 260m RT with 115sx Class G cement. Pulled back to 200m RT and circulated pipe clean. RIH and tagged plug #2 at 220m RT with 10K. Circulated casing with 9.2 ppg inhibitive mud. Layed down remaining drillpipe. Recovered wellhead and set abandonment plug #3 used 10sx Class G cement. Installed plate and erected well marker post. The rig was released at 23:00 hours on 22nd March 1997.

The well was completed in 16.56 days at an estimated cost of \$1020 K at an average cost of \$564/m plugged and abandoned.

APPENDIX 4
RFT REPORT.

RFT LOG - 19/20 March

strain/HP - p 212
HP calib 30/9/96

DECE
20/3/97

- 23:30 Test tool OK @ casing shoe.
 23:58 Correlate on depth.
 00:04 #1 - good. PIW - sticky.
 00:25 pulled free with 4000 lb overpull.
 → cable diff. stuck @ 600 m. (cf. skull creek-1)
 00:35 continue to #2 - plan to slack off on seat.
 00:48 re-correlate on depth.
 00:53 #2 - moderate/good PIW - free with 1800 lbs. dp
 01:02 tight spot @ 1366 m. - 1370 m
 01:10 #3 - tight - no buildup.
 → cable diff. stuck @ 600 m.
 01:20 pulled free with 3000 lb. overpull.
 01:24 #4 - no seat (suspect tool slipping down hole)
 01:27 #5 - tight - no buildup. (cable not slackened off)
 → cable diff. stuck @ 600 m.
 01:35 pulled free with 3000 lb overpull.
 01:42 #6 - tight
 → cable stuck - pull free @ 1700 lbs dp.
 01:50 #7 - mod. buildup - low perm
 → pulled free @ 1500 lb dp.
 02:03 #8 - mod. buildup - low perm.
 → cable stuck - pull free @ 2500 lbs. dp.
 02:17 #9 - mod. buildup - low perm
 → cable stuck - pull free @ 4000 lbs dp.
 02:40 Terminate job!

†.

stabilisation times compromised
by "time-on-seat" considerations.

SCN #1 RFT POINTS

<u>#</u>	<u>INTERVAL</u>	<u>M. RT</u>	
1	Waarte 'C'	1293.5	✓
2	..	1301.0	
3	Waarte 'A'	1354.0	✓
4	"	1355.0	
5	Emeralla	1376.0	✓
6	"	1378.5	✓
7		1469.6	✓
8		1473.9	
9		1495.2	
10		1501.5	✓
11		1511.7	✓
12		1515.6	✓
13		1519.5	
14		1523.0	
15		1538.7	
16		1543.0	
17		1546.5	
18		1547.0	
19		1550.9	
20		1552.6	
21		1629.8	

APPENDIX 5
HYDROCARBON ANALYSIS REPORT

16 JUN 1997

Amdel Limited
A.C.N. 008 127 802

Petroleum Services
PO Box 338
Torrensville Plaza SA 5031

Telephone: (08) 8416 5240

Facsimile: (08) 8234 2933

30 May, 1997

Basin Oil N.L.
Level 4, 828 Pacific Highway
GORDON NSW 2072

Attention: Greg O'Neill

REPORT LQ5889 - Part 1

CLIENT REFERENCE: 0144

WELL NAME/RE: Skull Creek North-1 DST-1 & DST-2B

MATERIAL: Natural Gas

WORK REQUIRED: Gas Composition

Please direct technical enquiries regarding this work to the signatory below under whose supervision the work was carried out. This report relates specifically to the sample or samples submitted for testing.



Brian L. Watson
Manager
Petroleum Services

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PETROLEUM SERVICES GAS ANALYSIS

Method GL-01-01

ASTM D 1945-91 (modified)

Client: BASIN OIL NL

Report # LQ5889

Sample: SKULL CREEK NORTH-1
DST-1
55 kPag
14/03/97, 0910 h, Cyl# 223

GAS	MOL %
Nitrogen	2.04
Carbon Dioxide	0.28
Methane	85.55
Ethane	5.65
Propane	2.89
I-Butane	0.84
N-Butane	0.94
I-Pentane	0.45
N-Pentane	0.32
Hexanes	0.55
Heptanes	0.45
Octanes and higher h'cs	0.04
Total	100.00

(0.00 = less than 0.01%)

The above results are calculated on an air and water free basis assuming only the measured constituents are present
The following parameters are calculated from the above composition at 15°C and 101.325 kPa (abs)

Average Molecular Weight	19.96
Lower Flammability limit	4.36
Upper Flammability limit	14.51
Ratio of upper to lower	3.33
Wobbe Index	53.03
Compressibility Factor	0.9969
Ideal Gas Density (Rel to air = 1)	0.689
Real gas Density (Rel to air = 1)	0.691
Ideal Nett Calorific Value MJ/m ³	39.87
Ideal Gross Calorific Value MJ/m ³	44.02
Real Nett Calorific Value MJ/m ³	39.99
Real Gross Calorific Value MJ/m ³	44.16
Gross calorific value of water-saturated gas MJ/m ³	43.25

This report relates specifically to the sample submitted for analysis.

Approved Signatory

Diane Cass

Registration No:

2013

Date :

30-05-97

PETROLEUM SERVICES GAS ANALYSIS

Method GL-01-01

ASTM D 1945-91 (modified)

Client: BASIN OIL NL

Report # LQ5889

Sample: SKULL CREEK NORTH-1
DST-2B
110 kPag
21/03/97, 1105 h, Cyl# 240

GAS	MOL %
Nitrogen	2.47
Carbon Dioxide	0.04
Methane	87.28
Ethane	5.22
Propane	2.32
I-Butane	0.67
N-Butane	0.70
I-Pentane	0.32
N-Pentane	0.23
Hexanes	0.35
Heptanes	0.21
Octanes and higher h'cs	0.19
Total	100.00

(0.00 = less than 0.01%)

The above results are calculated on an air and water free basis assuming only the measured constituents are present
The following parameters are calculated from the above composition at 15°C and 101.325 kPa (abs)

Average Molecular Weight	19.22
Lower Flammability limit	4.50
Upper Flammability limit	14.70
Ratio of upper to lower	3.27
Wobbe Index	52.18
Compressibility Factor	0.9972
Ideal Gas Density (Rel to air = 1)	0.664
Real gas Density (Rel to air = 1)	0.665
Ideal Nett Calorific Value MJ/m ³	38.46
Ideal Gross Calorific Value MJ/m ³	42.51
Real Nett Calorific Value MJ/m ³	38.57
Real Gross Calorific Value MJ/m ³	42.63
Gross calorific value of water-saturated gas MJ/m ³	41.76

This report relates specifically to the sample submitted for analysis.

Approved Signatory

Diene Cass

Registration No:

2013

Date :

30-05-97

APPENDIX 6
WATER ANALYSIS REPORTS



Amdel Limited
A.C.N. 008 127 802

Petroleum Services
PO Box 338
Torrensville Plaza SA 5031

Telephone: (08) 8416 5240

Facsimile: (08) 8234 2933

2 July, 1997

Basin Oil NL
Level 4, 828 Pacific Highway
GORDON NSW 2072

Attention: Greg O'Neill

REPORT LQ5889 - Part 2

CLIENT REFERENCE: 0144

WELL NAME/RE: Skull Creek North-1

MATERIAL: Water/Mud Filtrate

WORK REQUIRED: Water Analysis

Please direct technical enquiries regarding this work to the signatory below under whose supervision the work was carried out. This report relates specifically to the sample or samples submitted for testing.

Brian L. Watson
Manager
Petroleum Services

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1. INTRODUCTION AND RESULTS

Three (3) samples were received for standard water analysis (WA-10-01). All analyses were performed according to APHA methods (19th Edition). Results are presented on the following pages.

TABLE 1 - WATER ANALYSIS

JOB NUMBER: LQ5889 Part 2

WELL ID: Skull Creek North-1.DST-1 (Sample 11)
 SAMPLE TYPE: Water
 SAMPLE POINT: Sample Chamber
 DATE COLLECTED: -
 DATE RECEIVED: 23/05/97

FORMATION: Eumeralla
 INTERVAL: 1494-1512m
 COLLECTED BY: Client

PROPERTIES:

pH (measured) = 8.57
 Resistivity (Ohm.M @ 25°C) = 0.19
 Electrical Conductivity (µS/cm @ 25°C) = 52700
 Specific Gravity (S.G. @ 20°C) = na
 Measured Total Dissolved Solids(Evap@180°C) mg/L = na
 Measured Total Suspended Solids mg/L = na

CHEMICAL COMPOSITION

CATIONS				ANIONS			
		mg/L	meq/L		mg/L	meq/L	
Ammonium	as NH ₄	na	na	Bromide	as Br	na	na
Potassium	as K	16702	427.16	Chloride	as Cl	18563	522.90
Sodium	as Na	2052	89.26	Fluoride	as F	na	na
Barium	as Ba	na	na	Hydroxide	as OH	nd	nd
Calcium	as Ca	0.27	0.01	Nitrite	as NO ₂	na	na
Iron	as Fe	na	na	Nitrate	as NO ₃	nd	nd
Magnesium	as Mg	nd	nd	Sulphide	as S	na	na
Strontium	as Sr	na	na	Bicarbonate	as HCO ₃	954	15.64
Boron	as B	na	na	Carbonate	as CO ₃	117	3.90
				Sulphite	as SO ₃	na	na
				Sulphate	as SO ₄	172	3.58
Total Cations		18754.27	516.43	Total Anions		19806	546.02

DERIVED PARAMETERS

a) Ion Balance (Diff*100/Sum) (%) = 2.79
 b) Total Alkalinity (calc as CaCO₃) (mg/L) = 977
 c) Total of Cations + Anions = 38560.27
 (measured dissolved salts)
 d) Theoretical Result of Evaporation Test = 33728
 (From Electrical Conductivity)
 e) 0.6 x Concentration of Bicarbonate ion* = 572.4
 f) Theoretical Total Dissolved Salts d) + e) = 34300.4

QUALITY CONTROL COMMENTS

Item	Actual Value	Acceptance Criteria	Satisfactory? (Yes/No)
Ion Balance (%) =	2.79	5%	Yes
Undetected ions % =	-12.42	10%	Yes
(from comparison of measured vs theoretical salts derived from measured conductivity)			
Expected pH range		< 8.3	Yes
% difference between measured total dissolved solids and calc total dissolved salts (from ionic comp) =	na	5%	na

na = not applicable
 nd = not detected
 is = insufficient sample

If No - what action is recommended by Amdel

TABLE 1 - WATER ANALYSIS

JOB NUMBER: LQ5889 Part 2

WELL ID: Skull Creek North-1.DST-1 (Sample 13)
 SAMPLE TYPE: Mud Filtrate
 SAMPLE POINT: -
 DATE COLLECTED: 13/03/97,1600h
 DATE RECEIVED: 23/05/97

FORMATION: Eumeralla
 INTERVAL: -
 COLLECTED BY: Client

PROPERTIES:

pH (measured) = 7.45
 Resistivity (Ohm.M @ 25°C) = 0.26
 Electrical Conductivity (µS/cm @ 25°C) = 38000
 Specific Gravity (S.G. @ 20°C) = na
 Measured Total Dissolved Solids(Evap@180°C) mg/L = na
 Measured Total Suspended Solids mg/L = na

CHEMICAL COMPOSITION

CATIONS		mg/L	meq/L	ANIONS		mg/L	meq/L
Ammonium	as NH ₄	na	na	Bromide	as Br	na	na
Potassium	as K	4457	113.99	Chloride	as Cl	13678	385.30
Sodium	as Na	5419	235.71	Fluoride	as F	na	na
Barium	as Ba	na	na	Hydroxide	as OH	nd	nd
Calcium	as Ca	1654	82.53	Nitrite	as NO ₂	na	na
Iron	as Fe	na	na	Nitrate	as NO ₃	nd	nd
Magnesium	as Mg	nd	nd	Sulphide	as S	na	na
Strontium	as Sr	na	na	Bicarbonate	as HCO ₃	497	8.15
Boron	as B	na	na	Carbonate	as CO ₃	nd	nd
				Sulphite	as SO ₃	na	na
				Sulphate	as SO ₄	65.4	1.36
Total Cations		11530	432.24	Total Anions		14240.4	394.80

DERIVED PARAMETERS

- a) Ion Balance (Diff*100/Sum) (%) = 4.53
- b) Total Alkalinity (calc as CaCO₃) (mg/L) = 407
- c) Total of Cations + Anions = 25770.4 (measured dissolved salts)
- d) Theoretical Result of Evaporation Test = 24320 (From Electrical Conductivity)
- e) 0.6 x Concentration of Bicarbonate ion* = 298.2
- f) Theoretical Total Dissolved Salts d) + e) = 24618.2

QUALITY CONTROL COMMENTS

Item	Actual Value	Acceptance Criteria	Satisfactory? (Yes/No)
Ion Balance (%) =	4.53	5%	Yes
Undetected ions % =	-4.68	10%	Yes
(from comparison of measured vs theoretical salts derived from measured conductivity)			
Expected pH range		< 8.3	Yes
% difference between measured total dissolved solids and calc total dissolved salts (from ionic comp) =	na	5%	na
na = not applicable			If No - what action is recommended by Amdel
nd = not detected			
is = insufficient sample			



Petroleum Services

TABLE 1 - WATER ANALYSIS

JOB NUMBER: LQ5889 Part 2

WELL ID: Skull Creek North-1.DST-2
 SAMPLE TYPE: Water
 SAMPLE POINT: Sample Chamber (Bottom)
 DATE COLLECTED: -
 DATE RECEIVED: 20/06/97

FORMATION: -
 INTERVAL: -
 COLLECTED BY: Client

PROPERTIES:

pH (measured) = 7.53
 Resistivity (Ohm.M @ 25°C) = 0.51
 Electrical Conductivity (µS/cm @ 25°C) = 19600
 Specific Gravity (S.G. @ 20°C) = na
 Measured Total Dissolved Solids(Evap@180°C) mg/L = na
 Measured Total Suspended Solids mg/L = na

CHEMICAL COMPOSITION

CATIONS		mg/L	meq/L	ANIONS		mg/L	meq/L
Ammonium	as NH ₄	na	na	Bromide	as Br	na	na
Potassium	as K	3086	78.93	Chloride	as Cl	6547	184.42
Sodium	as Na	1548	67.33	Fluoride	as F	na	na
Barium	as Ba	na	na	Hydroxide	as OH	nd	nd
Calcium	as Ca	708	35.33	Nitrite	as NO ₂	na	na
Iron	as Fe	na	na	Nitrate	as NO ₃	nd	nd
Magnesium	as Mg	nd	nd	Sulphide	as S	na	na
Strontium	as Sr	na	na	Bicarbonate	as HCO ₃	238	3.90
Boron	as B	na	na	Carbonate	as CO ₃	nd	nd
				Sulphite	as SO ₃	na	na
				Sulphate	as SO ₄	90.5	1.88
Total Cations		5342	181.59	Total Anions		6875.5	190.21

DERIVED PARAMETERS

a) Ion Balance (Diff*100/Sum) (%) = 2.32
 b) Total Alkalinity (calc as CaCO₃) (mg/L) = 195
 c) Total of Cations + Anions = 12217.5 (measured dissolved salts)
 d) Theoretical Result of Evaporation Test = 12544 (From Electrical Conductivity)
 e) 0.6 x Concentration of Bicarbonate ion* = 142.8
 f) Theoretical Total Dissolved Salts d) + e) = 12686.8

QUALITY CONTROL COMMENTS

Item	Actual Value	Acceptance Criteria	Satisfactory? (Yes/No)
Ion Balance (%) =	2.32	5%	Yes
Undetected ions % =	3.70	10%	Yes
(from comparison of measured vs theoretical salts derived from measured conductivity)			
Expected pH range		< 8.3	Yes
% difference between measured total dissolved solids and calc total dissolved salts (from ionic comp) =	na	5%	na

na = not applicable
 nd = not detected
 is = insufficient sample

If No - what action is recommended by Amdel

APPENDIX 7
WELL LOCATION SURVEY DATA

ALAN H. SIMPSON

Licensed Surveyor, B. App. Sci. (Survey), L.S., M.I.S., Aust.
A.C.N. 062 912 510

LAND SURVEYOR — WARRNAMBOOL

125a Kepler Street, Warrnambool.

