

BASKER-2
VIC/L26
OFFSHORE GIPPSLAND BASIN
VICTORIA



WELL COMPLETION REPORT
VOLUME 2
INTERPRETIVE DATA
May 2006

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1. WELL DATA RECORD

Well Name	Basker-2
Designation	Appraisal/Development
Permit Name	VIC/L26 Production Licence
Title Holders	Anzon Australia Limited (Anzon) 50% and Beach Petroleum Limited (Beach) 50%
Operator (per P(SL)A Well Operations Regulations)	Anzon Australia Limited
Surface Location (GDA94, GRS80, MGA, UTM Zone 55)	Latitude 38° 17' 58.51"S Longitude 148° 42' 24.72"E 649251.9mE 5759566.4mN
Bottom Hole Location	Latitude 38° 18' 07.62"S Longitude 148° 42' 25.09"E 649255.6mE 5759285.5mN
Project Manager	Upstream Petroleum Pty. Ltd.
Rig Received	04:30 hrs 06 August, 2005
Spud Time/Date	12:00 hrs 14 August, 2005
TD date	14:00hrs 11 September, 2005
End Drilling/Start Completion Phase	06:30 hrs 18 September, 2005
End Completion Phase	12:00 hrs 30 September, 2005
Rig Released	08:00 hrs 2 October, 2005
Total Time Rig on Contract	57.1 days (1371.5 hours)
Water Depth	155.5m (below mean sea level)
Rotary Table	21.5m (above mean sea level)
Drilling Contractor / Rig Name / Type	Diamond Offshore General Company / Ocean Patriot / Semi-submersible
Well Status	Completed and Suspended for Extended Production Test
Total Depth	3414.0mMDRT (3344.6mTVDRT)
Maximum Deviation	30.1° @ 2981mMDRT (2960.1mTVDRT)
Bottom Hole Location offset	280.9m on an Azimuth of 179.25 degrees

2. INTRODUCTION

The Basker-2 well (Figure 1) was drilled as an appraisal well to quantify the performance of the Basker Field oil reservoirs prior to commencement of the Basker-Manta Project full field development. It was drilled with the “Ocean Patriot” semi-submersible drilling rig in 155.5 metres of water, within the VIC/RL6 Retention Lease (now the VIC/L26 Production Licence) of the Offshore Gippsland Basin. Basker-2 fulfilled the Year 5 well commitment of the VIC/RL6 Retention Lease.

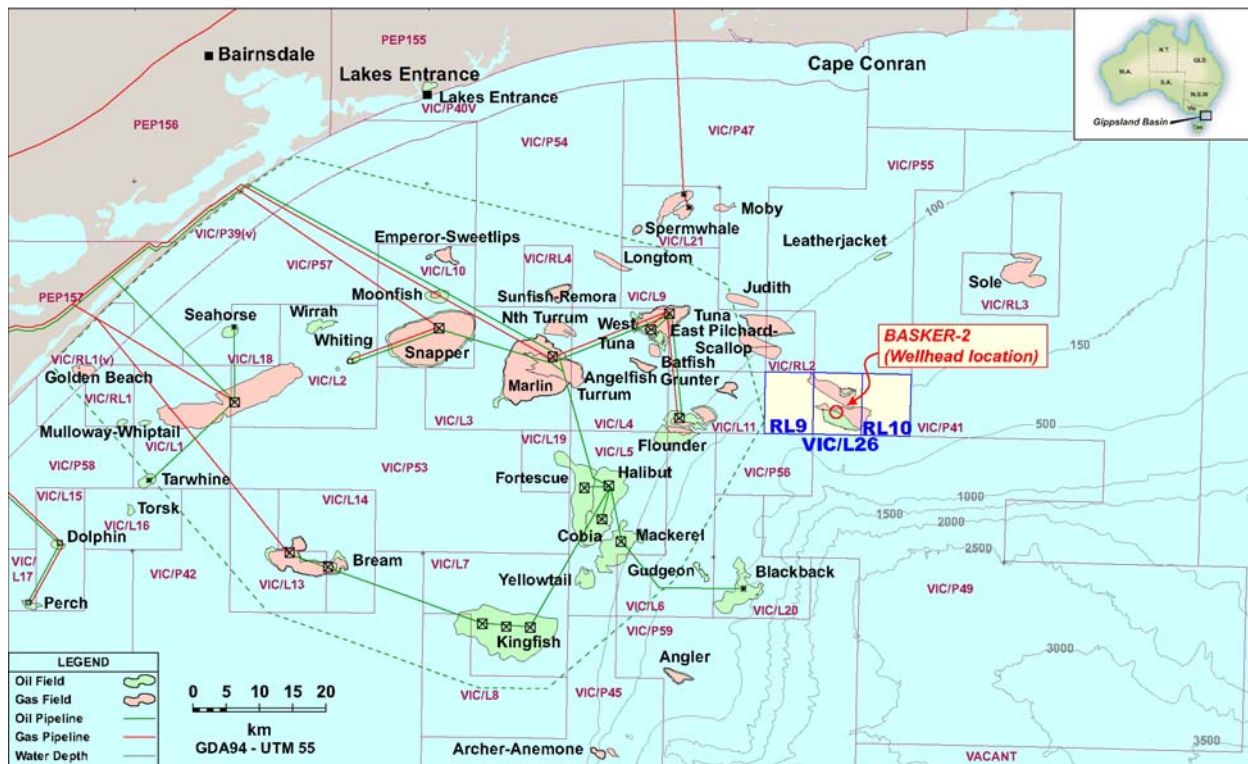


Figure 1 Basker-2 Location Map

Basker-2 was designed to investigate uncertainties in regard to the long-term performance of the Basker reservoirs and to then function as a production well for the Basker Field. It is thus both an appraisal and a development well.

It was drilled as a “build and hold” directional well (Figure 2). The final well path was modified from the one proposed in the Basker-2 Drilling, Testing and Completion Program (from an azimuth of 256° to an azimuth of 190°), so that the well would be slightly more crestal. The well was designed so that as it passed through the reservoir section it would follow the dip of the Basker Fault. The directional drilling was kicked-off at 2497mMDRT (503mMD above the reservoir section), on the proposed azimuth of 190°. Due to difficulties with steering the bit, the final path of the well has an azimuth decreasing through the reservoir section, from approximately 179° at 3023mMDRT to approximately 171° at TD (Figure 3). Angle was built at a rate of up to 5°/30m, achieving a maximum inclination of 30.1° at 2981mMDRT (2938mTVDSS). The average inclination over the directionally-drilled part of the hole is 27°. The well intersected the directional drilling target (the top of Volcanics Unit 1) within the target tolerance, in spite of the difficulties with steering the bit and reached a total depth of 3414.0mMDRT (3322.6mTVDSS) in a clastic unit below a 100m thick section of interbedded volcanic and clastic sediments. Oil and gas reservoirs were intersected over the interval 3023 to 3363mMDRT (2975 to 3277mTVDSS).