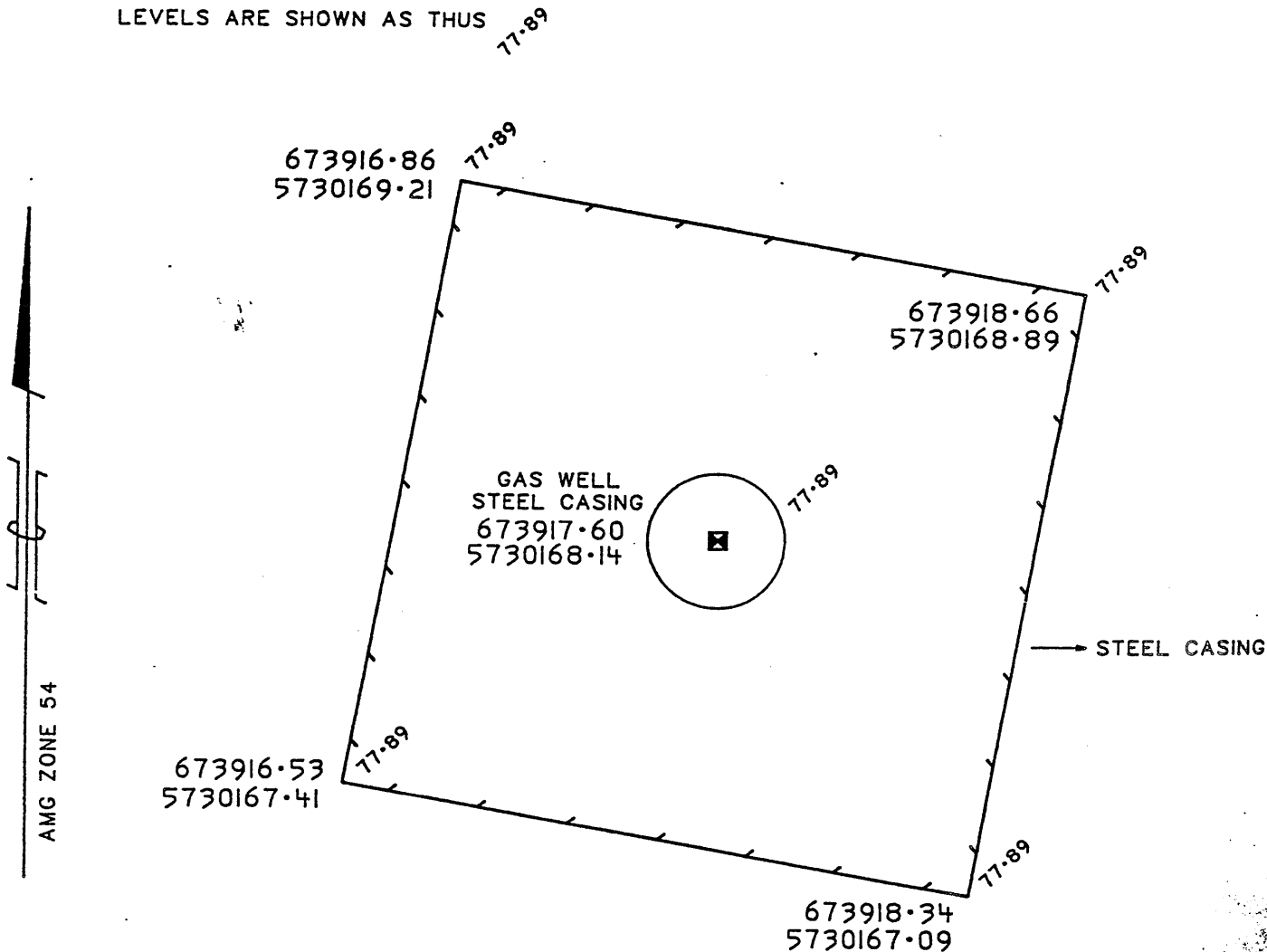
Correspondence to:
P.O. Box 421,
Warrnambool, 3280

Phone: (03) 5561 1846
A.H. (03) 5569 2404
Fax: (03) 5562 1775

SKULL CREEK NORTH #1

SCALE 1:20

DATUM OF BEARINGS IS TO AMG ZONE 54
LEVELS ARE TO APPROXIMATE AHD +/- 0.10m
LEVELS ARE SHOWN AS THUS



I CERTIFY THAT THIS SKETCH CORRECTLY REPRESENTS
THE SITE CONDITIONS ON 24/2/1997.


ALAN H. SIMPSON L.S.

APPENDIX 8
VELOCITY SURVEY

Velocity Data



**VELOCITY SURVEY
SKULL CREEK NORTH NO. 1**

PPL-1

VICTORIA

for

CULTUS PETROLEUM NL

recorded by

VELOCITY DATA PTY. LTD.

Processed by



Brisbane, Australia
2 April, 1997

CONTENTS

SUMMARY	1
GENERAL INFORMATION	1
EQUIPMENT	2
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PROCESSING				
Elevation Data	3
Recorded Data	4
Correction for Instrument Delay and Shot Offset	4
Correction to Datum	...	...	...	4
Calibration of Sonic Log				
Method	...	...	...	5
Results	...	...	...	5
Trace Playouts	...	...	...	6

FIGURES

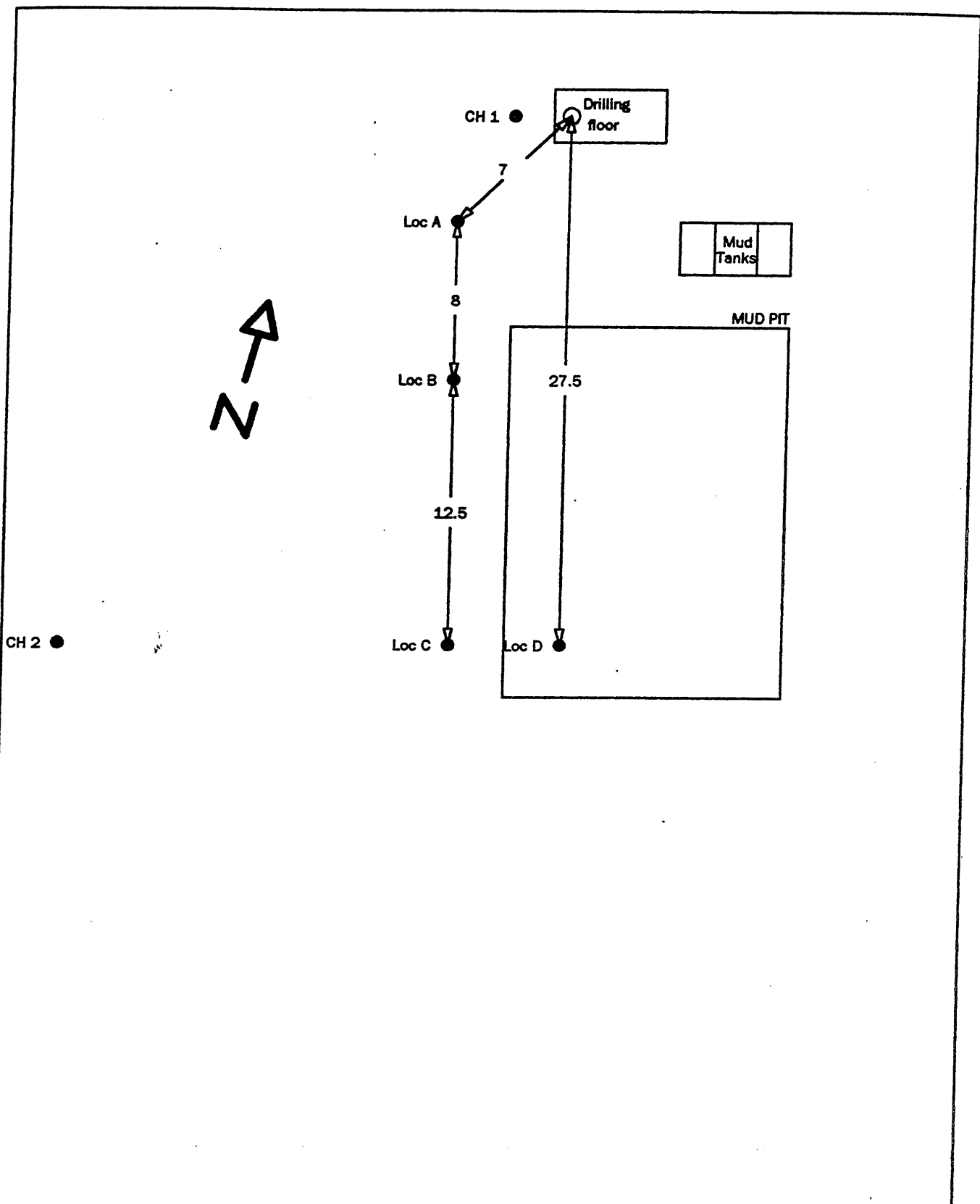
Figure 1	Shot location sketch
Figure 2	Time-depth and velocity curves
Figure 3	Trace playouts

Tables

Table 1	Time-depth values
---------	-------------------

Enclosures

1. Calculation Sheets
2. Trace Display and
First Arrival Plots



SKULL CREEK NTH #1

SHOT POINT LOCATION SKETCH
CULTUS PETROLEUM

Figure 1

SUMMARY

Velocity Data Pty Ltd conducted a velocity survey for Cultus Petroleum NL in the Skull Creek North No. 1 well, PPL 1, Victoria, Australia. The date of the survey was the 19th March 1997.

The results of the survey, which are considered to be reliable, have been used to calibrate the sonic log.

Explosives were used as an energy source with shots being fired in the mud pit in the majority of instances.

GENERAL INFORMATION

Name of Well	: Skull Creek North No. 1
Location	: PPL-1
Coordinates	: Latitude 38 33' 35.26"S : Longitude 142 59' 45.85"E
Date of Survey	: 19 th March, 1997
Wireline Logging	: BPB Wireline Services
Weather	: Fine
Operational Base	: Brisbane
Operator	: D. Blick
Shooter	: G. Clifford
Client Representative	: Mr. D. Horner

EQUIPMENT**Downhole Tool**

Veldata Camlock 100 (90 mm)

Sensors:

6 HSI 4.5 Hz 215 ohm, high temperature
(300 degrees F) detectors connected in
series parallel. Frequency response
8-300 Hz within 3 dB.

Preamplifier:

48 dB fixed gain.
Frequency response 5-200 Hz within 3 dB.

Reference Geophone

Mark Products L1 4.5 Hz

Recording Instrument**(1) System VDL 16**

Windows based high resolution seismic acquisition instruments

Computer :	386 Portable computer
Resolution :	A/D conversion 16 bits
Dynamic Range :	96dB
Total Gain :	136dB
Data channels :	8
Display :	A4 Bubble Jet Printer 300 D.P.I.

RECORDING

Energy Source : Explosive, Powergel
Shot Location : Mud pit
Charge Size : 0.25-2.0
Mud Pit Shot Depth : 0.5-1 metre
Mud Pit Shot Offset : 27.5 metres
Recording Geometry : Figure 1

Shots were recorded on 3¹/₂" floppy disc. Printouts of the shots used are included with this report.

The sample rate was 0.5 ms across the entire survey.

The scale of the graphic display varies with signal strength and is noted on each playout.
The times were picked from a sample by sample screen plot a full set of these trace displays can be seen at the rear of the report.

PROCESSING**Elevation Data**

Elevation of RT : 82.6 m above sea level
Elevation of Ground : 77.89 m above sea level
Elevation of Seismic Datum : 0.0 m above sea level
Depth Surveyed : 1800.0 m below RT
Total Depth : 1810 m
Depth of Casing : 304m below RT
Sonic Log Interval : 8.3 m to 1799.3 m below RT

PROCESSING

Recorded Data

Number of Shots Processed : 30

Number of Levels Recorded : 20

Data Quality : Good

Noise Level : Low

Correction for Instrument Delay and Shot Offset

The 'corrected' times shown on the calculation sheet have been obtained by:

- (1) Subtraction of the instrument delay (2.5 msec) from the recorded arrival times.
- (2) Geometric correction for non-verticality of ray paths resulting from shot offset.
- (3) Shot static correction to correct for the depth of shot below ground level at the well head using a correction velocity of 2000 metres/sec.
- (4) Additional 1.2 msec uphole time added to all shots external to the mud pit.
- (5) 0.0 msec bulk shift applied to all shots discharged within the mud pit to tie them to shots external to the pit.
- (6) re-addition of the instrument delay (2.5 msec).

Correction to Datum

The datum chosen was 0.0 metres ASL that is 100.3 metres below RT. This level was shot seven times during the survey, four of which have been used to calculate the effective datum correction time of 55.4 msec.

This value includes the 2.5 msec instrument delay which must be subtracted to obtain the raw time.

PROCESSING

Calibration of Sonic Log - Method

Sonic times were adjusted to checkshot times using a polynomial derived least squares fit correction of the sonic transient times. The sonic log that lay within the casing was deleted from the calibration.

Differences between the check shot and sonic times arise as the sonic tool measures the local velocity characteristics of the formation with a high frequency signal, whereas the downhole geophone records the bulk velocity character using a signal of significantly lower frequency.

Calibration of Sonic Log - Results

The discrepancies between shot and sonic interval velocities were generally small. The largest of these occurred over the interval 1270.0 to 1286.0 m which yielded an interval sonic drift of 81.25 $\mu\text{sec/m}$.

In aggregate, the shot and sonic interval times differed by -4.5 msec over the logged portion of the well.

PROCESSING

Trace Playouts (Figure 3)

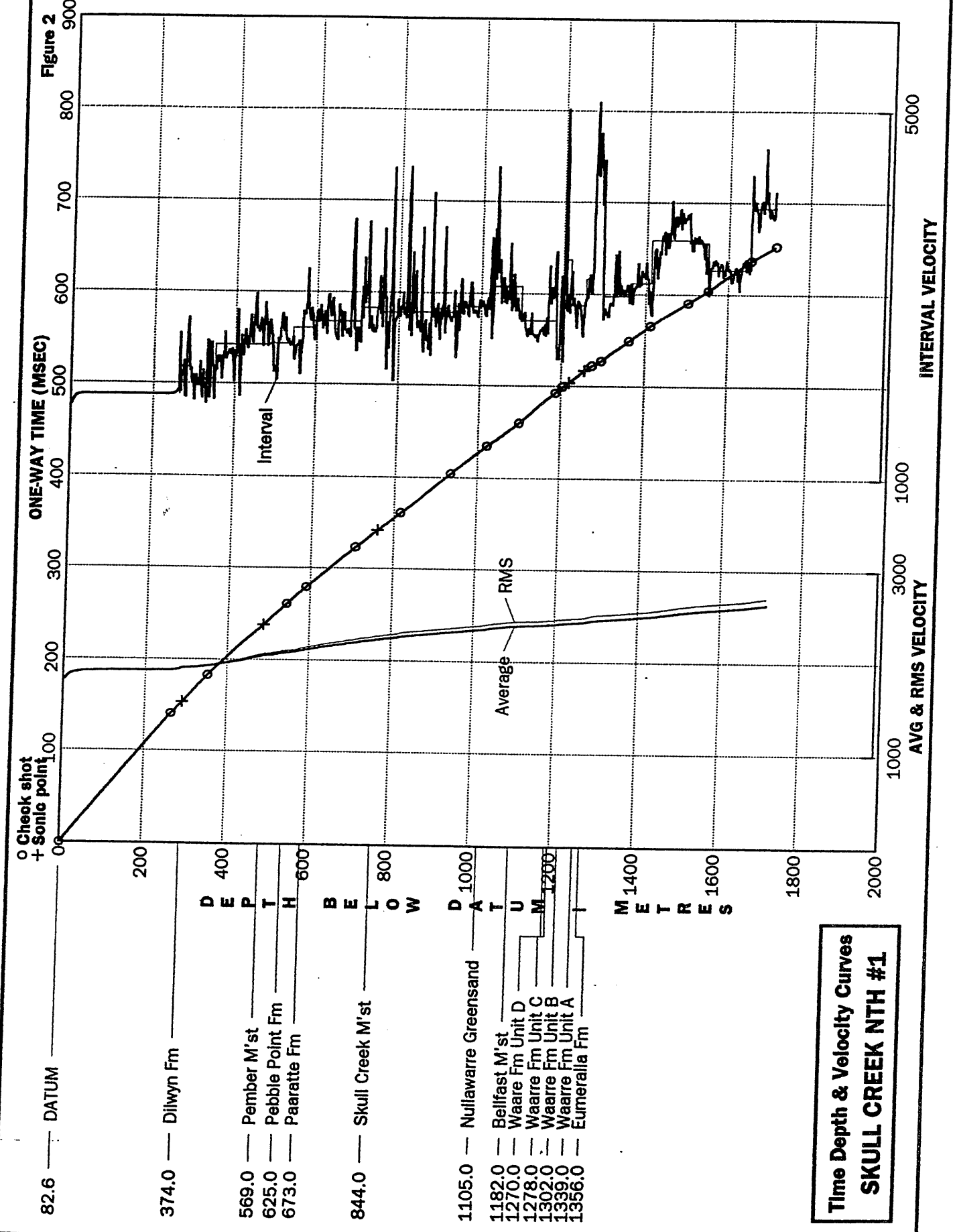
Figure 3A is a plot of all raw data traces used.

Figure 3B is a plot to scale in depth and time of selected traces.