The evaluation of Basker-2 included logging-while-drilling, wireline logging and a 6-month extended production test (EPT) using a floating production, storage and off-take vessel (FPSO), the “Crystal Ocean”.

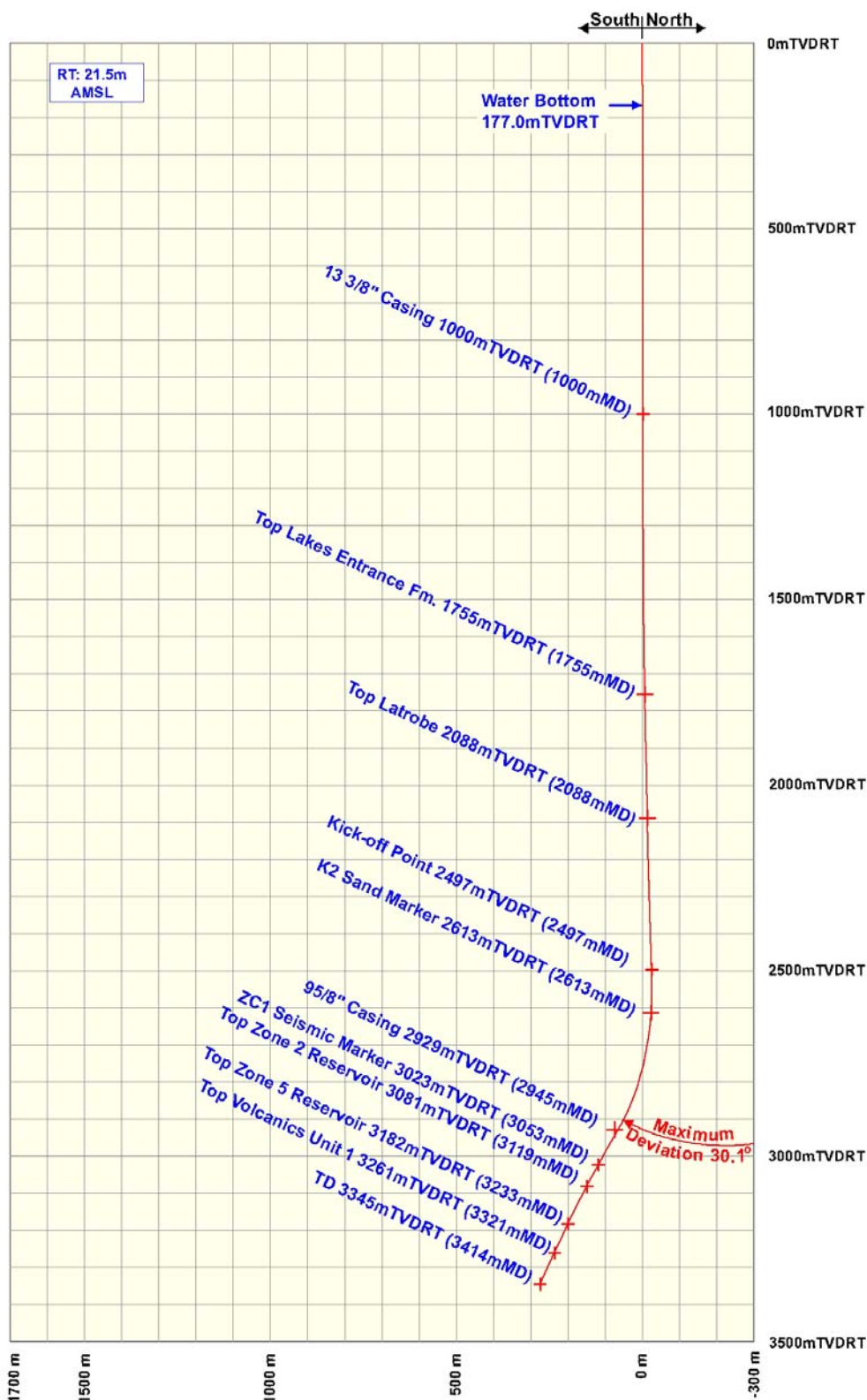


Figure 2 Vertical Cross-Section Along the Basker-2 Well Path

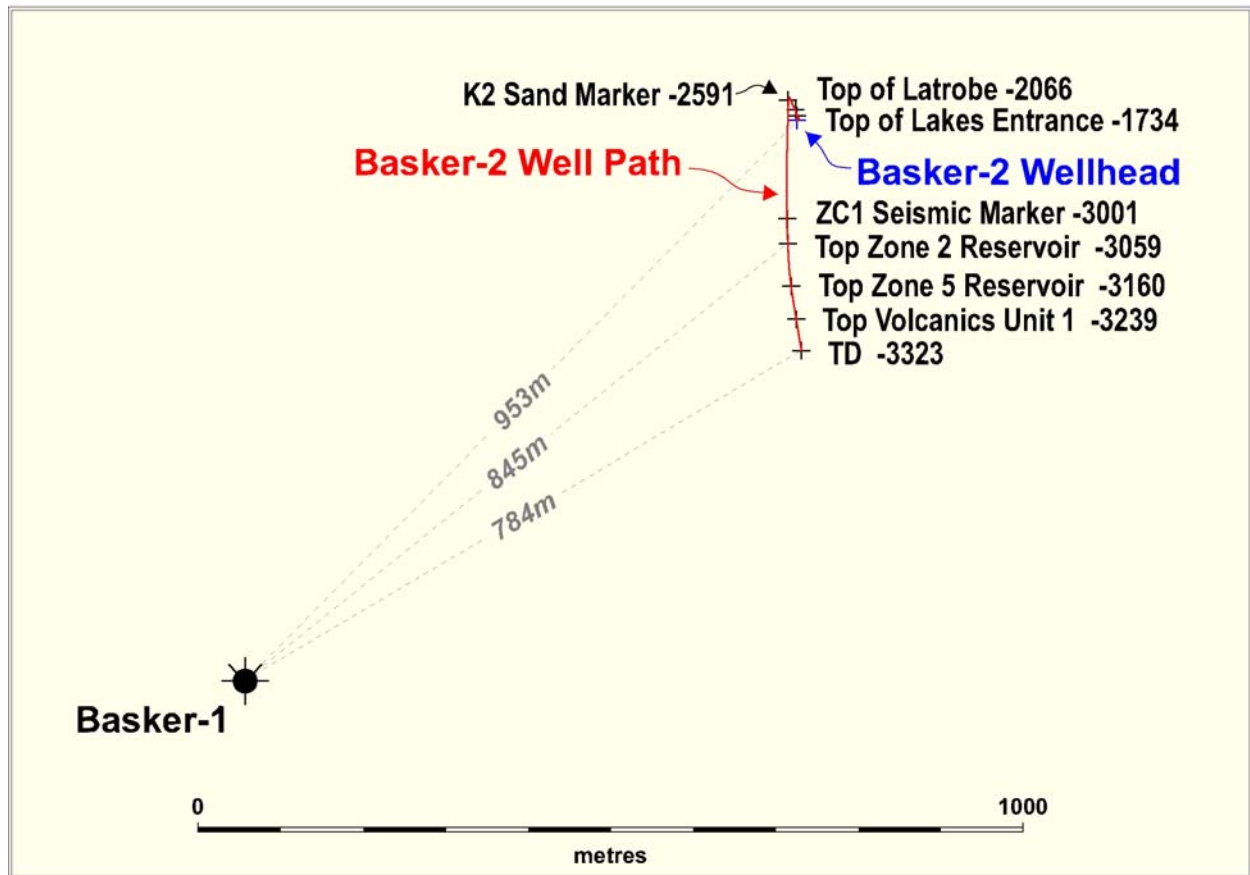


Figure 3 Plan View of Basker-2 Well Path Showing offsets from Basker-1

3. SUMMARY OF WELL RESULTS

The predicted and actual formation tops penetrated in Basker-2 are summarised in Table 1. There was an unusually high degree of uncertainty with depth prediction in Basker-2 (in spite of its proximity to Basker-1), because of difficulties with both depth conversion (further discussed in Section 5) and reservoir correlation (further discussed in Sections 4 and 6).

Table 1 Basker-2 Predicted Versus Actual Formation Tops

Formation	Predicted Depth* (mTVDSS)	Actual Depth (mMDRT)	Actual Depth (mTVDSS)	Predicted vs Actual (m)
Sea Floor	-154.0	177.0	-155.5	1.5 deep
Top High Velocity Wedge	-1263.0	1266.0	-1244.5	18.5 high
Intra-Mioc. Downlap Surface	-1328.0	1359.0	-1337.5	9.5 deep
Top Lakes Entrance Fm.	-1736.0	1755.0	-1733.5	2.5 high
Top Latrobe Group	-2070.0	2088.0	-2066.4	3.6 high
Base Tuna-Flounder Channel	-2145.0	2161.5	-2139.8	5.2 high
K2 Sand Marker	-2579.0	2613.0	-2591.1	12.1 deep
Ma2 Sand Marker	-2844.0	2878.0	-2848.3	4.3 deep
ZC1 Seismic Marker	-2989.0	3052.7	-3001.0	12.0 deep
Top Zone 2 Reservoir	-3043.0	3118.7	-3059.0	16.0 deep
Top Zone 5 Reservoir	-3146.0	3232.9	-3160.4	14.4 deep
Top Volcanics Unit 1	-3241.0	3320.9	-3239.4	1.6 high
Total Depth	-3283.0	3414.0	-3323.1	40.1 deep

* Revised prediction after revision to proposed well path