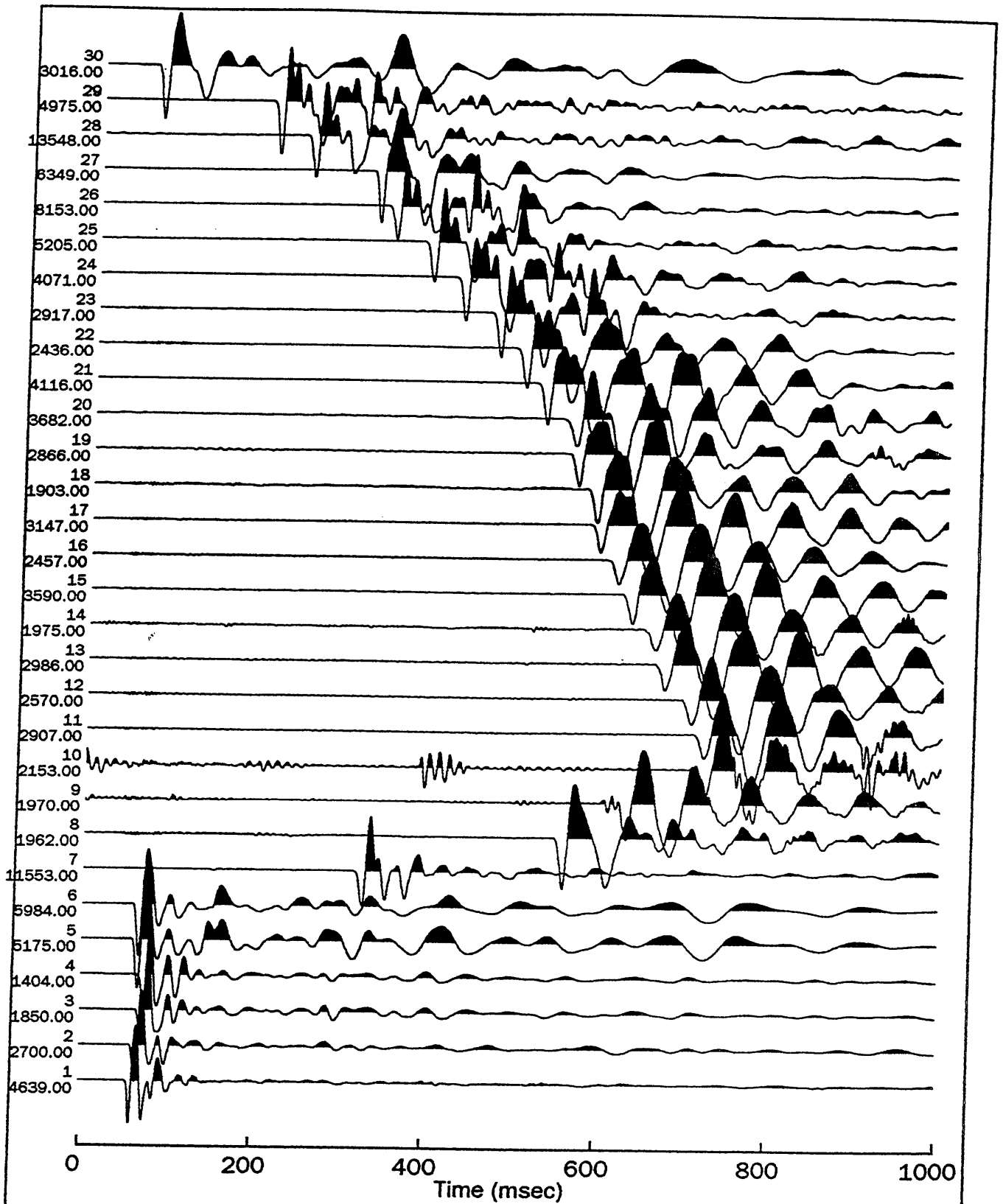
Figure 3C is a plot of selected surface traces. .

Fiona Duncan
Geophysicist.

Figure 2



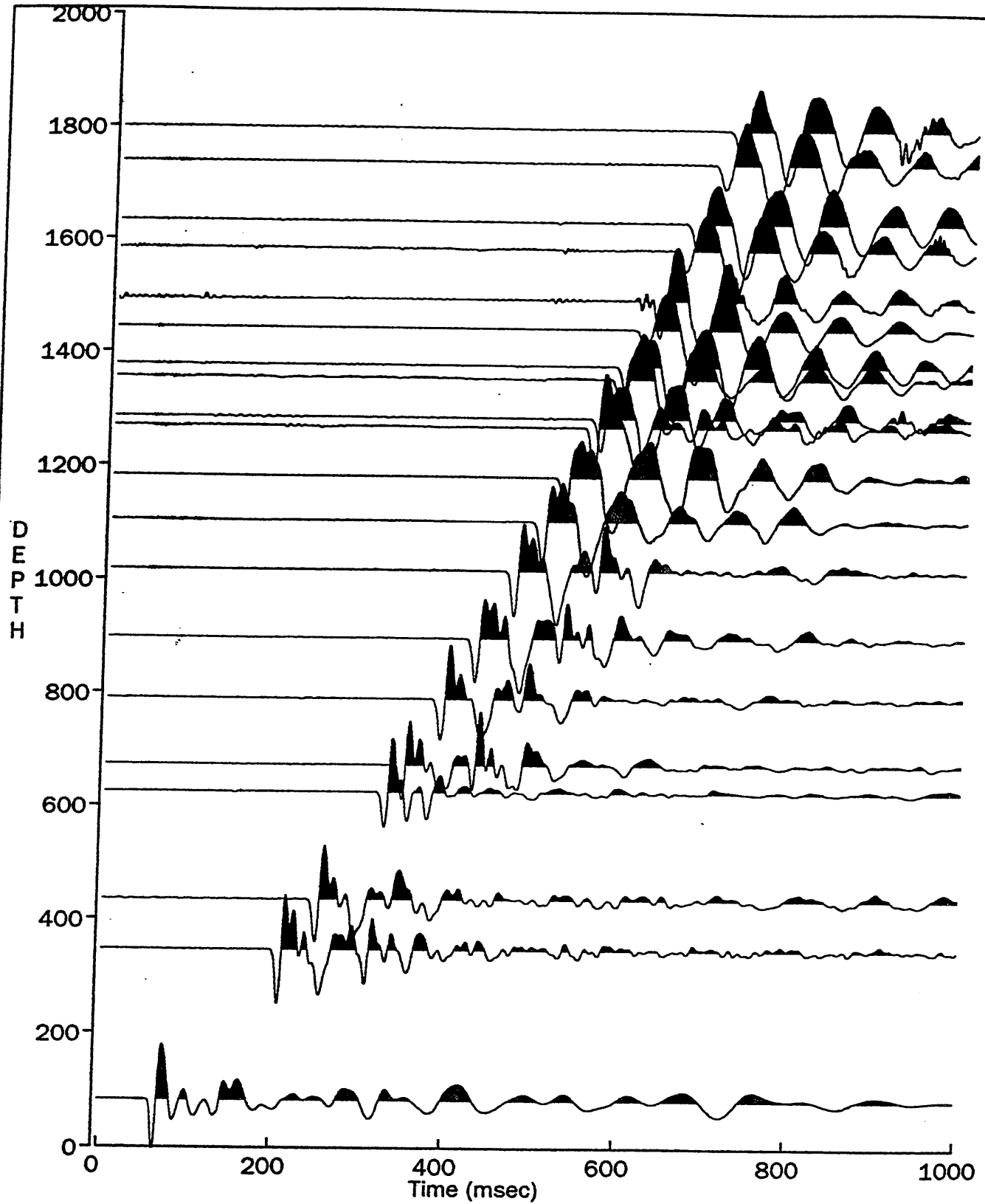
**Time Depth & Velocity Curves
SKULL CREEK NTH #1**



SKULL CREEK NTH #1

VELOCITY SURVEY TRACE DISPLAY

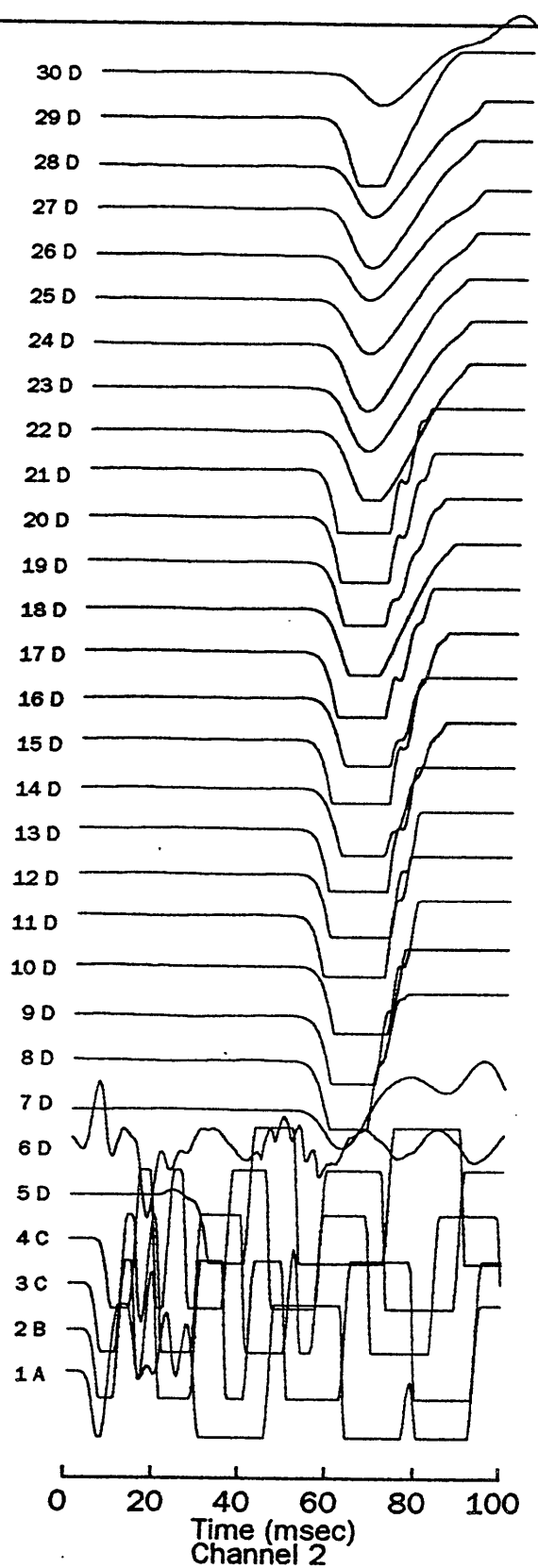
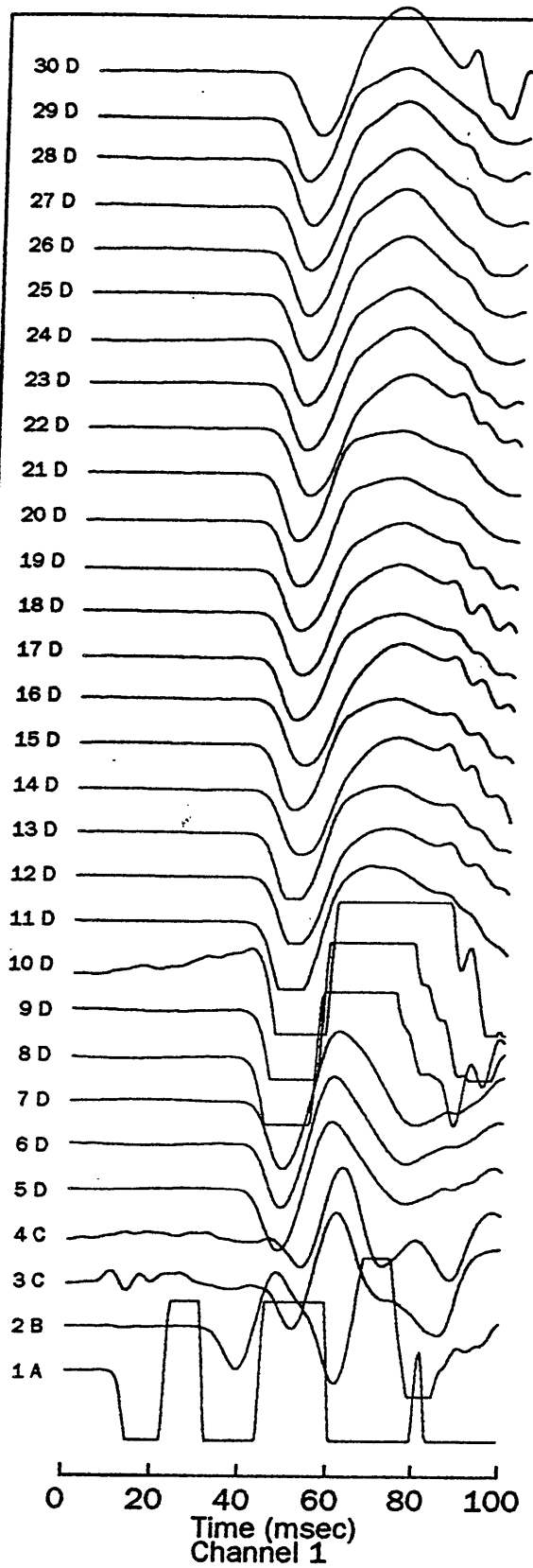
Figure 3a



SKULL CREEK NTH #1

VELOCITY SURVEY TRACE DISPLAY

Figure 3b



SKULL CREEK NTH #1

VELOCITY SURVEY TRACE DISPLAY
AUXILIARY CHANNELS

Figure 3c

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
2.5	1.4	1772	1772	1772	102.5	54.8	1872	1872	1880
5.0	2.8	1789	1789	1807	105.0	56.1	1872	1872	1880
7.5	4.2	1803	1803	1831	107.5	57.4	1872	1873	1880
10.0	5.5	1814	1814	1848	110.0	58.7	1873	1873	1880
12.5	6.9	1823	1823	1859	112.5	60.1	1873	1873	1880
15.0	8.2	1830	1830	1866	115.0	61.4	1873	1873	1880
17.5	9.5	1836	1836	1871	117.5	62.7	1873	1873	1880
20.0	10.9	1840	1841	1874	120.0	64.1	1873	1873	1880
22.5	12.2	1844	1845	1876	122.5	65.4	1873	1874	1880
25.0	13.5	1848	1848	1878	125.0	66.7	1874	1874	1880
27.5	14.9	1850	1851	1878	127.5	68.0	1874	1874	1880
30.0	16.2	1853	1853	1879	130.0	69.4	1874	1874	1880
32.5	17.5	1855	1855	1880	132.5	70.7	1874	1874	1880
35.0	18.9	1856	1857	1880	135.0	72.0	1874	1874	1880
37.5	20.2	1858	1858	1880	137.5	73.4	1874	1874	1880
40.0	21.5	1859	1860	1880	140.0	74.7	1874	1874	1880
42.5	22.8	1861	1861	1880	142.5	76.0	1874	1874	1880
45.0	24.2	1862	1862	1880	145.0	77.4	1874	1875	1880
47.5	25.5	1863	1863	1880	147.5	78.7	1875	1875	1880
50.0	26.8	1864	1864	1880	150.0	80.0	1875	1875	1880
52.5	28.2	1864	1865	1880	152.5	81.3	1875	1875	1880
55.0	29.5	1865	1865	1880	155.0	82.7	1875	1875	1880
57.5	30.8	1866	1866	1880	157.5	84.0	1875	1875	1880
60.0	32.1	1866	1866	1880	160.0	85.3	1875	1875	1880
62.5	33.5	1867	1867	1880	162.5	86.7	1875	1875	1880
65.0	34.8	1867	1868	1880	165.0	88.0	1875	1875	1880
67.5	36.1	1868	1868	1880	167.5	89.3	1875	1875	1880
70.0	37.5	1868	1868	1880	170.0	90.7	1875	1875	1880
72.5	38.8	1869	1869	1880	172.5	92.0	1875	1875	1880
75.0	40.1	1869	1869	1880	175.0	93.3	1875	1876	1880
77.5	41.5	1869	1870	1880	177.5	94.6	1876	1876	1880
80.0	42.8	1870	1870	1880	180.0	96.0	1876	1876	1880
82.5	44.1	1870	1870	1880	182.5	97.3	1876	1876	1880
85.0	45.4	1870	1871	1880	185.0	98.6	1876	1876	1880
87.5	46.8	1871	1871	1880	187.5	100.0	1876	1876	1880
90.0	48.1	1871	1871	1880	190.0	101.3	1876	1876	1880
92.5	49.4	1871	1871	1880	192.5	102.6	1876	1876	1880
95.0	50.8	1871	1872	1880	195.0	103.9	1876	1876	1880
97.5	52.1	1872	1872	1880	197.5	105.3	1876	1876	1880
100.0	53.4	1872	1872	1880	200.0	106.6	1876	1876	1880

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
202.5	107.9	1876	1876	1880	302.5	158.6	1908	1911	1966
205.0	109.3	1876	1876	1880	305.0	159.8	1909	1913	2088
207.5	110.6	1876	1876	1880	307.5	161.0	1910	1913	1995
210.0	111.9	1876	1876	1880	310.0	162.3	1910	1914	1979
212.5	113.3	1876	1876	1880	312.5	163.5	1911	1915	2045
215.0	114.6	1876	1876	1880	315.0	164.6	1913	1917	2228
217.5	115.9	1876	1876	1880	317.5	165.9	1914	1918	1964
220.0	117.2	1876	1877	1880	320.0	167.3	1913	1917	1847
222.5	118.6	1876	1877	1880	322.5	168.4	1915	1919	2141
225.0	119.9	1877	1877	1880	325.0	169.7	1915	1919	1956
227.5	121.2	1877	1877	1880	327.5	171.0	1916	1919	1962
230.0	122.6	1877	1877	1881	330.0	172.4	1915	1918	1794
232.5	123.9	1877	1877	1881	332.5	173.4	1918	1922	2466
235.0	125.2	1877	1877	1881	335.0	174.4	1921	1925	2446
237.5	126.5	1877	1877	1881	337.5	175.8	1920	1925	1849
240.0	127.9	1877	1877	1882	340.0	177.0	1921	1925	1964
242.5	129.2	1877	1877	1882	342.5	178.1	1924	1928	2441
245.0	130.5	1877	1877	1883	345.0	179.2	1925	1930	2200
247.5	131.9	1877	1877	1885	347.5	180.3	1927	1932	2181
250.0	133.2	1877	1877	1887	350.0	181.7	1926	1931	1833
252.5	134.5	1877	1877	1891	352.5	182.8	1928	1933	2189
255.0	135.8	1877	1877	1896	355.0	184.0	1929	1934	2151
257.5	137.1	1878	1878	1904	357.5	185.1	1931	1937	2289
260.0	138.4	1878	1878	1917	360.0	186.2	1934	1939	2292
262.5	139.7	1879	1879	1937	362.5	187.3	1935	1941	2238
265.0	140.7	1883	1884	2543	365.0	188.4	1937	1943	2293
267.5	142.0	1884	1884	1918	367.5	189.6	1938	1944	2057
270.0	143.2	1885	1886	2110	370.0	190.7	1940	1946	2267
272.5	144.4	1887	1889	2131	372.5	191.8	1942	1948	2343
275.0	145.5	1890	1891	2241	375.0	192.8	1945	1952	2555
277.5	146.8	1890	1891	1865	377.5	193.9	1947	1954	2272
280.0	148.2	1890	1891	1856	380.0	194.9	1949	1956	2306
282.5	149.2	1894	1896	2547	382.5	196.0	1951	1958	2323
285.0	150.1	1899	1902	2712	385.0	197.1	1954	1961	2362
287.5	151.2	1902	1905	2324	387.5	198.1	1956	1963	2364
290.0	152.3	1904	1907	2142	390.0	199.2	1958	1965	2319
292.5	153.5	1906	1909	2162	392.5	200.3	1960	1967	2376
295.0	154.7	1907	1910	2004	395.0	201.4	1961	1969	2211
297.5	155.9	1908	1912	2088	397.5	202.6	1962	1969	2028
300.0	157.3	1907	1911	1826	400.0	203.7	1964	1971	2353

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
402.5	204.8	1966	1973	2295	502.5	245.0	2051	2068	2052
405.0	205.7	1969	1978	2798	505.0	246.0	2053	2070	2492
407.5	206.7	1971	1980	2329	507.5	247.0	2054	2072	2468
410.0	207.8	1973	1982	2326	510.0	248.0	2056	2074	2506
412.5	209.2	1972	1981	1874	512.5	249.0	2059	2076	2696
415.0	210.1	1975	1984	2523	515.0	249.9	2061	2079	2767
417.5	211.2	1977	1986	2408	517.5	250.8	2063	2082	2613
420.0	212.3	1979	1988	2310	520.0	251.8	2065	2084	2576
422.5	213.3	1981	1990	2466	522.5	252.7	2068	2086	2719
425.0	214.2	1984	1994	2582	525.0	253.7	2069	2088	2496
427.5	215.3	1986	1996	2492	527.5	254.7	2071	2090	2458
430.0	216.3	1988	1998	2387	530.0	255.7	2072	2091	2482
432.5	217.3	1990	2001	2446	532.5	256.8	2074	2093	2440
435.0	218.3	1993	2003	2533	535.0	257.8	2075	2094	2415
437.5	219.2	1996	2007	2742	537.5	258.8	2077	2096	2453
440.0	220.2	1998	2010	2549	540.0	259.8	2078	2097	2443
442.5	221.2	2000	2012	2449	542.5	260.8	2080	2099	2508
445.0	222.2	2003	2015	2662	545.0	261.9	2081	2100	2269
447.5	223.1	2006	2019	2759	547.5	263.0	2082	2101	2323
450.0	223.9	2010	2023	2979	550.0	264.1	2083	2102	2413
452.5	224.9	2012	2026	2599	552.5	265.1	2084	2103	2424
455.0	225.8	2015	2029	2618	555.0	266.1	2086	2105	2416
457.5	226.8	2017	2031	2564	557.5	267.1	2087	2106	2468
460.0	227.8	2020	2034	2597	560.0	268.3	2087	2106	2114
462.5	228.7	2022	2037	2711	562.5	269.4	2088	2107	2384
465.0	229.6	2025	2040	2676	565.0	270.4	2090	2109	2488
467.5	230.7	2027	2042	2410	567.5	271.3	2092	2112	2794
470.0	231.6	2029	2045	2582	570.0	272.2	2094	2114	2755
472.5	232.5	2032	2048	2878	572.5	273.1	2097	2117	2766
475.0	233.4	2035	2051	2714	575.0	273.9	2099	2119	2880
477.5	234.4	2037	2054	2621	577.5	274.7	2102	2123	3247
480.0	235.4	2039	2056	2415	580.0	275.6	2105	2126	2877
482.5	236.4	2041	2058	2540	582.5	276.5	2107	2129	2736
485.0	237.3	2044	2061	2687	585.0	277.4	2109	2131	2686
487.5	238.3	2046	2063	2605	587.5	278.3	2111	2133	2821
490.0	239.3	2048	2066	2522	590.0	279.2	2113	2136	2746
492.5	240.3	2049	2067	2370	592.5	280.2	2115	2137	2586
495.0	241.5	2050	2067	2136	595.0	281.2	2116	2139	2476
497.5	242.7	2050	2068	2138	597.5	282.2	2117	2140	2487
500.0	243.8	2051	2068	2187	600.0	283.1	2119	2142	2775

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
602.5	284.0	2122	2145	2801	702.5	320.9	2189	2219	2606
605.0	284.9	2123	2147	2676	705.0	321.9	2190	2219	2465
607.5	285.9	2125	2149	2690	707.5	322.9	2191	2220	2457
610.0	286.7	2127	2151	2855	710.0	323.7	2193	2223	3054
612.5	287.6	2129	2153	2734	712.5	324.6	2195	2224	2721
615.0	288.6	2131	2155	2603	715.0	325.4	2197	2228	3372
617.5	289.6	2133	2157	2652	717.5	326.3	2199	2230	2886
620.0	290.4	2135	2159	2787	720.0	327.1	2201	2232	3073
622.5	291.4	2136	2161	2702	722.5	327.9	2203	2234	2968
625.0	292.4	2138	2162	2549	725.0	328.6	2206	2238	3763
627.5	293.2	2140	2165	2939	727.5	329.5	2208	2240	2604
630.0	294.0	2143	2168	2975	730.0	330.5	2209	2241	2669
632.5	294.9	2145	2170	2826	732.5	331.4	2210	2242	2737
635.0	295.8	2146	2172	2740	735.0	332.4	2211	2243	2577
637.5	296.7	2149	2174	2867	737.5	333.3	2213	2245	2639
640.0	297.6	2151	2177	2933	740.0	334.3	2214	2246	2569
642.5	298.5	2153	2179	2747	742.5	335.3	2215	2247	2569
645.0	299.4	2154	2180	2592	745.0	336.2	2216	2248	2607
647.5	300.4	2155	2181	2514	747.5	337.1	2217	2249	2798
650.0	301.4	2156	2183	2493	750.0	338.0	2219	2251	2844
652.5	302.4	2157	2184	2484	752.5	338.8	2221	2254	3174
655.0	303.3	2159	2186	2860	755.0	339.7	2223	2255	2772
657.5	304.2	2161	2188	2743	757.5	340.5	2225	2257	2966
660.0	305.1	2163	2190	2788	760.0	341.5	2226	2258	2622
662.5	306.1	2164	2191	2520	762.5	342.1	2229	2262	3687
665.0	307.0	2166	2193	2736	765.0	343.0	2230	2264	2967
667.5	307.9	2168	2195	2776	767.5	343.8	2232	2266	2935
670.0	308.9	2169	2196	2587	770.0	345.0	2232	2266	2168
672.5	309.9	2170	2197	2578	772.5	345.9	2233	2267	2667
675.0	310.8	2171	2198	2554	775.0	347.0	2234	2267	2394
677.5	311.8	2173	2200	2598	777.5	347.9	2235	2269	2738
680.0	312.8	2174	2201	2546	780.0	348.7	2237	2271	3024
682.5	313.8	2175	2202	2513	782.5	349.3	2240	2276	4355
685.0	314.6	2177	2205	2999	785.0	350.2	2242	2277	2859
687.5	315.3	2180	2209	3582	787.5	351.4	2241	2277	2047
690.0	316.0	2184	2213	3791	790.0	352.3	2242	2278	2687
692.5	316.9	2185	2214	2607	792.5	353.2	2244	2279	2714
695.0	317.9	2186	2216	2581	795.0	354.1	2245	2280	2742
697.5	319.0	2187	2216	2365	797.5	355.0	2246	2282	2920
700.0	319.9	2188	2217	2612	800.0	355.9	2248	2284	2809

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
802.5	356.8	2249	2285	2745	902.5	392.6	2299	2339	2829
805.0	357.7	2251	2286	2850	905.0	393.5	2300	2340	2723
807.5	358.6	2252	2288	2835	907.5	394.4	2301	2342	2874
810.0	359.4	2254	2290	2998	910.0	395.0	2304	2345	3713
812.5	360.3	2255	2291	2765	912.5	396.0	2304	2345	2566
815.0	361.2	2256	2293	2830	915.0	396.9	2305	2346	2752
817.5	362.1	2258	2294	2724	917.5	397.8	2306	2347	2751
820.0	362.7	2261	2298	4081	920.0	398.7	2308	2348	2860
822.5	363.3	2264	2303	4367	922.5	399.6	2309	2349	2756
825.0	364.3	2265	2304	2595	925.0	400.5	2310	2350	2725
827.5	365.1	2266	2305	2828	927.5	401.4	2310	2351	2693
830.0	366.1	2267	2306	2538	930.0	402.4	2311	2352	2739
832.5	366.9	2269	2308	3433	932.5	403.3	2312	2353	2744
835.0	367.7	2271	2310	2783	935.0	404.1	2314	2355	3021
837.5	368.6	2272	2311	2984	937.5	405.0	2315	2356	2756
840.0	369.4	2274	2314	3231	940.0	406.1	2315	2356	2305
842.5	370.3	2275	2315	2748	942.5	407.1	2315	2356	2408
845.0	371.2	2276	2316	2619	945.0	408.0	2316	2357	2882
847.5	372.2	2277	2317	2692	947.5	409.0	2317	2358	2596
850.0	373.1	2278	2318	2622	950.0	409.8	2318	2359	3091
852.5	374.1	2279	2318	2574	952.5	410.6	2320	2361	3148
855.0	374.8	2282	2322	3703	955.0	411.5	2321	2362	2785
857.5	375.8	2282	2322	2452	957.5	412.4	2322	2363	2777
860.0	376.8	2282	2322	2361	960.0	413.2	2323	2364	2909
862.5	377.8	2283	2323	2619	962.5	414.1	2324	2366	2897
865.0	378.7	2284	2324	2699	965.0	415.0	2326	2367	2848
867.5	379.7	2285	2324	2480	967.5	415.8	2327	2368	2837
870.0	380.7	2285	2325	2530	970.0	416.7	2328	2369	2750
872.5	381.8	2285	2325	2387	972.5	417.6	2329	2370	3023
875.0	382.7	2286	2326	2665	975.0	418.4	2330	2372	3115
877.5	383.8	2287	2326	2324	977.5	419.2	2332	2373	3037
880.0	384.4	2289	2330	4086	980.0	420.1	2333	2374	2827
882.5	385.2	2291	2331	2950	982.5	421.0	2334	2375	2790
885.0	386.1	2292	2332	2740	985.0	421.9	2335	2376	2814
887.5	387.0	2293	2334	2828	987.5	422.8	2336	2377	2794
890.0	388.0	2294	2334	2632	990.0	423.7	2337	2378	2785
892.5	388.9	2295	2335	2775	992.5	424.6	2338	2379	2743
895.0	389.7	2296	2337	2879	995.0	425.4	2339	2380	2850
897.5	390.7	2297	2338	2677	997.5	426.3	2340	2381	2927
900.0	391.7	2298	2338	2499	1000.0	427.2	2341	2382	2863

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
1002.5	428.0	2342	2383	2880	1102.5	461.3	2390	2435	2710
1005.0	428.9	2343	2385	2915	1105.0	462.2	2391	2436	2781
1007.5	429.8	2344	2386	2867	1107.5	463.1	2392	2437	2796
1010.0	430.7	2345	2387	2777	1110.0	464.0	2392	2437	2636
1012.5	431.6	2346	2387	2757	1112.5	465.0	2393	2437	2590
1015.0	432.4	2347	2389	2885	1115.0	466.0	2393	2438	2542
1017.5	433.3	2348	2390	2955	1117.5	466.9	2393	2438	2620
1020.0	434.2	2349	2391	2831	1120.0	467.9	2394	2438	2581
1022.5	434.9	2351	2393	3266	1122.5	468.9	2394	2439	2561
1025.0	435.6	2353	2395	3599	1125.0	469.8	2395	2439	2788
1027.5	436.6	2353	2395	2515	1127.5	470.7	2395	2440	2564
1030.0	437.5	2354	2396	2823	1130.0	471.7	2395	2440	2556
1032.5	438.2	2356	2399	3697	1132.5	472.7	2396	2440	2542
1035.0	439.0	2358	2400	3157	1135.0	473.7	2396	2440	2525
1037.5	439.6	2360	2404	4373	1137.5	474.7	2396	2441	2551
1040.0	440.3	2362	2406	3443	1140.0	475.7	2397	2441	2485
1042.5	441.1	2364	2408	3232	1142.5	476.7	2397	2441	2549
1045.0	441.8	2365	2410	3365	1145.0	477.6	2397	2441	2587
1047.5	442.6	2367	2411	3073	1147.5	478.6	2398	2441	2606
1050.0	443.5	2368	2412	2899	1150.0	479.5	2398	2442	2614
1052.5	444.3	2369	2414	3157	1152.5	480.5	2399	2442	2636
1055.0	445.1	2370	2415	3168	1155.0	481.5	2399	2442	2560
1057.5	445.9	2372	2416	2915	1157.5	482.4	2399	2443	2665
1060.0	446.7	2373	2418	3080	1160.0	483.4	2400	2443	2544
1062.5	447.6	2374	2419	2893	1162.5	484.3	2400	2444	2743
1065.0	448.4	2375	2420	3018	1165.0	485.3	2401	2444	2573
1067.5	449.3	2376	2421	2940	1167.5	486.0	2402	2446	3298
1070.0	450.0	2378	2423	3539	1170.0	486.9	2403	2447	2958
1072.5	450.8	2379	2425	3131	1172.5	487.7	2404	2447	2898
1075.0	451.7	2380	2425	2824	1175.0	488.6	2405	2449	3071
1077.5	452.5	2381	2426	2860	1177.5	489.4	2406	2450	2955
1080.0	453.3	2382	2428	3205	1180.0	490.2	2407	2451	2985
1082.5	454.1	2384	2429	3022	1182.5	491.0	2408	2452	3371
1085.0	455.0	2384	2430	2818	1185.0	491.7	2410	2454	3453
1087.5	455.9	2385	2431	2872	1187.5	492.7	2410	2454	2414
1090.0	456.7	2386	2432	2950	1190.0	493.8	2410	2454	2322
1092.5	457.6	2387	2433	2819	1192.5	494.9	2410	2453	2304
1095.0	458.5	2388	2433	2727	1195.0	495.9	2410	2453	2457
1097.5	459.4	2389	2434	2799	1197.5	496.7	2411	2455	3192
1100.0	460.4	2389	2435	2707	1200.0	497.5	2412	2456	3055