The oil and gas reservoirs encountered in Basker-2 are similar to those encountered in Basker-1 (Enclosures 1, 2 and 3). The Basker-1 well is only 850m (approximately) southwest of Basker-2 (at the reservoir level) hence similar oil and gas reservoirs were expected. Seven oil reservoirs were intersected (total oil pay 17.9mTVT) and three gas reservoirs (total gas pay 2.3mTVT). Further details of the hydrocarbon intersections are provided in Section 7.

Lab-derived compositional analyses on the Basker-2 oil samples indicate initial gas/oil ratios ranging from 1074 to 1210scf/stb and API gravities in the range 39.1 to 41.2°. Gas sample analyses showed CO₂ concentrations between 1.3 and 16.2%. Condensate/gas ratio data is not available.

No clear hydrocarbon contacts were observed on logs (all of the reservoirs appear to be hydrocarbon-on-rock reservoirs). Nevertheless, the interpretation of pressure data in conjunction with the log data provided good indications of hydrocarbon column heights in the upper part of the reservoir interval (from 2970 to 3100mTVDSS). There is significant uncertainty with interpretation of column heights for the deeper reservoirs (below 3100mTVDSS), because of a paucity of reliable pressure readings to define the gradient and position of the water line (Figure 4 and Section 8).

Basker-2 was completed as an oil and gas production well. Eight intervals were perforated in two groups, from six reservoir "Zones" (Zones 0, 1.2, 2, 5, 6.1 and 6.2, Table 2). A tandem "intelligent" downhole completion was run, with an upper packer at 2969mMDRT and a lower packer at 3179mMDRT. The completion utilises an interval control valve and a lubricator valve, to allow production from either the upper or the lower perforation group or from both.