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
1202.5	498.6	2412	2455	2269	1302.5	529.7	2459	2512	2843
1205.0	499.1	2414	2459	5012	1305.0	530.6	2459	2512	2786
1207.5	499.7	2417	2463	4598	1307.5	531.5	2460	2513	2792
1210.0	500.5	2417	2463	2849	1310.0	532.4	2461	2513	2754
1212.5	501.4	2418	2464	2818	1312.5	533.3	2461	2514	2880
1215.0	502.3	2419	2465	2999	1315.0	534.1	2462	2515	2902
1217.5	503.2	2420	2466	2799	1317.5	535.0	2463	2515	2889
1220.0	504.0	2421	2467	3117	1320.0	535.9	2463	2516	2884
1222.5	504.7	2422	2468	3242	1322.5	536.7	2464	2517	2999
1225.0	505.6	2423	2469	2892	1325.0	537.4	2465	2518	3429
1227.5	506.4	2424	2470	2955	1327.5	538.3	2466	2519	2981
1230.0	507.3	2425	2471	2899	1330.0	539.1	2467	2520	3025
1232.5	508.2	2425	2471	2763	1332.5	539.8	2468	2521	3467
1235.0	509.2	2426	2472	2637	1335.0	540.6	2469	2522	3135
1237.5	510.0	2426	2472	2924	1337.5	541.5	2470	2523	2983
1240.0	510.9	2427	2473	2901	1340.0	542.3	2471	2524	3092
1242.5	511.7	2428	2474	2891	1342.5	543.1	2472	2525	3014
1245.0	512.6	2429	2475	2818	1345.0	543.9	2473	2526	3048
1247.5	513.5	2429	2475	2712	1347.5	544.8	2474	2526	2989
1250.0	514.5	2429	2475	2543	1350.0	545.6	2474	2527	3002
1252.5	515.4	2430	2476	2791	1352.5	546.4	2475	2528	3049
1255.0	516.3	2431	2476	2908	1355.0	547.2	2476	2529	3104
1257.5	517.1	2432	2477	2956	1357.5	548.0	2477	2530	3084
1260.0	518.0	2433	2478	2961	1360.0	548.9	2478	2531	2911
1262.5	518.8	2434	2479	3058	1362.5	549.7	2479	2532	3113
1265.0	519.6	2435	2480	3205	1365.0	550.5	2480	2532	3104
1267.5	520.4	2436	2482	3114	1367.5	551.3	2480	2533	2901
1270.0	521.2	2437	2483	3012	1370.0	552.2	2481	2534	3034
1272.5	522.0	2438	2484	3239	1372.5	553.0	2482	2535	3075
1275.0	522.5	2440	2487	4517	1375.0	553.8	2483	2536	3075
1277.5	523.0	2443	2491	5093	1377.5	554.6	2484	2537	3105
1280.0	523.6	2445	2493	4386	1380.0	555.4	2485	2538	3332
1282.5	524.2	2447	2496	4288	1382.5	556.2	2486	2539	3091
1285.0	524.7	2449	2499	4750	1385.0	557.0	2487	2540	3129
1287.5	525.3	2451	2502	4519	1387.5	557.8	2488	2541	3106
1290.0	525.8	2453	2505	4351	1390.0	558.5	2489	2542	3256
1292.5	526.5	2455	2507	3974	1392.5	559.3	2490	2543	3194
1295.0	527.0	2457	2510	4458	1395.0	560.1	2491	2544	3228
1297.5	527.9	2458	2511	2731	1397.5	560.9	2492	2545	3168
1300.0	528.8	2458	2511	2799	1400.0	561.6	2493	2546	3343

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
1402.5	562.4	2494	2547	3171	1502.5	590.6	2544	2604	3881
1405.0	563.2	2495	2548	3164	1505.0	591.3	2545	2606	3653
1407.5	564.1	2495	2549	2904	1507.5	592.0	2546	2607	3590
1410.0	564.9	2496	2549	3034	1510.0	592.7	2547	2608	3480
1412.5	565.8	2497	2550	2810	1512.5	593.5	2549	2610	3479
1415.0	566.7	2497	2550	2779	1515.0	594.2	2550	2611	3620
1417.5	567.5	2498	2551	3133	1517.5	594.9	2551	2612	3567
1420.0	568.2	2499	2552	3468	1520.0	595.6	2552	2614	3607
1422.5	568.9	2500	2554	3496	1522.5	596.3	2553	2615	3574
1425.0	569.7	2502	2555	3380	1525.0	596.9	2555	2616	3633
1427.5	570.4	2502	2556	3182	1527.5	597.6	2556	2618	3560
1430.0	571.2	2504	2557	3329	1530.0	598.3	2557	2619	3595
1432.5	571.9	2505	2559	3467	1532.5	599.0	2558	2620	3574
1435.0	572.6	2506	2560	3440	1535.0	599.7	2559	2622	3558
1437.5	573.3	2507	2561	3636	1537.5	600.5	2561	2623	3511
1440.0	574.0	2509	2563	3628	1540.0	601.2	2562	2624	3392
1442.5	574.7	2510	2565	3681	1542.5	601.9	2563	2625	3550
1445.0	575.4	2511	2566	3442	1545.0	602.7	2564	2626	3236
1447.5	576.1	2513	2567	3660	1547.5	603.4	2565	2627	3401
1450.0	576.8	2514	2569	3666	1550.0	604.1	2566	2628	3368
1452.5	577.5	2515	2570	3509	1552.5	605.0	2566	2629	2992
1455.0	578.2	2516	2572	3580	1555.0	605.8	2567	2630	3205
1457.5	578.9	2518	2574	3736	1557.5	606.5	2568	2631	3292
1460.0	579.5	2519	2576	4015	1560.0	607.3	2569	2631	3295
1462.5	580.2	2521	2577	3710	1562.5	608.0	2570	2632	3364
1465.0	580.9	2522	2579	3612	1565.0	608.8	2571	2633	3328
1467.5	581.5	2524	2580	3834	1567.5	609.5	2572	2634	3375
1470.0	582.2	2525	2582	3848	1570.0	610.3	2573	2635	3332
1472.5	582.8	2526	2584	3746	1572.5	611.0	2574	2636	3348
1475.0	583.5	2528	2585	3770	1575.0	611.8	2574	2637	3211
1477.5	584.1	2529	2587	3855	1577.5	612.5	2575	2638	3278
1480.0	584.8	2531	2589	3929	1580.0	613.3	2576	2639	3316
1482.5	585.4	2532	2591	3718	1582.5	614.1	2577	2640	3334
1485.0	586.1	2534	2592	3882	1585.0	614.8	2578	2641	3310
1487.5	586.7	2535	2594	3836	1587.5	615.6	2579	2642	3191
1490.0	587.4	2537	2596	3785	1590.0	616.4	2580	2643	3260
1492.5	588.1	2538	2597	3828	1592.5	617.1	2580	2643	3218
1495.0	588.7	2539	2599	3819	1595.0	617.9	2581	2644	3362
1497.5	589.4	2541	2601	3863	1597.5	618.6	2582	2645	3294
1500.0	590.0	2542	2602	3856	1600.0	619.4	2583	2646	3267

TABLE 1

Time depth curve values

Well : SKULL CREEK NTH #1

Client : CULTUS PETROLEUM

Survey units : METRES

Datum : 0.0

Calibrated sonic velocities used from 265.0 to 1715.0

Datum depth	One-way time(ms)	— VELOCITIES —			Datum depth	One-way time(ms)	— VELOCITIES —		
		Average	RMS	Interval			Average	RMS	Interval
1602.5	620.2	2584	2647	3278	1702.5	648.3	2626	2694	3929
1605.0	620.9	2585	2648	3246	1705.0	648.9	2627	2695	3877
1607.5	621.7	2586	2649	3135	1707.5	649.6	2629	2697	3841
1610.0	622.5	2586	2649	3139	1710.0	650.3	2630	2698	3822
1612.5	623.3	2587	2650	3182	1712.5	650.9	2631	2700	3863
1615.0	624.1	2588	2651	3231	1715.0	651.5	2632	2701	4113
1617.5	624.8	2589	2652	3288					
1620.0	625.6	2589	2652	3293					
1622.5	626.4	2590	2653	3155					
1625.0	627.2	2591	2654	3254					
1627.5	628.0	2592	2655	3045					
1630.0	628.8	2592	2655	3188					
1632.5	629.5	2593	2656	3232					
1635.0	630.3	2594	2657	3329					
1637.5	631.0	2595	2658	3357					
1640.0	631.8	2596	2659	3325					
1642.5	632.5	2597	2660	3381					
1645.0	633.3	2597	2661	3256					
1647.5	634.1	2598	2661	3321					
1650.0	634.8	2599	2662	3302					
1652.5	635.6	2600	2663	3235					
1655.0	636.3	2601	2664	3290					
1657.5	636.9	2602	2666	4290					
1660.0	637.6	2604	2667	3979					
1662.5	638.2	2605	2669	3926					
1665.0	638.8	2606	2671	4004					
1667.5	639.5	2608	2672	3922					
1670.0	640.1	2609	2674	3887					
1672.5	640.8	2610	2675	3694					
1675.0	641.4	2611	2676	3752					
1677.5	642.1	2613	2678	3953					
1680.0	642.7	2614	2679	3984					
1682.5	643.3	2615	2681	4016					
1685.0	644.0	2617	2683	3889					
1687.5	644.6	2618	2684	3999					
1690.0	645.1	2620	2686	4582					
1692.5	645.8	2621	2688	4011					
1695.0	646.4	2622	2690	4115					
1697.5	647.0	2624	2691	3865					
1700.0	647.7	2625	2692	3841					

SHOT CALCULATIONS : (cont)

Shot no.	Geophone depth Kelly - Datum	Shot Locn	Shot Depth	Record	TIMES		Datum	Check shot distance		Velocities			
					Corr.	Avg.		time	Interval	Average	RMS		
25	791.0	708.4	D	0.5	378.5	379.0	379.0	323.6	118.0	44.0	2189.1	2211.8	2681.8
24	898.0	815.4	D	0.5	416.5	417.1	417.1	361.7	107.0	38.1	2254.4	2282.0	2808.4
23	1018.0	935.4	D	0.5	459.5	460.1	460.1	404.7	120.0	43.0	2311.3	2341.3	2790.7
Nullawarre Greensand													
22	1105.0	1022.4	D	0.5	490.0	490.6	490.6	435.2	87.0	30.5	2349.3	2380.7	2852.5
Bellfest M'st													
21	1182.0	1099.4	D	1.0	515.0	515.6	515.6	460.2	77.0	25.0	2389.0	2423.9	3080.0
Waarre Fm Unit D													
8	1270.0	1187.4	D	0.5	548.5	549.1	549.1		88.0	32.5	2410.0	2443.6	2707.7
20	1270.0	1187.4	D	0.8	546.5	547.1	548.1	492.7	16.0	6.5	2410.7	2443.9	2461.5
19	1286.0	1203.4	D	0.8	554.0	554.6	554.6	499.2	70.0	23.0	2438.5	2473.3	3043.5
Eumeralla Fm													
18	1356.0	1273.4	D	0.8	577.0	577.6	577.6	522.2	22.0	5.0	2457.1	2498.6	4400.0
17	1378.0	1295.4	D	0.8	582.0	582.6	582.6	527.2	65.5	22.0	2478.0	2519.5	2977.3
16	1443.5	1360.9	D	0.8	604.0	604.6	604.6	549.2	51.5	16.5	2496.7	2539.1	3121.2
9	1495.0	1412.4	D	0.5	621.5	622.1	622.1		90.0	25.1	2543.0	2592.2	3585.7
15	1495.0	1412.4	D	0.8	619.5	620.1	621.1	565.7					
14	1585.0	1502.4	D	0.8	645.5	646.2	646.2	590.8					

SHOT CALCULATIONS : (cont)

Shot no.	Geophone depth Kelly - Datum	Shot Locn	Shot Depth	TIMES			Datum	Check shot distance	Check shot interval time	Velocities	
				Record	Corr.	Avg.				Average	RMS	Interval
13	1633.0	D	0.8	659.0	659.7	659.7	604.3	48.0	13.5	2565.6	3555.6
12	1739.0	D	0.8	691.5	692.2	692.2	636.8	106.0	32.5	2601.1	3261.5
10	1800.0	D	0.8	708.0	708.7	708.7		61.0	15.5	2632.8	3935.5
11	1800.0	D	0.8	706.0	706.7	707.7	652.3			2691.7	

COMPANY : CULTUS PETROLEUM
WELL : SKULL CREEK NTH #1

Latitude : 38 33 35.26 N Longitude : 142 59 45.85 E Survey date : 19-Mar-97 Survey units : METRES
 Elevations : Datum : 0 Ground : 77.9 Kelly : 82.6
 Times : MILLISECONDS

SONIC DRIFT :

Geophone depth Kelly — Datum	Check shot times Average - Below Datum	Check shot interval Distance - Time	Sonic Int. time	Interval sonic drift usec/m - msec	Cumulative drift msec
DATUM					
82.6 0.0	55.4 0.0				
347.0 264.4	196.1 140.7	264.4 140.7			
435.0 352.4	238.3 182.9	88.0 42.2	44.9	-30.68	-2.7
Pebble Point Fm					
625.0 542.4	316.6 261.2	190.0 78.3	81.1	-14.74	-2.8
Paaratte Fm					
673.0 590.4	335.0 279.6	48.0 18.4	17.6	16.67	0.8
791.0 708.4	379.0 323.6	118.0 44.0	44.8	-6.78	-0.8
898.0 815.4	417.1 361.7	107.0 38.1	39.9	-16.82	-1.8
1018.0 935.4	460.1 404.7	120.0 43.0	42.5	4.17	0.5
Nullawarre Greensand					
1105.0 1022.4	490.6 435.2	87.0 30.5	30.6	-1.15	-0.1
Belfast M'st					
1182.0 1099.4	515.6 460.2	77.0 25.0	26.1	-14.29	-1.1
					-8.0

SONIC DRIFT : (cont)

Geophone depth Kelly --- Datum	Check shot times Average - Below Datum	Check shot interval Distance - Time	Sonic Int. time	Interval sonic drift usec/m - msec	Cumulative drift msec				
Belfast M'st									
1182.0	1099.4	515.6	460.2	88.0	32.5	32.4	1.14	0.1	-7.9
Waarre Fm Unit D									
1270.0	1187.4	548.1	492.7	16.0	6.5	5.2	81.25	1.3	-6.6
1286.0	1203.4	554.6	499.2	70.0	23.0	21.8	17.14	1.2	-5.4
Eumeralla Fm									
1356.0	1273.4	577.6	522.2	22.0	5.0	6.3	-59.09	-1.3	-6.7
1378.0	1295.4	582.6	527.2	65.5	22.0	19.7	35.11	2.3	-4.4
1443.5	1360.9	604.6	549.2	51.5	16.5	15.9	11.65	0.6	-3.8
1495.0	1412.4	621.1	565.7	90.0	25.1	27.5	-26.67	-2.4	-6.2
1585.0	1502.4	646.2	590.8	48.0	13.5	13.6	-2.08	-0.1	-6.3
1633.0	1550.4	659.7	604.3	106.0	32.5	29.8	25.47	2.7	-3.6
1739.0	1656.4	692.2	636.8	61.0	15.5	16.4	-14.75	-0.9	-4.5
1800.0	1717.4	707.7	652.3						

**COMPANY : CULTUS PETROLEUM
WELL : SKULL CREEK NTH #1**

Latitude : 38 33 35.26 N Longitude : 142 59 45.85 E Survey date : 19-Mar-97 Survey units : METRES
Elevations : Datum : 0 Ground : 77.9 Kelly : 82.6
Times : MILLISECONDS

SONIC CALIBRATION :

Geophone depth Kelly — Datum	Interval Distance	Original sonic times Interval — Cumulative	Adjusted sonic times Interval — Calibrated	Velocities	
				Average	RMS
DATUM					
82.6	0.0				
347.0	264.4			1879.2	1879.2
Dilwyn Fm					
374.0	27.0	13.2	12.4	1879.2	2176.3
435.0	61.0	13.2	29.8	1903.3	1905.0
Pember M'st					
569.0	134.0	44.9	55.3	1926.7	1928.9
2422.2					
Pebble Point Fm					
625.0	56.0	102.2	23.0	2041.8	2054.0
2437.1					
Paaratte Fm					
673.0	48.0	126.0	18.4	2076.6	2090.6
2608.7					
791.0	118.0	143.6	44.0	2111.6	2128.5
Skull Creek M'st					
844.0	53.0	188.4	18.7	2189.1	2211.9
2831.8					
898.0	54.0	208.0	19.4	2224.3	2250.2
2785.8					
		228.3		2254.4	2282.1

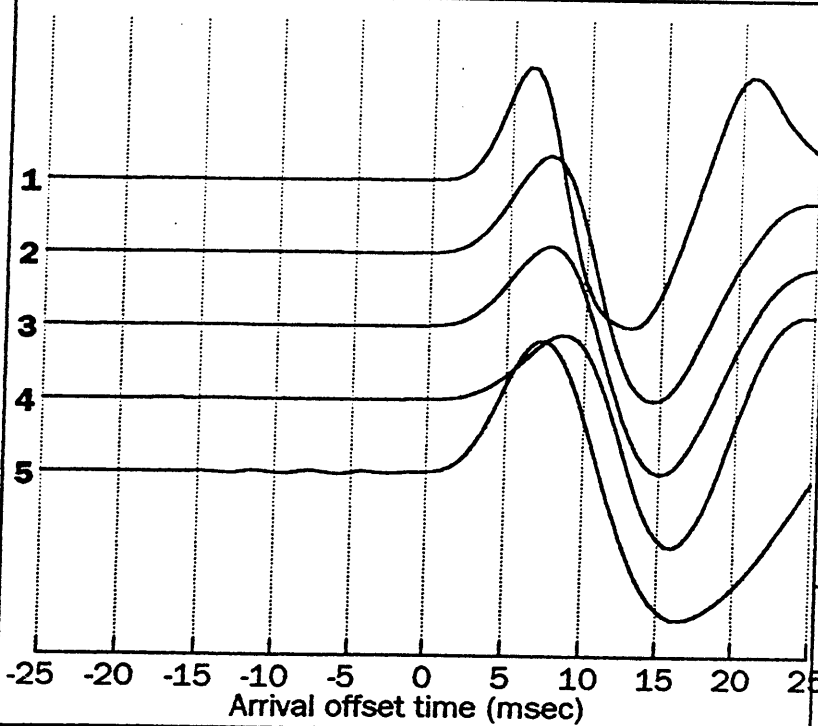
SONIC CALIBRATION : (cont)

Geophone depth Kelly — Datum	Interval Distance	Original sonic times Interval — Cumulative	Adjusted sonic times Interval — Calibrated	Velocities	
				Average	RMS
898.0 815.4	120.0	42.5	43.0	2254.4	2282.1
1018.0 935.4	87.0	270.8	404.7	2311.3	2341.4
Nullawarre Greensand 1105.0 1022.4	77.0	301.4	435.2	2349.3	2380.8
Belfast M'st 1182.0 1099.4	88.0	327.5	460.2	2389.0	2424.0
Waarre Fm Unit D 1270.0 1187.4	8.0	359.9	492.7	2410.0	2443.7
Waarre Fm Unit C 1278.0 1195.4	8.0	362.7	496.2	2409.1	2442.6
1286.0 1203.4	16.0	365.1	499.2	2410.7	2444.0
Waarre Fm Unit B 1302.0 1219.4	37.0	369.6	503.9	2419.7	2454.4
Waarre Fm Unit A 1339.0 1256.4	17.0	381.8	516.8	2431.0	2465.7
Eumeralla Fm 1356.0 1273.4	22.0	386.9	522.2	2438.5	2473.9
1378.0 1295.4	65.5	393.2	527.2	2457.1	2499.1
1443.5 1360.9		412.9	549.2	2478.0	2520.0
					2790.7
					2852.5
					3080.0
					2707.7
					2285.7
					2666.7
					3370.0
					2874.6
					3159.4
					4400.0
					2977.3

SONIC CALIBRATION : (cont)

Geophone depth Kelly — Datum	Interval Distance	Original sonic times Interval — Cumulative	Adjusted sonic times Interval — Calibrated	Velocities	
				Average	RMS
1443.5	1360.9			2478.0	2520.0
1495.0	1412.4	15.9	16.5	2496.7	2539.6
1585.0	1502.4	90.0	25.1	2543.0	2592.6
1633.0	1550.4	48.0	13.5	2565.6	2618.0
1739.0	1656.4	106.0	32.5	2601.1	2654.6
1800.0	1717.4	61.0	15.5	2632.8	2692.1
					3121.2
					3585.7
					3555.6
					3261.5
					3935.5

First arrivals plot : SKULL CREEK NTH #1



Shot 1 Location : A
 Charge depth 0.5 Size 0.25
 Phone depth : 82.6
 Arrival time : 53.0 msec

Shot 2 Location : B
 Charge depth 0.5 Size 0.25
 Phone depth : 82.6
 Arrival time : 56.5 msec

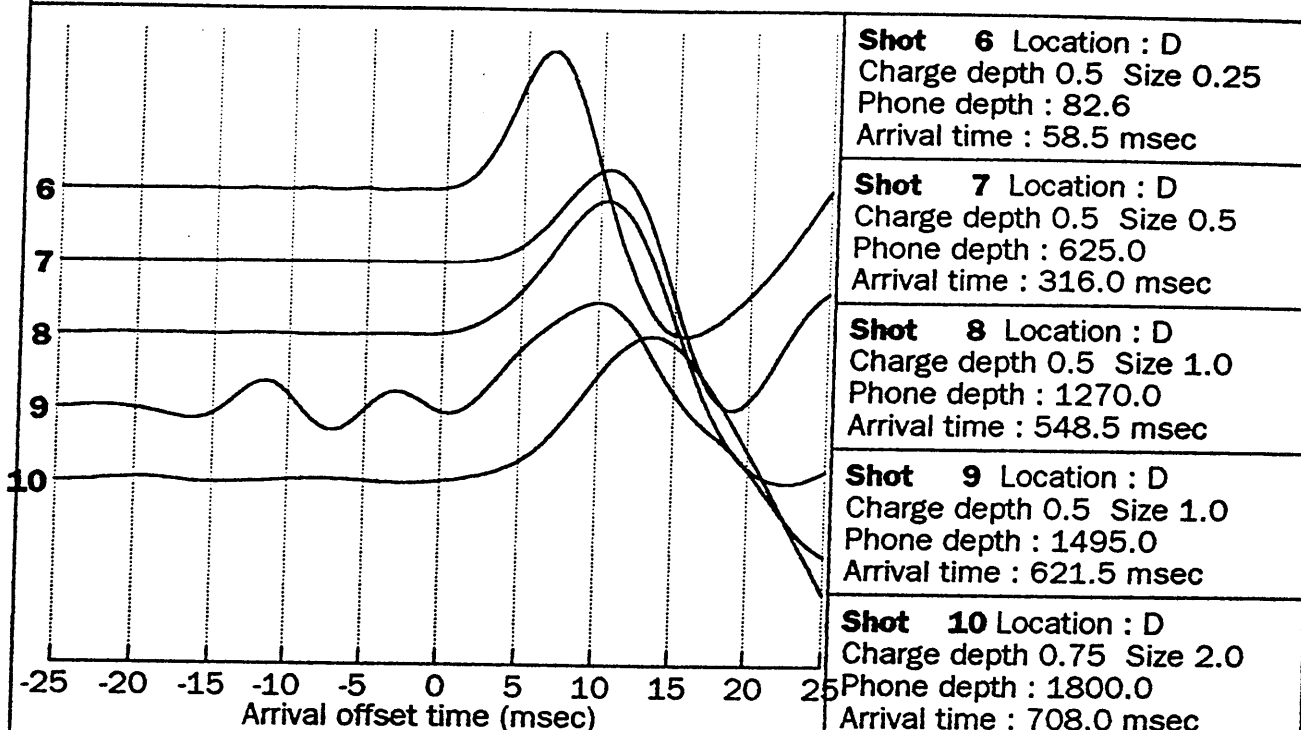
Shot 3 Location : C
 Charge depth 0.5 Size 0.25
 Phone depth : 82.6
 Arrival time : 63.0 msec

Shot 4 Location : C
 Charge depth 0.5 Size 0.25
 Phone depth : 82.6
 Arrival time : 64.0 msec

Shot 5 Location : D
 Charge depth 0.5 Size 0.25
 Phone depth : 82.6
 Arrival time : 58.0 msec

SHOT 1		SHOT 2		SHOT 3		SHOT 4		SHOT 5	
Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl
42.0	-5.00	46.0	-7.00	52.0	-4.00	53.0	-2.00	47.0	-34.00
42.5	-5.00	46.5	-8.00	52.5	-5.00	53.5	-4.00	47.5	0.00
43.0	-6.00	47.0	-6.00	53.0	-4.00	54.0	-2.00	48.0	30.00
43.5	-3.00	47.5	-5.00	53.5	-4.00	54.5	-4.00	48.5	42.00
44.0	-1.00	48.0	-4.00	54.0	-5.00	55.0	-3.00	49.0	28.00
44.5	3.00	48.5	-3.00	54.5	-5.00	55.5	-2.00	49.5	-12.00
45.0	7.00	49.0	-3.00	55.0	-4.00	56.0	-2.00	50.0	-55.00
45.5	8.00	49.5	-4.00	55.5	-6.00	56.5	-1.00	50.5	-58.00
46.0	5.00	50.0	-3.00	56.0	-4.00	57.0	-2.00	51.0	-20.00
46.5	0.00	50.5	-3.00	56.5	-3.00	57.5	-2.00	51.5	23.00
47.0	-6.00	51.0	-3.00	57.0	-4.00	58.0	-2.00	52.0	50.00
47.5	-12.00	51.5	-1.00	57.5	-3.00	58.5	-2.00	52.5	43.00
48.0	-13.00	52.0	-2.00	58.0	-2.00	59.0	0.00	53.0	2.00
48.5	-12.00	52.5	-1.00	58.5	-2.00	59.5	-1.00	53.5	-43.00
49.0	-8.00	53.0	-1.00	59.0	-1.00	60.0	-2.00	54.0	-44.00
49.5	-3.00	53.5	-1.00	59.5	-2.00	60.5	-3.00	54.5	-22.00
50.0	1.00	54.0	-1.00	60.0	-2.00	61.0	-3.00	55.0	8.00
50.5	3.00	54.5	-2.00	60.5	-2.00	61.5	-3.00	55.5	28.00
51.0	1.00	55.0	-1.00	61.0	-3.00	62.0	-3.00	56.0	22.00
51.5	-1.00	55.5	-1.00	61.5	-4.00	62.5	-4.00	56.5	-11.00
52.0	-3.00	56.0	-3.00	62.0	-4.00	63.0	-4.00	57.0	-19.00
52.5	-4.00	56.5	-3.00	62.5	-4.00	63.5	-5.00	57.5	-21.00
53.0	-7.00	57.0	-7.00	63.0	-7.00	64.0	-5.00	58.0	-27.00
53.5	-12.00	57.5	-13.00	63.5	-11.00	64.5	-7.00	58.5	-49.00
54.0	-30.00	58.0	-27.00	64.0	-21.00	65.0	-11.00	59.0	-105.00
54.5	-72.00	58.5	-53.00	64.5	-37.00	65.5	-17.00	59.5	-211.00
55.0	-159.00	59.0	-99.00	65.0	-64.00	66.0	-27.00	60.0	-383.00
55.5	-317.00	59.5	-167.00	65.5	-104.00	66.5	-42.00	60.5	-642.00
56.0	-581.00	60.0	-271.00	66.0	-162.00	67.0	-65.00	61.0	-996.00
56.5	-970.00	60.5	-407.00	66.5	-238.00	67.5	-94.00	61.5	-1446.00
57.0	-1493.00	61.0	-579.00	67.0	-331.00	68.0	-134.00	62.0	-1974.00
57.5	-2113.00	61.5	-780.00	67.5	-442.00	68.5	-182.00	62.5	-2553.00
58.0	-2758.00	62.0	-1001.00	68.0	-563.00	69.0	-239.00	63.0	-3143.00
58.5	-3309.00	62.5	-1228.00	68.5	-689.00	69.5	-303.00	63.5	-3696.00
59.0	-3630.00	63.0	-1446.00	69.0	-808.00	70.0	-374.00	64.0	-4164.00
59.5	-3605.00	63.5	-1633.00	69.5	-912.00	70.5	-442.00	64.5	-4505.00
60.0	-3169.00	64.0	-1767.00	70.0	-988.00	71.0	-509.00	65.0	-4683.00
60.5	-2338.00	64.5	-1821.00	70.5	-1025.00	71.5	-566.00	65.5	-4681.00
61.0	-1209.00	65.0	-1776.00	71.0	-1013.00	72.0	-610.00	66.0	-4488.00
61.5	68.00	65.5	-1611.00	71.5	-942.00	72.5	-629.00	66.5	-4099.00
62.0	1310.00	66.0	-1323.00	72.0	-810.00	73.0	-622.00	67.0	-3527.00
62.5	2380.00	66.5	-914.00	72.5	-617.00	73.5	-579.00	67.5	-2805.00
63.0	3201.00	67.0	-413.00	73.0	-370.00	74.0	-495.00	68.0	-1974.00
63.5	3767.00	67.5	144.00	73.5	-82.00	74.5	-369.00	68.5	-1078.00
64.0	4129.00	68.0	710.00	74.0	232.00	75.0	-204.00	69.0	-161.00

First arrivals plot : SKULL CK. NTH. #01



Shot 6 Location : D
 Charge depth 0.5 Size 0.25
 Phone depth : 82.6
 Arrival time : 58.5 msec

Shot 7 Location : D
 Charge depth 0.5 Size 0.5
 Phone depth : 625.0
 Arrival time : 316.0 msec

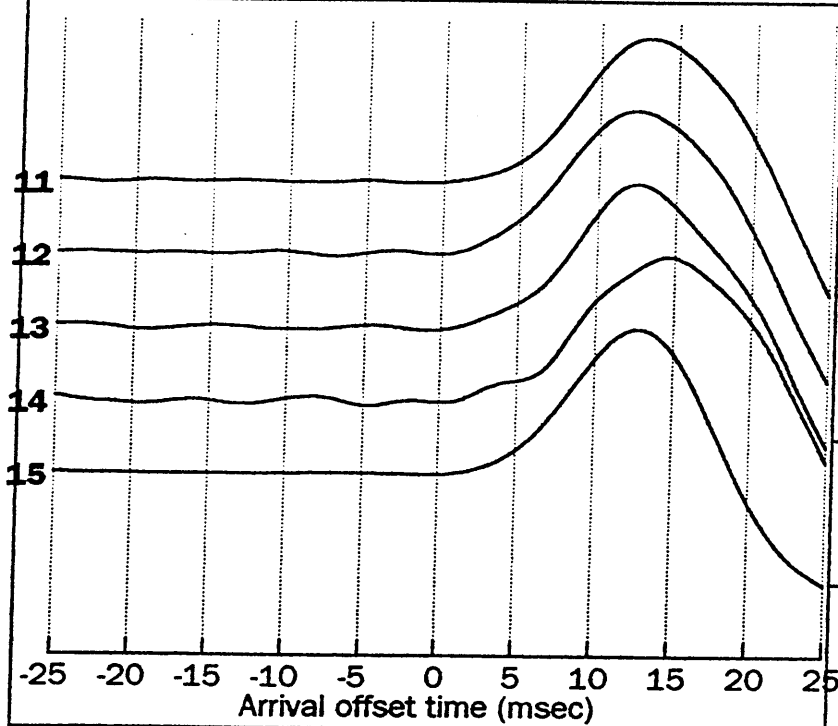
Shot 8 Location : D
 Charge depth 0.5 Size 1.0
 Phone depth : 1270.0
 Arrival time : 548.5 msec

Shot 9 Location : D
 Charge depth 0.5 Size 1.0
 Phone depth : 1495.0
 Arrival time : 621.5 msec

Shot 10 Location : D
 Charge depth 0.75 Size 2.0
 Phone depth : 1800.0
 Arrival time : 708.0 msec

SHOT 6		SHOT 7		SHOT 8		SHOT 9		SHOT 10	
Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl
48.0	10.00	305.0	-14.00	538.0	-9.00	610.0	-304.00	697.0	-3.00
48.5	17.00	305.5	-17.00	538.5	-7.00	610.5	-247.00	697.5	-6.00
49.0	12.00	306.0	-19.00	539.0	-4.00	611.0	-162.00	698.0	-10.00
49.5	-8.00	306.5	-20.00	539.5	-2.00	611.5	-59.00	698.5	-10.00
50.0	-34.00	307.0	-21.00	540.0	2.00	612.0	49.00	699.0	-13.00
50.5	-35.00	307.5	-19.00	540.5	2.00	612.5	150.00	699.5	-14.00
51.0	-14.00	308.0	-18.00	541.0	2.00	613.0	228.00	700.0	-15.00
51.5	10.00	308.5	-17.00	541.5	3.00	613.5	275.00	700.5	-14.00
52.0	24.00	309.0	-16.00	542.0	3.00	614.0	285.00	701.0	-14.00
52.5	16.00	309.5	-13.00	542.5	1.00	614.5	256.00	701.5	-12.00
53.0	-13.00	310.0	-14.00	543.0	2.00	615.0	197.00	702.0	-9.00
53.5	-40.00	310.5	-15.00	543.5	-1.00	615.5	114.00	702.5	-6.00
54.0	-30.00	311.0	-14.00	544.0	-4.00	616.0	21.00	703.0	-2.00
54.5	-5.00	311.5	-15.00	544.5	-7.00	616.5	-68.00	703.5	0.00
55.0	17.00	312.0	-16.00	545.0	-10.00	617.0	-140.00	704.0	5.00
55.5	25.00	312.5	-18.00	545.5	-13.00	617.5	-188.00	704.5	8.00
56.0	5.00	313.0	-19.00	546.0	-13.00	618.0	-207.00	705.0	10.00
56.5	-27.00	313.5	-20.00	546.5	-13.00	618.5	-194.00	705.5	12.00
57.0	-24.00	314.0	-22.00	547.0	-9.00	619.0	-158.00	706.0	11.00
57.5	-15.00	314.5	-22.00	547.5	-6.00	619.5	-104.00	706.5	9.00
58.0	-10.00	315.0	-24.00	548.0	-5.00	620.0	-44.00	707.0	6.00
58.5	-18.00	315.5	-25.00	548.5	-7.00	620.5	11.00	707.5	1.00
59.0	-57.00	316.0	-29.00	549.0	-16.00	621.0	49.00	708.0	-2.00
59.5	-126.00	316.5	-38.00	549.5	-29.00	621.5	63.00	708.5	-9.00
60.0	-249.00	317.0	-57.00	550.0	-52.00	622.0	46.00	709.0	-16.00
60.5	-441.00	317.5	-87.00	550.5	-83.00	622.5	2.00	709.5	-26.00
61.0	-720.00	318.0	-138.00	551.0	-125.00	623.0	-70.00	710.0	-36.00
61.5	-1103.00	318.5	-215.00	551.5	-176.00	623.5	-165.00	710.5	-47.00
62.0	-1594.00	319.0	-330.00	552.0	-238.00	624.0	-273.00	711.0	-61.00
62.5	-2194.00	319.5	-491.00	552.5	-312.00	624.5	-390.00	711.5	-77.00
63.0	-2885.00	320.0	-712.00	553.0	-397.00	625.0	-507.00	712.0	-101.00
63.5	-3626.00	320.5	-1001.00	553.5	-491.00	625.5	-621.00	712.5	-123.00
64.0	-4359.00	321.0	-1372.00	554.0	-599.00	626.0	-727.00	713.0	-152.00
64.5	-5002.00	321.5	-1827.00	554.5	-718.00	626.5	-824.00	713.5	-189.00
65.0	-5483.00	322.0	-2374.00	555.0	-849.00	627.0	-912.00	714.0	-234.00
65.5	-5750.00	322.5	-2996.00	555.5	-990.00	627.5	-990.00	714.5	-285.00
66.0	-5754.00	323.0	-3691.00	556.0	-1136.00	628.0	-1063.00	715.0	-343.00
66.5	-5475.00	323.5	-4430.00	556.5	-1285.00	628.5	-1132.00	715.5	-406.00
67.0	-4920.00	324.0	-5168.00	557.0	-1428.00	629.0	-1196.00	716.0	-477.00
67.5	-4120.00	324.5	-5871.00	557.5	-1562.00	629.5	-1255.00	716.5	-550.00
68.0	-3139.00	325.0	-6505.00	558.0	-1677.00	630.0	-1305.00	717.0	-627.00
68.5	-2059.00	325.5	-7023.00	558.5	-1767.00	630.5	-1339.00	717.5	-703.00
69.0	-954.00	326.0	-7378.00	559.0	-1823.00	631.0	-1353.00	718.0	-777.00
69.5	122.00	326.5	-7526.00	559.5	-1840.00	631.5	-1340.00	718.5	-848.00
70.0	1138.00	327.0	-7430.00	560.0	-1813.00	632.0	-1299.00	719.0	-914.00