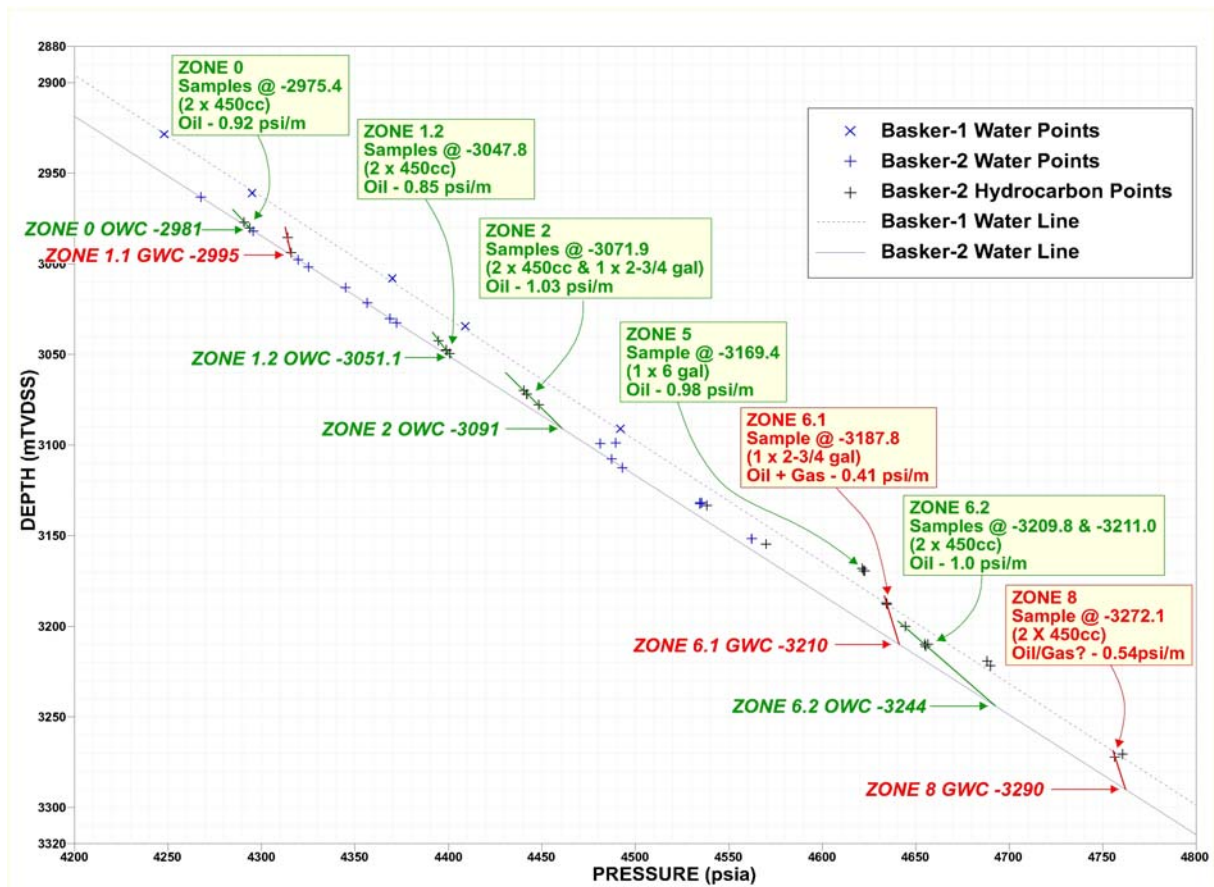


Figure 4 Basker-1 and Basker-2 Pressure Data, Showing Interpretation of Basker-2 Hydrocarbon Contacts

Table 2 Basker-2 Perforation Intervals

	Reservoir Zone	Perforation Interval (mMDRT)	Perforation Interval (mTVDSS)
Packer 2969mMDRT			
Upper Perforation Group	Zone 0	3022.3-3026.6	2974.5-2978.2
	Zone 1.2	3097.6-3102.3	3040.4-3044.5
	Zone 1.2	3104.6-3109.0	3046.6-3050.4
	Zone 2	3130.6-3141.6	3069.5-3079.2
Packer 3179mMDRT			
Lower Perforation Group	Zone 5	3239.6-3243.6	3166.4-3170.0
	Zone 6.1	3261.7-3269.3	3186.2-3193.1
	Zone 6.2	3273.0-3283.0	3196.4-3205.4
	Zone 6.2	3287.0-3291.0	3209.0-3212.6

Oil

Gas

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4. GEOLOGICAL DISCUSSION

Following Basker-2, seven oil reservoirs and three gas reservoirs have been discovered in the Basker Field, in the lower part of the Intra-Latrobe Siliciclastics (Figure 5), over a 300m interval between 2970 and 3270mTVDSS (Table 3). The reservoirs consist primarily of fine-grained, finely interbedded sandstones and silty sandstones deposited in a low energy, lower coastal plain depositional environment. Individual sand bodies appear to be either crevasse splays or highly sinuous channel sands which are believed to form south to southeast trending “meander belts” one to two kilometres wide. Sand connectivity is likely to be good within each meander belt. Production data accumulated so far suggests that sand interfingering is present, allowing significant free hydrocarbon migration both within and between the meander belts during production.

Correlation of the reservoirs between Basker-1 and Basker-2 is difficult because of the thin and discontinuous nature of the reservoir sands and because no reliable lithological or biostratigraphic datums are present within the reservoir interval. The only stratigraphic datum that can be reliably correlated between the wells is the “Top of Volcanics Unit 1”, which lies near to the base of the 300m reservoir interval. Table 3 shows the current Basker reservoir naming and the way that the stratigraphically highest sand occurrence in each reservoir “Zone” is currently correlated between Basker-1 and Basker-2. These correlations may change as further wells are drilled. In some instances the stratigraphic equivalent to the highest sand occurrence in a reservoir Zone is in a shaly or non-net section. Hence some of the structure maps are derived from a well pick which has non-net in the uppermost part of the reservoir (Table 3). The reservoir correlation is further discussed in Section 5.

Table 3 Reservoir Correlation Between Basker-1 and Basker-2

Level	Basker-1 (mTVDSS)	Basker-1 (mKB)	Basker-2 (mTVDSS)	Basker-2 (mMDRT)	Elevation Basker-2 above Basker-1	Comments
Top Zone 0 Seal	-2969.1	2994.1	-2969.4	3016.4	-0.3	
Top Zone 0 Reservoir or Equivalent	-2974.5	2999.5	-2974.7	3022.6	-0.2	NP in Basker-1
Top Zone 1.1 Seal	-2982.0	3007.0	-2982.3	3031.3	-0.3	
Top Zone 1.1 Reservoir or Equivalent	-2985.0	3010.0	-2985.0	3034.4	0.0	NN in Basker-1
ZC1 Seismic Marker	-3000.0	3025.0	-3001.0	3052.7	-1.0	
Top Zone 1.2 Seal	-3046.8	3071.8	-3039.1	3096.1	+7.7	
ZC2 Seismic Marker	-3052.0	3077.0	-3045.0	3102.8	+7.0	
Top Zone 1.2 Reservoir or Equivalent	-3054.0	3079.0	-3047.2	3105.3	+6.8	Basker-1 below OWC
Top Zone 2 Seal	-3058.0	3083.0	-3050.3	3108.8	+7.7	
Top Zone 2 Reservoir or Equivalent	-3065.0	3090.0	-3059.0	3118.7	+6.0	NN in Basker-2
Top Zone 4 Seal	-3091.5	3116.5	-3083.0	3145.9	+8.5	
Top Zone 4 Reservoir or Equivalent	-3103.4	3128.4	-3094.6	3159.0	+8.8	NP in Basker-2
ZC3 Seismic Marker	-3108.0	3133.0	-3099.0	3164.0	+9.0	
Top Zone 5 Seal	-3168.8	3193.8	-3158.4	3230.7	+10.4	
Top Zone 5 Reservoir or Equivalent	-3170.4	3195.4	-3160.4	3232.9	+10.0	NN in Basker-2
ZC4 Seismic Marker	-3200.0	3225.0	-3183.0	3258.1	+17.0	
Top Zone 6.1 Seal	-3200.7	3225.7	-3183.8	3259.0	+16.9	
Top Zone 6.1 Reservoir or Equivalent	-3204.8	3229.8	-3186.8	3262.3	+18.0	NP in Basker-1
Top Zone 6.2 Seal	-3210.8	3235.8	-3193.6	3269.9	+17.2	
Top Zone 6.2 Reservoir or Equivalent	-3215.6	3240.6	-3197.8	3274.6	+17.8	Basal part tight in B-1
Top Zone 7 Seal	-3245.5	3270.5	-3224.0	3303.7	+21.5	
Top Zone 7 Reservoir or Equivalent	-3250.1	3275.1	-3228.5	3308.7	+21.6	NP in Basker-2
Top Volcanics Unit 1 (ZC5 Seis. Mkr.)	-3261.0	3286.0	-3239.4	3320.9	+21.6	
Top Zone 8 Reservoir (Intra-Volc.)	-3291.0	3316.0	-3270.4	3355.4	+20.6	Basker-1 below GWC

Seal
 Seismic Marker
 Gas Reservoir
 Oil Reservoir

NN: The uppermost part of the reservoir is non-net
 NP: No hydrocarbon-bearing reservoir is present

5. GEOPHYSICAL DISCUSSION

The trap for the Basker Field hydrocarbons is a fault-dependent closure on the downthrown side of a high-angle normal fault (the Basker Fault) which cuts across a south to southwest plunging nose (Figure 6). Low viscosity basaltic intrusives are believed to have congealed in the fault plane, providing the fault seal.