First arrivals plot : SKULL CK. NTH. #01



Shot 11 Location : D
 Charge depth 0.75 Size 2.0
 Phone depth : 1800.0
 Arrival time : 706.0 msec

Shot 12 Location : D
 Charge depth 0.75 Size 2.0
 Phone depth : 1739.0
 Arrival time : 691.5 msec

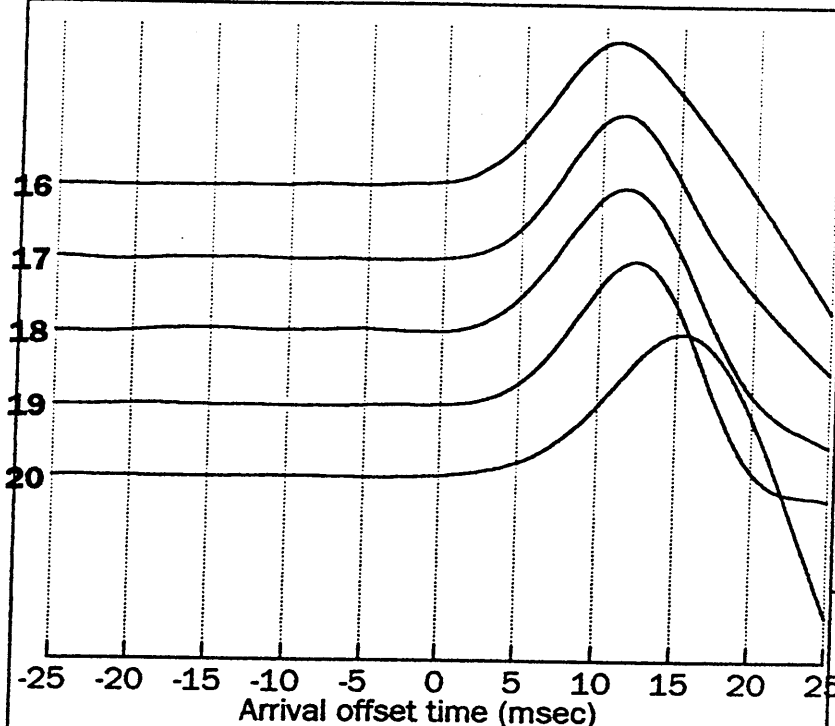
Shot 13 Location : D
 Charge depth 0.75 Size 1.5
 Phone depth : 1633.0
 Arrival time : 659.0 msec

Shot 14 Location : D
 Charge depth 0.75 Size 1.5
 Phone depth : 1585.0
 Arrival time : 645.5 msec

Shot 15 Location : D
 Charge depth 0.75 Size 1.5
 Phone depth : 1495.0
 Arrival time : 619.5 msec

SHOT 11		SHOT 12		SHOT 13		SHOT 14		SHOT 15	
Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl
695.0	-2.00	680.0	-26.00	648.0	17.00	634.0	4.00	608.0	4.00
695.5	0.00	680.5	-26.00	648.5	19.00	634.5	-3.00	608.5	4.00
696.0	3.00	681.0	-23.00	649.0	21.00	635.0	-10.00	609.0	2.00
696.5	5.00	681.5	-17.00	649.5	20.00	635.5	-16.00	609.5	0.00
697.0	7.00	682.0	-10.00	650.0	20.00	636.0	-20.00	610.0	-4.00
697.5	7.00	682.5	-2.00	650.5	18.00	636.5	-22.00	610.5	-5.00
698.0	6.00	683.0	5.00	651.0	16.00	637.0	-21.00	611.0	-8.00
698.5	3.00	683.5	11.00	651.5	12.00	637.5	-17.00	611.5	-8.00
699.0	0.00	684.0	12.00	652.0	4.00	638.0	-10.00	612.0	-10.00
699.5	-6.00	684.5	11.00	652.5	-3.00	638.5	0.00	612.5	-8.00
700.0	-9.00	685.0	5.00	653.0	-11.00	639.0	10.00	613.0	-8.00
700.5	-13.00	685.5	-2.00	653.5	-17.00	639.5	18.00	613.5	-7.00
701.0	-13.00	686.0	-10.00	654.0	-22.00	640.0	23.00	614.0	-5.00
701.5	-11.00	686.5	-20.00	654.5	-23.00	640.5	24.00	614.5	-4.00
702.0	-9.00	687.0	-27.00	655.0	-22.00	641.0	21.00	615.0	-4.00
702.5	-4.00	687.5	-31.00	655.5	-15.00	641.5	14.00	615.5	-2.00
703.0	0.00	688.0	-31.00	656.0	-8.00	642.0	6.00	616.0	-3.00
703.5	3.00	688.5	-30.00	656.5	2.00	642.5	1.00	616.5	0.00
704.0	4.00	689.0	-24.00	657.0	12.00	643.0	-2.00	617.0	3.00
704.5	5.00	689.5	-17.00	657.5	20.00	643.5	-2.00	617.5	6.00
705.0	5.00	690.0	-10.00	658.0	25.00	644.0	-1.00	618.0	8.00
705.5	3.00	690.5	-7.00	658.5	24.00	644.5	4.00	618.5	10.00
706.0	0.00	691.0	-6.00	659.0	19.00	645.0	5.00	619.0	6.00
706.5	-7.00	691.5	-11.00	659.5	9.00	645.5	5.00	619.5	0.00
707.0	-16.00	692.0	-22.00	660.0	-7.00	646.0	-1.00	620.0	-10.00
707.5	-27.00	692.5	-41.00	660.5	-29.00	646.5	-13.00	620.5	-27.00
708.0	-40.00	693.0	-66.00	661.0	-54.00	647.0	-30.00	621.0	-48.00
708.5	-56.00	693.5	-96.00	661.5	-83.00	647.5	-49.00	621.5	-73.00
709.0	-74.00	694.0	-128.00	662.0	-114.00	648.0	-71.00	622.0	-107.00
709.5	-96.00	694.5	-164.00	662.5	-146.00	648.5	-85.00	622.5	-148.00
710.0	-122.00	695.0	-202.00	663.0	-180.00	649.0	-98.00	623.0	-198.00
710.5	-152.00	695.5	-246.00	663.5	-216.00	649.5	-104.00	623.5	-256.00
711.0	-189.00	696.0	-295.00	664.0	-255.00	650.0	-110.00	624.0	-327.00
711.5	-235.00	696.5	-352.00	664.5	-299.00	650.5	-116.00	624.5	-410.00
712.0	-290.00	697.0	-415.00	665.0	-353.00	651.0	-130.00	625.0	-505.00
712.5	-356.00	697.5	-487.00	665.5	-417.00	651.5	-154.00	625.5	-615.00
713.0	-431.00	698.0	-565.00	666.0	-495.00	652.0	-193.00	626.0	-736.00
713.5	-513.00	698.5	-648.00	666.5	-587.00	652.5	-243.00	626.5	-867.00
714.0	-605.00	699.0	-732.00	667.0	-691.00	653.0	-302.00	627.0	-1006.00
714.5	-701.00	699.5	-817.00	667.5	-803.00	653.5	-365.00	627.5	-1150.00
715.0	-798.00	700.0	-897.00	668.0	-922.00	654.0	-427.00	628.0	-1295.00
715.5	-894.00	700.5	-971.00	668.5	-1040.00	654.5	-484.00	628.5	-1437.00
716.0	-984.00	701.0	-1039.00	669.0	-1151.00	655.0	-534.00	629.0	-1573.00
716.5	-1066.00	701.5	-1094.00	669.5	-1251.00	655.5	-574.00	629.5	-1698.00
717.0	-1138.00	702.0	-1139.00	670.0	-1336.00	656.0	-607.00	630.0	-1804.00

First arrivals plot : SKULL CK. NTH. #01



Shot 16 Location : D
 Charge depth 0.75 Size 1.5
 Phone depth : 1443.5
 Arrival time : 604.0 msec

Shot 17 Location : D
 Charge depth 0.75 Size 1.0
 Phone depth : 1378.0
 Arrival time : 582.0 msec

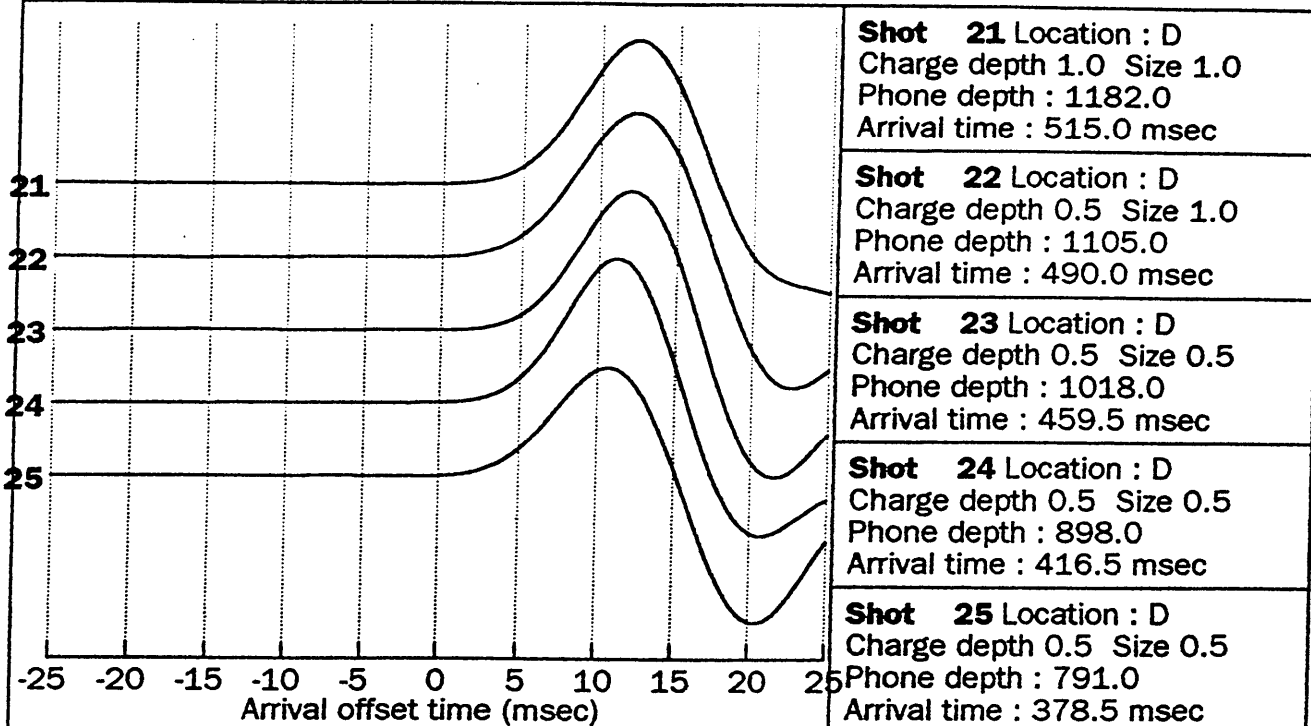
Shot 18 Location : D
 Charge depth 0.75 Size 1.0
 Phone depth : 1356.0
 Arrival time : 577.0 msec

Shot 19 Location : D
 Charge depth 0.75 Size 1.0
 Phone depth : 1286.0
 Arrival time : 554.0 msec

Shot 20 Location : D
 Charge depth 0.75 Size 1.0
 Phone depth : 1270.0
 Arrival time : 546.5 msec

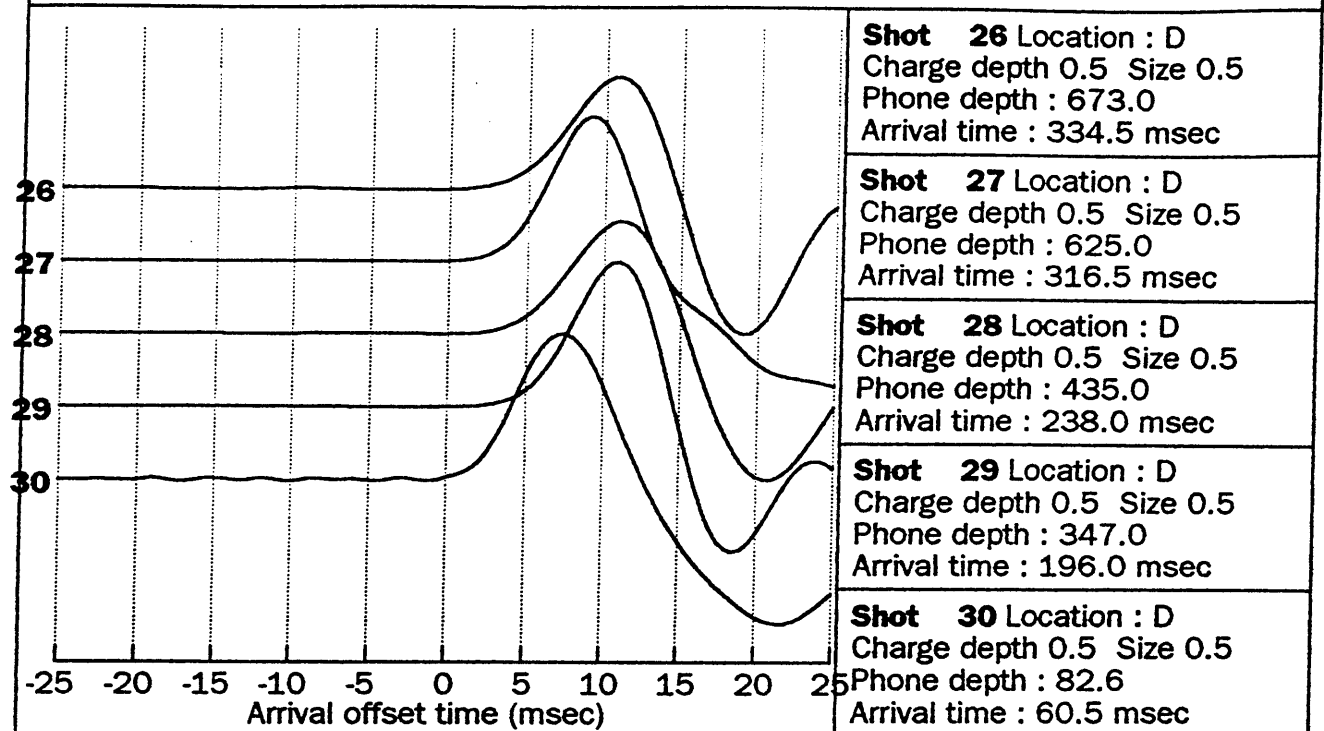
SHOT 16		SHOT 17		SHOT 18		SHOT 19		SHOT 20	
Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl
593.0	-4.00	571.0	-6.00	566.0	-10.00	543.0	9.00	536.0	-17.00
593.5	-5.00	571.5	-1.00	566.5	-9.00	543.5	11.00	536.5	-19.00
594.0	-7.00	572.0	1.00	567.0	-10.00	544.0	10.00	537.0	-19.00
594.5	-9.00	572.5	3.00	567.5	-12.00	544.5	12.00	537.5	-23.00
595.0	-12.00	573.0	2.00	568.0	-14.00	545.0	10.00	538.0	-21.00
595.5	-15.00	573.5	0.00	568.5	-15.00	545.5	11.00	538.5	-21.00
596.0	-16.00	574.0	-2.00	569.0	-16.00	546.0	12.00	539.0	-19.00
596.5	-14.00	574.5	-5.00	569.5	-18.00	546.5	12.00	539.5	-17.00
597.0	-13.00	575.0	-7.00	570.0	-21.00	547.0	9.00	540.0	-15.00
597.5	-10.00	575.5	-8.00	570.5	-22.00	547.5	9.00	540.5	-13.00
598.0	-7.00	576.0	-6.00	571.0	-24.00	548.0	7.00	541.0	-11.00
598.5	-7.00	576.5	-3.00	571.5	-26.00	548.5	5.00	541.5	-9.00
599.0	-7.00	577.0	0.00	572.0	-25.00	549.0	2.00	542.0	-7.00
599.5	-7.00	577.5	-1.00	572.5	-22.00	549.5	-1.00	542.5	-7.00
600.0	-11.00	578.0	3.00	573.0	-20.00	550.0	-2.00	543.0	-7.00
600.5	-14.00	578.5	3.00	573.5	-16.00	550.5	-5.00	543.5	-8.00
601.0	-18.00	579.0	2.00	574.0	-13.00	551.0	-5.00	544.0	-9.00
601.5	-22.00	579.5	-1.00	574.5	-9.00	551.5	-4.00	544.5	-12.00
602.0	-24.00	580.0	-2.00	575.0	-6.00	552.0	-5.00	545.0	-14.00
602.5	-25.00	580.5	-3.00	575.5	-5.00	552.5	-3.00	545.5	-19.00
603.0	-28.00	581.0	-5.00	576.0	-5.00	553.0	-3.00	546.0	-23.00
603.5	-31.00	581.5	-9.00	576.5	-5.00	553.5	-5.00	546.5	-28.00
604.0	-35.00	582.0	-15.00	577.0	-5.00	554.0	-5.00	547.0	-34.00
604.5	-42.00	582.5	-22.00	577.5	-12.00	554.5	-9.00	547.5	-41.00
605.0	-55.00	583.0	-32.00	578.0	-19.00	555.0	-17.00	548.0	-50.00
605.5	-73.00	583.5	-45.00	578.5	-31.00	555.5	-26.00	548.5	-61.00
606.0	-96.00	584.0	-62.00	579.0	-48.00	556.0	-38.00	549.0	-72.00
606.5	-126.00	584.5	-85.00	579.5	-69.00	556.5	-58.00	549.5	-86.00
607.0	-162.00	585.0	-117.00	580.0	-99.00	557.0	-82.00	550.0	-102.00
607.5	-205.00	585.5	-160.00	580.5	-136.00	557.5	-113.00	550.5	-123.00
608.0	-256.00	586.0	-213.00	581.0	-179.00	558.0	-153.00	551.0	-146.00
608.5	-314.00	586.5	-279.00	581.5	-228.00	558.5	-202.00	551.5	-174.00
609.0	-380.00	587.0	-358.00	582.0	-285.00	559.0	-263.00	552.0	-206.00
609.5	-452.00	587.5	-449.00	582.5	-350.00	559.5	-333.00	552.5	-246.00
610.0	-531.00	588.0	-554.00	583.0	-423.00	560.0	-418.00	553.0	-292.00
610.5	-614.00	588.5	-670.00	583.5	-504.00	560.5	-515.00	553.5	-348.00
611.0	-700.00	589.0	-798.00	584.0	-589.00	561.0	-622.00	554.0	-409.00
611.5	-785.00	589.5	-932.00	584.5	-680.00	561.5	-744.00	554.5	-477.00
612.0	-869.00	590.0	-1069.00	585.0	-772.00	562.0	-873.00	555.0	-554.00
612.5	-947.00	590.5	-1203.00	585.5	-863.00	562.5	-1011.00	555.5	-640.00
613.0	-1014.00	591.0	-1329.00	586.0	-948.00	563.0	-1147.00	556.0	-732.00
613.5	-1070.00	591.5	-1440.00	586.5	-1026.00	563.5	-1282.00	556.5	-834.00
614.0	-1109.00	592.0	-1530.00	587.0	-1092.00	564.0	-1409.00	557.0	-943.00
614.5	-1132.00	592.5	-1594.00	587.5	-1144.00	564.5	-1521.00	557.5	-1058.00
615.0	-1136.00	593.0	-1628.00	588.0	-1178.00	565.0	-1615.00	558.0	-1175.00