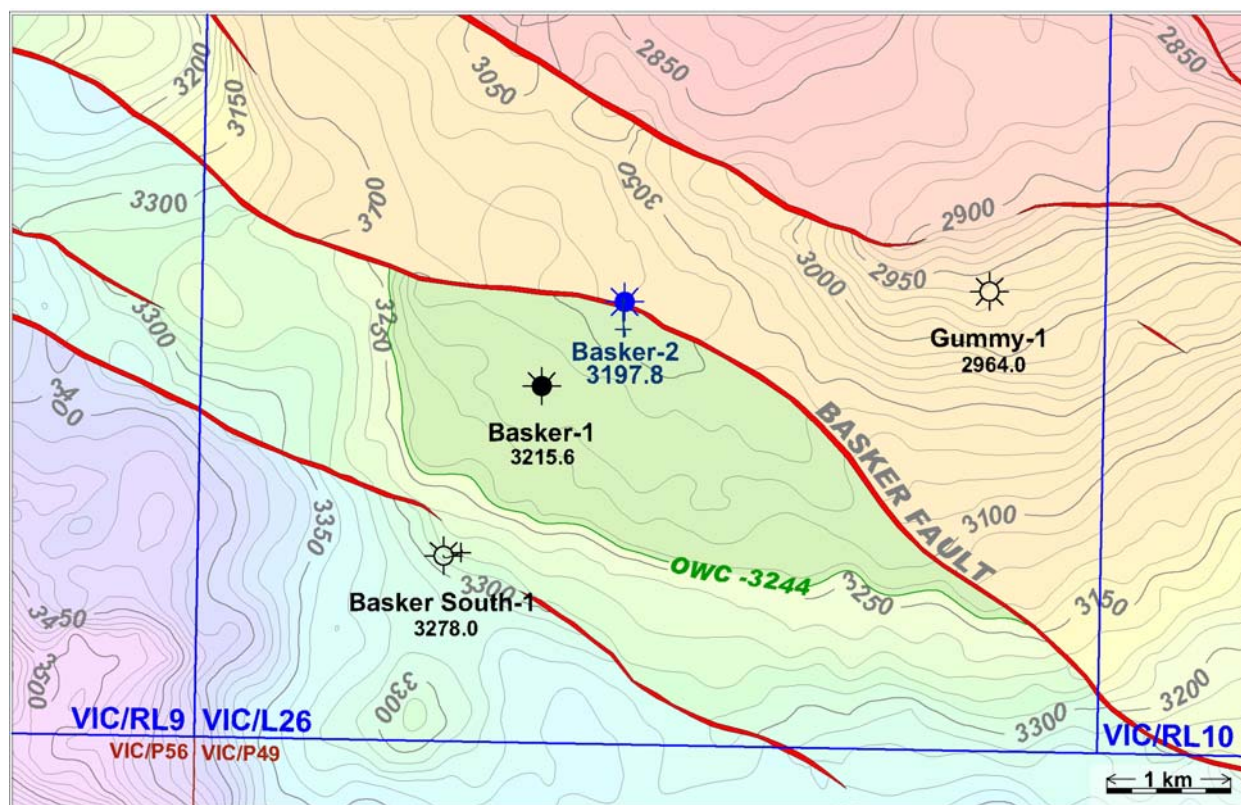


Figure 6 Structure Map, Top of Basker Field Zone 6.2 Reservoir (Contour Interval 10m)

Six reservoir mapping seismic horizons (MZN2 and ZC1 to ZC5) have been mapped over the Basker Field, dividing the reservoir section into five intervals. Figure 7 shows the relationship of these horizons to the reservoir nomenclature that has been developed in the Basker-1, Manta-1 and Gummy-1 wells. Reservoir zones of the same name are not stratigraphically equivalent in the three wells. Figure 8 (an arbitrary 3D seismic line through the Basker and Manta wells) shows the key Basker reservoirs in relation to the reservoir seismic markers. Enclosure 4 is an arbitrary 3D seismic line along the Basker-2 well path, showing all seismic horizons.

Seismic coverage for the Basker, Manta and Gummy fields is provided by the 1996 Basker-Manta (BM96) 3D Seismic Survey. Two processed versions of this survey are presently available: the original 1997 processing by Shell's Melbourne Processing Centre and reprocessing completed by Woodside in 2001, which included both merging with the Kipper 3D and pre-stack depth migration (PSDM). The current reservoir maps were derived from Anzon's interpretation of the 2001 merged and reprocessed Kipper-Basker-Manta PSDM 3D seismic (KBM3D), after scaling from depth back to two-way time.

Seismic data quality in the vicinity of the Basker Field is excellent and well-to-seismic ties are relatively straightforward, with good agreement between the seismic and the synthetics over most of the logged section. The KBM3D seismic is nominally quadrature phase (zero phase with a 90° phase shift) and is displayed with the Australian normal polarity convention (an increase in acoustic impedance gives a positive reflection coefficient, is written to tape as a negative number and is displayed as a trough). Hence the marked increase in impedance at

the top of Latrobe appears at the zero crossing between a strong trough and peak on both the synthetics and the KBM3D seismic (Figure 8).