First arrivals plot : SKULL CK. NTH. #01



SHOT 21		SHOT 22		SHOT 23		SHOT 24		SHOT 25	
Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl
504.0	-9.00	479.0	-6.00	448.0	1.00	406.0	-9.00	368.0	-1.00
504.5	-7.00	479.5	2.00	448.5	1.00	406.5	-9.00	368.5	-3.00
505.0	-5.00	480.0	-2.00	449.0	3.00	407.0	-9.00	369.0	-4.00
505.5	-5.00	480.5	0.00	449.5	4.00	407.5	-8.00	369.5	-5.00
506.0	-6.00	481.0	-2.00	450.0	9.00	408.0	-9.00	370.0	-5.00
506.5	-5.00	481.5	-5.00	450.5	6.00	408.5	-10.00	370.5	-8.00
507.0	-6.00	482.0	-5.00	451.0	5.00	409.0	-9.00	371.0	-9.00
507.5	-5.00	482.5	-4.00	451.5	8.00	409.5	-10.00	371.5	-10.00
508.0	-4.00	483.0	-4.00	452.0	8.00	410.0	-11.00	372.0	-11.00
508.5	-2.00	483.5	-4.00	452.5	6.00	410.5	-11.00	372.5	-12.00
509.0	-2.00	484.0	-2.00	453.0	5.00	411.0	-11.00	373.0	-10.00
509.5	-4.00	484.5	-1.00	453.5	5.00	411.5	-11.00	373.5	-8.00
510.0	0.00	485.0	-2.00	454.0	1.00	412.0	-12.00	374.0	-5.00
510.5	1.00	485.5	-1.00	454.5	1.00	412.5	-11.00	374.5	-2.00
511.0	-1.00	486.0	-1.00	455.0	1.00	413.0	-11.00	375.0	0.00
511.5	-1.00	486.5	-1.00	455.5	-1.00	413.5	-13.00	375.5	1.00
512.0	-5.00	487.0	-2.00	456.0	-2.00	414.0	-15.00	376.0	3.00
512.5	-5.00	487.5	-2.00	456.5	-2.00	414.5	-16.00	376.5	4.00
513.0	-7.00	488.0	-5.00	457.0	-3.00	415.0	-16.00	377.0	1.00
513.5	-6.00	488.5	-6.00	457.5	-3.00	415.5	-21.00	377.5	1.00
514.0	-7.00	489.0	-6.00	458.0	-3.00	416.0	-22.00	378.0	-1.00
514.5	-11.00	489.5	-8.00	458.5	-3.00	416.5	-23.00	378.5	-5.00
515.0	-12.00	490.0	-10.00	459.0	-4.00	417.0	-28.00	379.0	-16.00
515.5	-18.00	490.5	-14.00	459.5	-5.00	417.5	-35.00	379.5	-32.00
516.0	-26.00	491.0	-22.00	460.0	-9.00	418.0	-44.00	380.0	-57.00
516.5	-38.00	491.5	-32.00	460.5	-16.00	418.5	-59.00	380.5	-96.00
517.0	-54.00	492.0	-47.00	461.0	-26.00	419.0	-84.00	381.0	-150.00
517.5	-78.00	492.5	-66.00	461.5	-42.00	419.5	-119.00	381.5	-223.00
518.0	-113.00	493.0	-92.00	462.0	-65.00	420.0	-168.00	382.0	-319.00
518.5	-158.00	493.5	-126.00	462.5	-98.00	420.5	-235.00	382.5	-441.00
519.0	-220.00	494.0	-168.00	463.0	-142.00	421.0	-323.00	383.0	-590.00
519.5	-296.00	494.5	-221.00	463.5	-201.00	421.5	-436.00	383.5	-774.00
520.0	-394.00	495.0	-284.00	464.0	-277.00	422.0	-578.00	384.0	-991.00
520.5	-515.00	495.5	-360.00	464.5	-372.00	422.5	-750.00	384.5	-1245.00
521.0	-661.00	496.0	-452.00	465.0	-488.00	423.0	-955.00	385.0	-1530.00
521.5	-832.00	496.5	-555.00	465.5	-629.00	423.5	-1191.00	385.5	-1843.00
522.0	-1030.00	497.0	-672.00	466.0	-791.00	424.0	-1453.00	386.0	-2174.00
522.5	-1249.00	497.5	-799.00	466.5	-973.00	424.5	-1737.00	386.5	-2512.00
523.0	-1489.00	498.0	-935.00	467.0	-1171.00	425.0	-2032.00	387.0	-2844.00
523.5	-1740.00	498.5	-1077.00	467.5	-1380.00	425.5	-2327.00	387.5	-3156.00
524.0	-2000.00	499.0	-1219.00	468.0	-1593.00	426.0	-2608.00	388.0	-3431.00
524.5	-2255.00	499.5	-1356.00	468.5	-1803.00	426.5	-2858.00	388.5	-3657.00
525.0	-2499.00	500.0	-1486.00	469.0	-1999.00	427.0	-3065.00	389.0	-3817.00
525.5	-2718.00	500.5	-1600.00	469.5	-2169.00	427.5	-3210.00	389.5	-3897.00
526.0	-2900.00	501.0	-1693.00	470.0	-2304.00	428.0	-3282.00	390.0	-3886.00

First arrivals plot : SKULL CK. NTH. #01



Shot 26 Location : D
Charge depth 0.5 Size 0.5
Phone depth : 673.0
Arrival time : 334.5 msec

Shot 27 Location : D
Charge depth 0.5 Size 0.5
Phone depth : 625.0
Arrival time : 316.5 msec

Shot 28 Location : D
Charge depth 0.5 Size 0.5
Phone depth : 435.0
Arrival time : 238.0 msec

Shot 29 Location : D
Charge depth 0.5 Size 0.5
Phone depth : 347.0
Arrival time : 196.0 msec

Shot 30 Location : D
Charge depth 0.5 Size 0.5
Phone depth : 82.6
Arrival time : 60.5 msec

SHOT 26		SHOT 27		SHOT 28		SHOT 29		SHOT 30	
Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl	Time	Ampl
324.0	-33.00	306.0	-8.00	227.0	13.00	185.0	-5.00	50.0	3.00
324.5	-39.00	306.5	-9.00	227.5	10.00	185.5	-5.00	50.5	25.00
325.0	-42.00	307.0	-9.00	228.0	7.00	186.0	-5.00	51.0	30.00
325.5	-44.00	307.5	-11.00	228.5	2.00	186.5	-3.00	51.5	11.00
326.0	-41.00	308.0	-13.00	229.0	-5.00	187.0	-3.00	52.0	-22.00
326.5	-36.00	308.5	-14.00	229.5	-11.00	187.5	-1.00	52.5	-24.00
327.0	-29.00	309.0	-15.00	230.0	-18.00	188.0	2.00	53.0	-16.00
327.5	-21.00	309.5	-16.00	230.5	-24.00	188.5	3.00	53.5	-4.00
328.0	-12.00	310.0	-16.00	231.0	-28.00	189.0	3.00	54.0	0.00
328.5	-3.00	310.5	-19.00	231.5	-33.00	189.5	6.00	54.5	-8.00
329.0	8.00	311.0	-18.00	232.0	-34.00	190.0	8.00	55.0	-17.00
329.5	17.00	311.5	-18.00	232.5	-33.00	190.5	10.00	55.5	1.00
330.0	24.00	312.0	-19.00	233.0	-31.00	191.0	11.00	56.0	16.00
330.5	29.00	312.5	-17.00	233.5	-27.00	191.5	14.00	56.5	21.00
331.0	34.00	313.0	-16.00	234.0	-22.00	192.0	14.00	57.0	8.00
331.5	36.00	313.5	-15.00	234.5	-15.00	192.5	13.00	57.5	-18.00
332.0	36.00	314.0	-15.00	235.0	-10.00	193.0	13.00	58.0	-45.00
332.5	37.00	314.5	-14.00	235.5	-6.00	193.5	10.00	58.5	-32.00
333.0	35.00	315.0	-14.00	236.0	-1.00	194.0	11.00	59.0	-3.00
333.5	31.00	315.5	-13.00	236.5	5.00	194.5	10.00	59.5	19.00
334.0	26.00	316.0	-16.00	237.0	7.00	195.0	8.00	60.0	24.00
334.5	18.00	316.5	-19.00	237.5	8.00	195.5	5.00	60.5	3.00
335.0	8.00	317.0	-28.00	238.0	5.00	196.0	2.00	61.0	-48.00
335.5	-7.00	317.5	-45.00	238.5	-7.00	196.5	-3.00	61.5	-92.00
336.0	-29.00	318.0	-74.00	239.0	-29.00	197.0	-12.00	62.0	-150.00
336.5	-59.00	318.5	-119.00	239.5	-70.00	197.5	-24.00	62.5	-233.00
337.0	-105.00	319.0	-192.00	240.0	-134.00	198.0	-41.00	63.0	-361.00
337.5	-166.00	319.5	-302.00	240.5	-231.00	198.5	-68.00	63.5	-548.00
338.0	-250.00	320.0	-463.00	241.0	-376.00	199.0	-112.00	64.0	-802.00
338.5	-362.00	320.5	-686.00	241.5	-580.00	199.5	-174.00	64.5	-1114.00
339.0	-509.00	321.0	-990.00	242.0	-857.00	200.0	-266.00	65.0	-1465.00
339.5	-699.00	321.5	-1377.00	242.5	-1224.00	200.5	-393.00	65.5	-1829.00
340.0	-939.00	322.0	-1855.00	243.0	-1692.00	201.0	-568.00	66.0	-2177.00
340.5	-1229.00	322.5	-2419.00	243.5	-2270.00	201.5	-799.00	66.5	-2484.00
341.0	-1577.00	323.0	-3056.00	244.0	-2961.00	202.0	-1093.00	67.0	-2732.00
341.5	-1976.00	323.5	-3737.00	244.5	-3764.00	202.5	-1452.00	67.5	-2909.00
342.0	-2419.00	324.0	-4419.00	245.0	-4660.00	203.0	-1878.00	68.0	-3004.00
342.5	-2896.00	324.5	-5047.00	245.5	-5603.00	203.5	-2358.00	68.5	-3016.00
343.0	-3389.00	325.0	-5570.00	246.0	-6575.00	204.0	-2876.00	69.0	-2946.00
343.5	-3873.00	325.5	-5940.00	246.5	-7540.00	204.5	-3405.00	69.5	-2794.00
344.0	-4315.00	326.0	-6116.00	247.0	-8456.00	205.0	-3916.00	70.0	-2571.00
344.5	-4703.00	326.5	-6065.00	247.5	-9270.00	205.5	-4365.00	70.5	-2284.00
345.0	-4987.00	327.0	-5778.00	248.0	-9926.00	206.0	-4713.00	71.0	-1948.00
345.5	-5143.00	327.5	-5263.00	248.5	-10380.00	206.5	-4928.00	71.5	-1579.00
346.0	-5156.00	328.0	-4544.00	249.0	-10586.00	207.0	-4975.00	72.0	-1198.00

PE605501

This is an enclosure indicator page.
The enclosure PE605501 is enclosed within the
container PE907481 at this location in this
document.

The enclosure PE605501 has the following characteristics:

ITEM_BARCODE = PE605501
CONTAINER_BARCODE = PE907481
NAME = Composite Log
BASIN = OTWAY
PERMIT = PPL 1
TYPE = WELL
SUBTYPE = COMPOSITE_LOG
DESCRIPTION = Composite Log (enclosure from Well
Completion Report) for Skull Creek
North-1, Otway Onshore, PPL 1
REMARKS =
DATE_CREATED = 22/03/97
DATE_RECEIVED =
W_NO = W1185
WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR =
CLIENT_OP_CO = BASIN OIL N.L.

(Inserted by DNRE - Vic Govt Mines Dept)

PE605502

This is an enclosure indicator page.
The enclosure PE605502 is enclosed within the
container PE907481 at this location in this
document.

The enclosure PE605502 has the following characteristics:

ITEM_BARCODE = PE605502
CONTAINER_BARCODE = PE907481
NAME = Mud Log
BASIN = OTWAY
PERMIT = PPL 1
TYPE = WELL
SUBTYPE = MUD_LOG
DESCRIPTION = Fromation Evaluation Log/Mud Log
(enclosure from Well Completion Report)
for Skull Creek North-1, Otway Onshore,
PPL 1
REMARKS =
DATE_CREATED = 18/03/97
DATE_RECEIVED =
W_NO = W1185
WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR = HALLIBURTON
CLIENT_OP_CO = CULTUS PETROLEUM

(Inserted by DNRE - Vic Govt Mines Dept)

PE605503

This is an enclosure indicator page.
The enclosure PE605503 is enclosed within the
container PE907481 at this location in this
document.

The enclosure PE605503 has the following characteristics:

ITEM_BARCODE = PE605503
CONTAINER_BARCODE = PE907481
NAME = Electric Log Analysis
BASIN = OTWAY
PERMIT = PPL 1
TYPE = WELL
SUBTYPE = WELL_LOG
DESCRIPTION = Electric Log Analysis (enclosure from
Well Completion Report) for Skull Creek
North-1, Otway Onshore, PPL 1
REMARKS =
DATE_CREATED = 18/03/97
DATE_RECEIVED =
W_NO = W1185
WELL_NAME = SKULL CREEK NORTH-1
CONTRACTOR =
CLIENT_OP_CO = BASIN OIL N.L.

(Inserted by DNRE - Vic Govt Mines Dept)