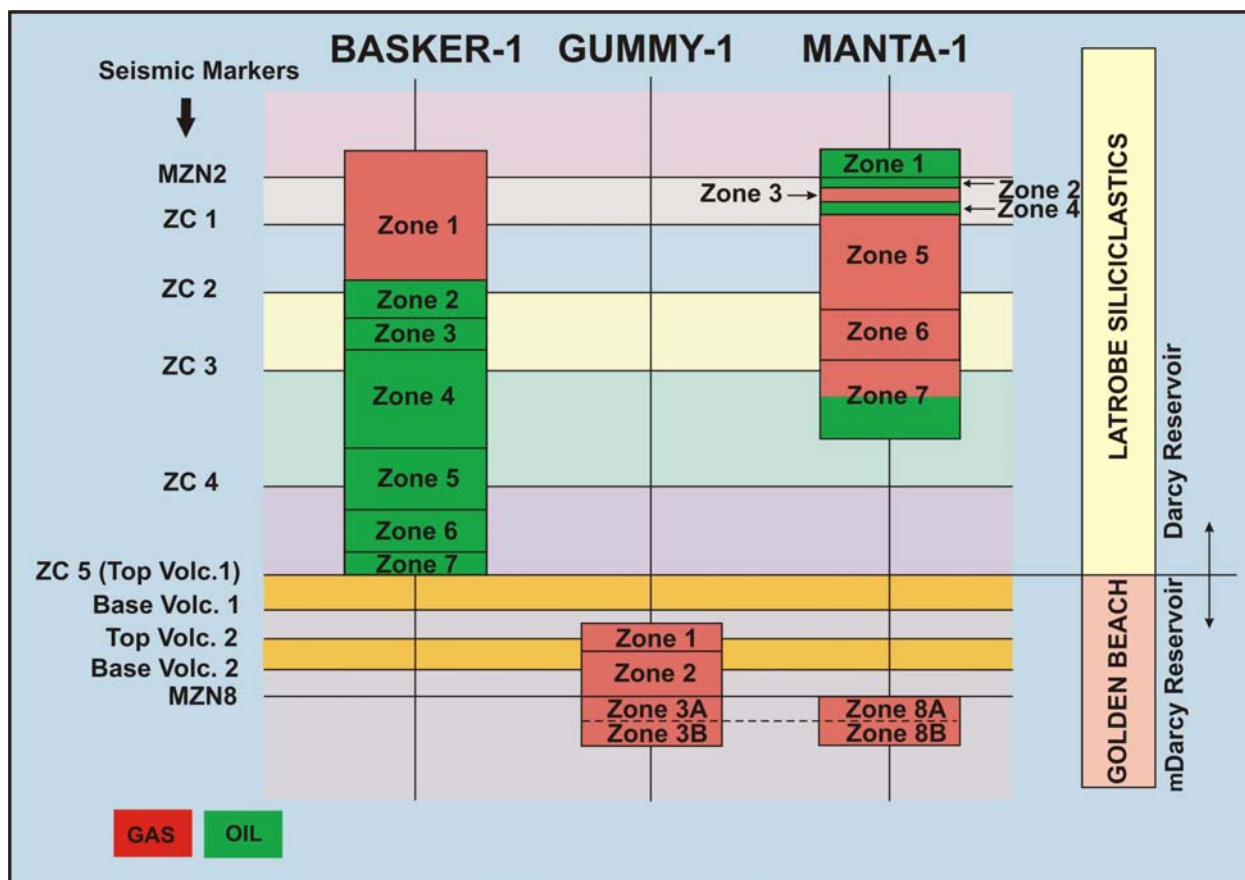


Figure 7 Schematic Illustration of Seismic Markers and Reservoir Zonation for the Intra-Latrobe and Golden Beach Sections in Basker-1, Manta-1 and Gummy-1

Within the Intra-Latrobe reservoir interval, it is not possible to correlate individual sands, shales or coals between the wells, using well logs. As a consequence of this, seismic horizons corresponding to each of the reservoir units could not be interpreted. The well correlations were hence derived from the seismic interpretation. Six reservoir seismic markers (MZN2, ZC1, ZC2, ZC3, ZC4 and ZC5) were correlated on the seismic over the reservoir interval, on zero-crossings. Synthetic seismograms were then used to derive the well correlations. Table 4 shows how the six mapping horizons have been correlated between the wells, based on the seismic.

Confidence in the horizon and fault interpretation is generally good for all six of the reservoir seismic markers. All six events can be picked with a high degree of confidence over the Basker Fault Block and with at least a reasonable degree of confidence over the other fault blocks. The ZC4 event is usually higher in amplitude and shows less “cycle splits” than the other events and is hence the most reliable indicator of structure. The other events become progressively more difficult to correlate towards the north, primarily because they coalesce as the reservoir interval thins towards the north (Figure 8).

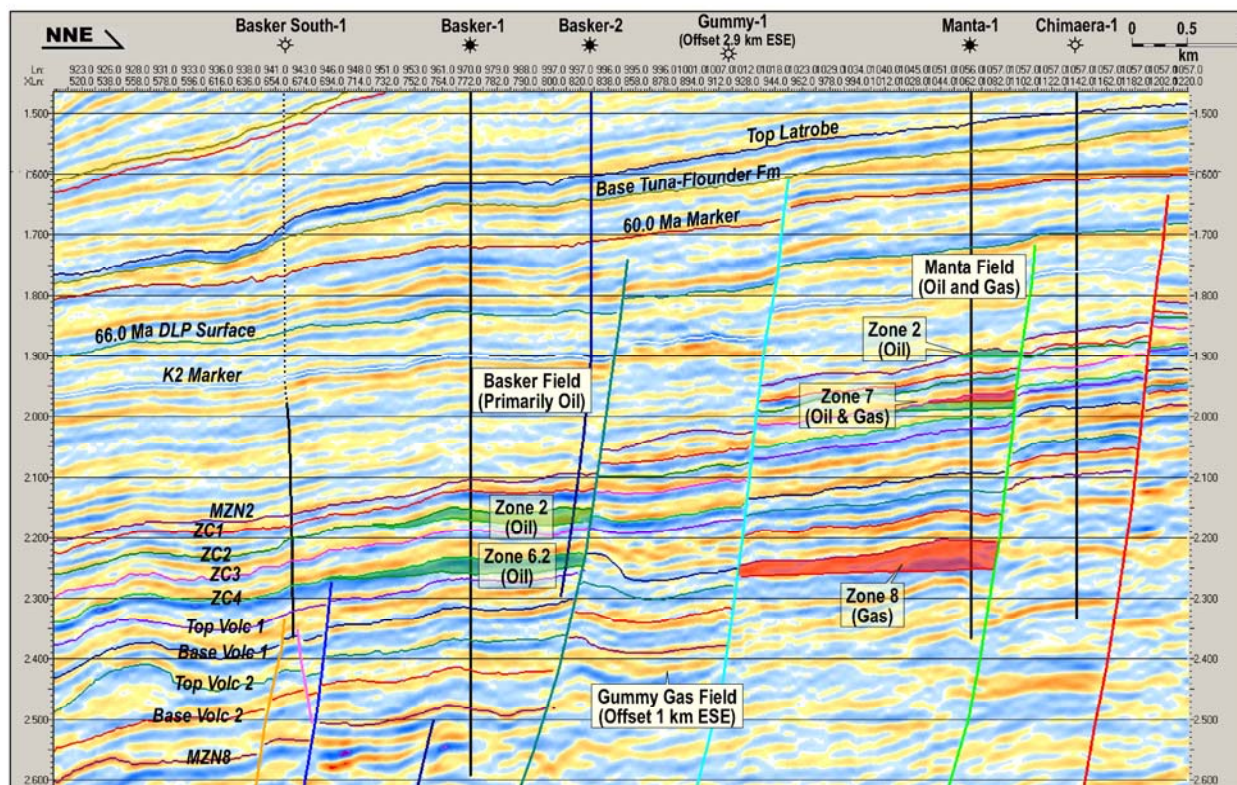


Figure 8 Seismic Line Through the Basker and Manta Wells, Showing the Key Reservoirs

Table 4 Well Correlation of the Intra-Latrobe Reservoir Horizons

Well	MZN2 Depth mTVDSS	ZC1 Depth mTVDSS	ZC2 Depth mTVDSS	ZC3 Depth mTVDSS	ZC4 Depth mTVDSS	ZC5* Depth mTVDSS
Basker-1	-2963	-3000	-3052	-3108	-3200	-3261
Basker-2	-2949	-3001	-3045	-3099	-3183	-3239
Basker South-1	-3021	-3065	-3124	-3190	-3258	-3345
Chimaera-1	-2480	-2560	-2560	-2628	-2674	-2674
Gummy-1	-2736	-2799	-2822	-2883	-2950	-3008
Manta-1	-2590	-2657	-2680	-2715	-2793	-2811

*: The ZC5 marker is at the Top of Volcanics Unit 1

Seismic time to depth conversion for the Basker Field is difficult. The combination of the rugose water bottom overlying the Basker Field (Figure 9) with rapid shallow lateral velocity variations in the section overlying the Latrobe (due to complex shallow channelling; Enclosure 4) makes accurate depth prediction difficult. There is hence an unusually high degree of uncertainty with the mapping of the Basker Field reservoirs.

Six different depth conversion approaches were tested (in order: stacking velocity, PSDM velocity, PSDM velocity slice, layer-cake, V0-K and Dix interval velocity). Two previous depth conversions (by Shell and by Woodside) were also re-visited. In each case artefacts of the water bottom remained in the depth maps after depth conversion. It was hence necessary to use hand-editing to remove these artefacts. The hand-editing was checked by revising the top of Latrobe average velocity, in each case (the top Latrobe is the key horizon, from which the reservoir depth conversions were "hung"). A final top Latrobe depth map was derived from the mean of the eight preferred depth conversions.

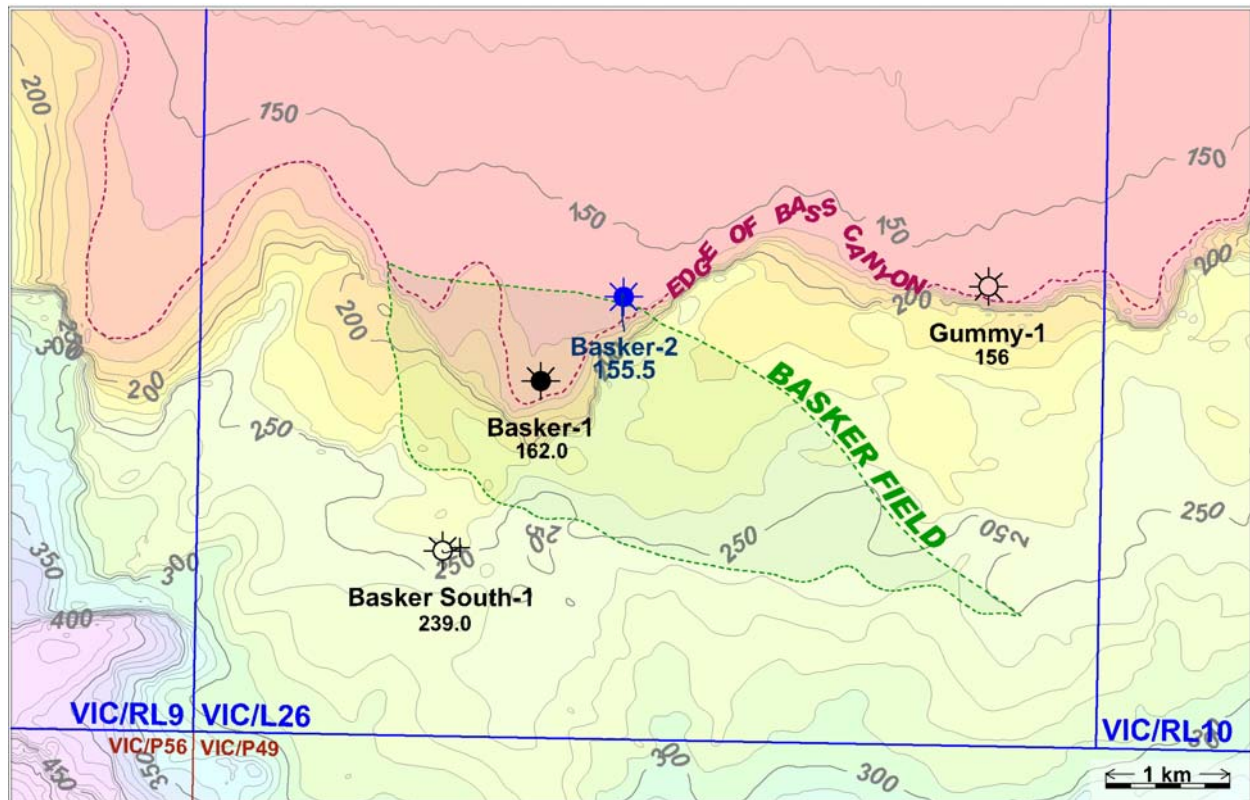


Figure 9 Bathymetry Map (Contour Interval 10m), Showing Location of the Basker Field

Average velocity grids for each of the six reservoir mapping horizons were derived from the top of Latrobe average velocity grid (using average velocity difference grids generated from hand-drawn average velocity difference maps). Depth conversion of the reservoir mapping horizons was then executed by grid multiplication. For instance:

$$\text{ZC2 Depth} = (2\text{WT ZC23} * \text{ZC2 Vavg})/2000$$

The reservoir depth grids were derived from the MZN2 and ZC1 to ZC5 depth grids using formulae which were developed from the position of the reservoirs relative to the mapping horizons. For instance, the Zone 2 depth grid was calculated using the formula:

$$\text{Depth Zone 2} = \text{Depth ZC2} + 0.232143 * (\text{Depth ZC3} - \text{Depth ZC2}).$$

The ten post Basker-2 reservoir maps are presented as Figures 10 to 19. In each case the map is at the top of the uppermost reservoir sand or its stratigraphic equivalent.

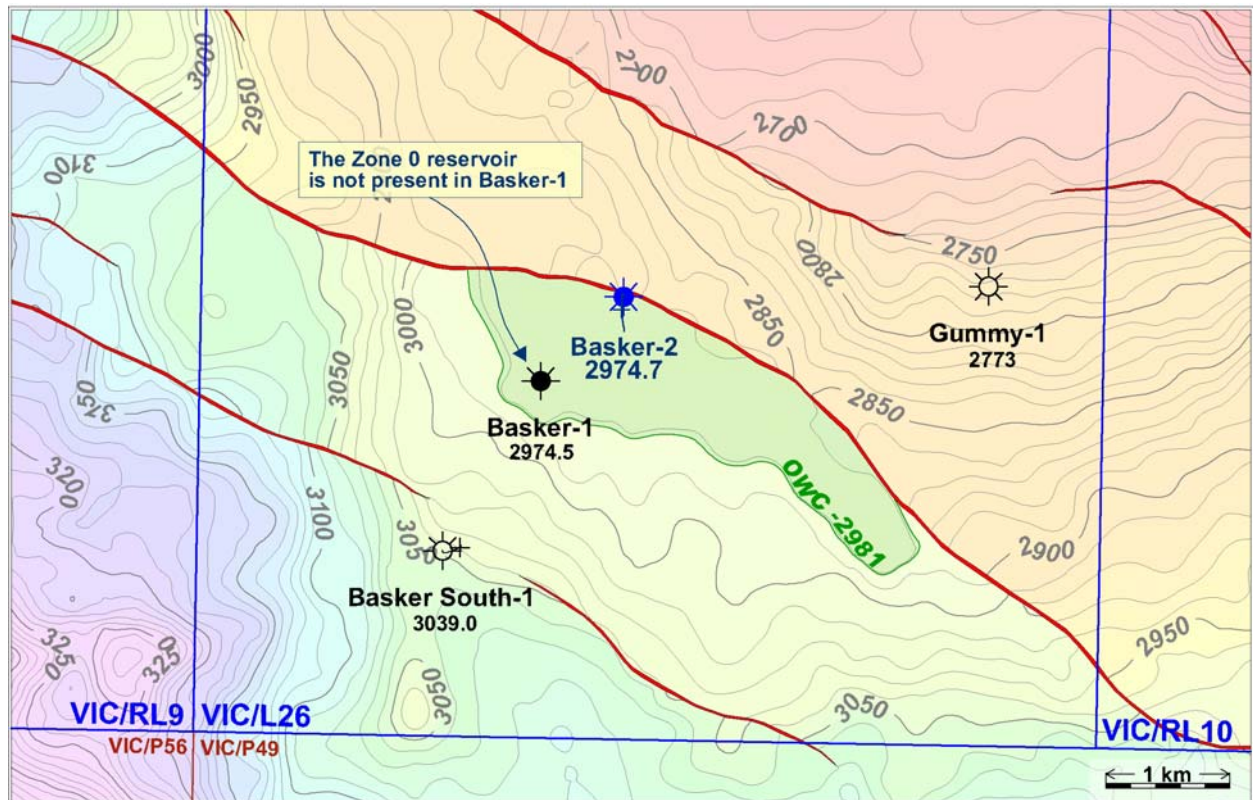


Figure 10 Structure Map, Top of Basker Zone 0 Reservoir (Contour Interval 10m)

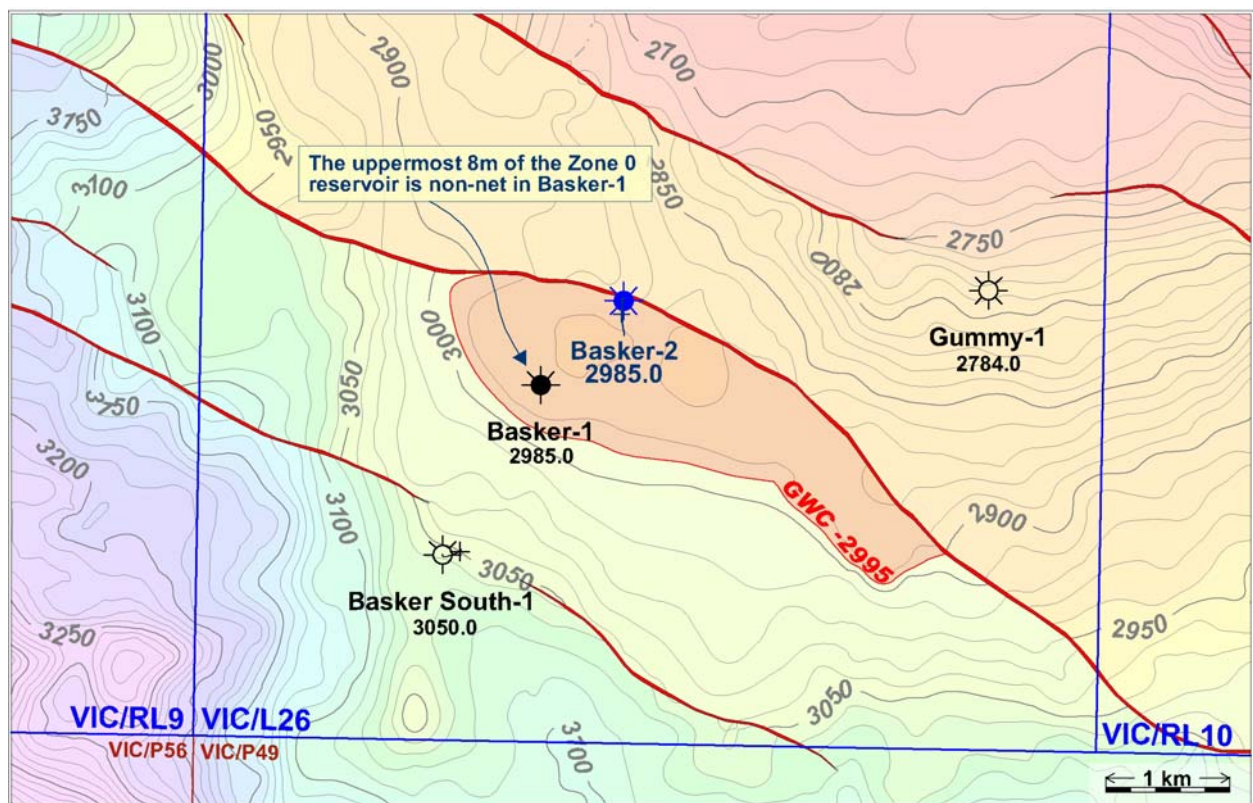


Figure 11 Structure Map, Top of Basker Zone 1.1 Reservoir (Contour Interval 10m)

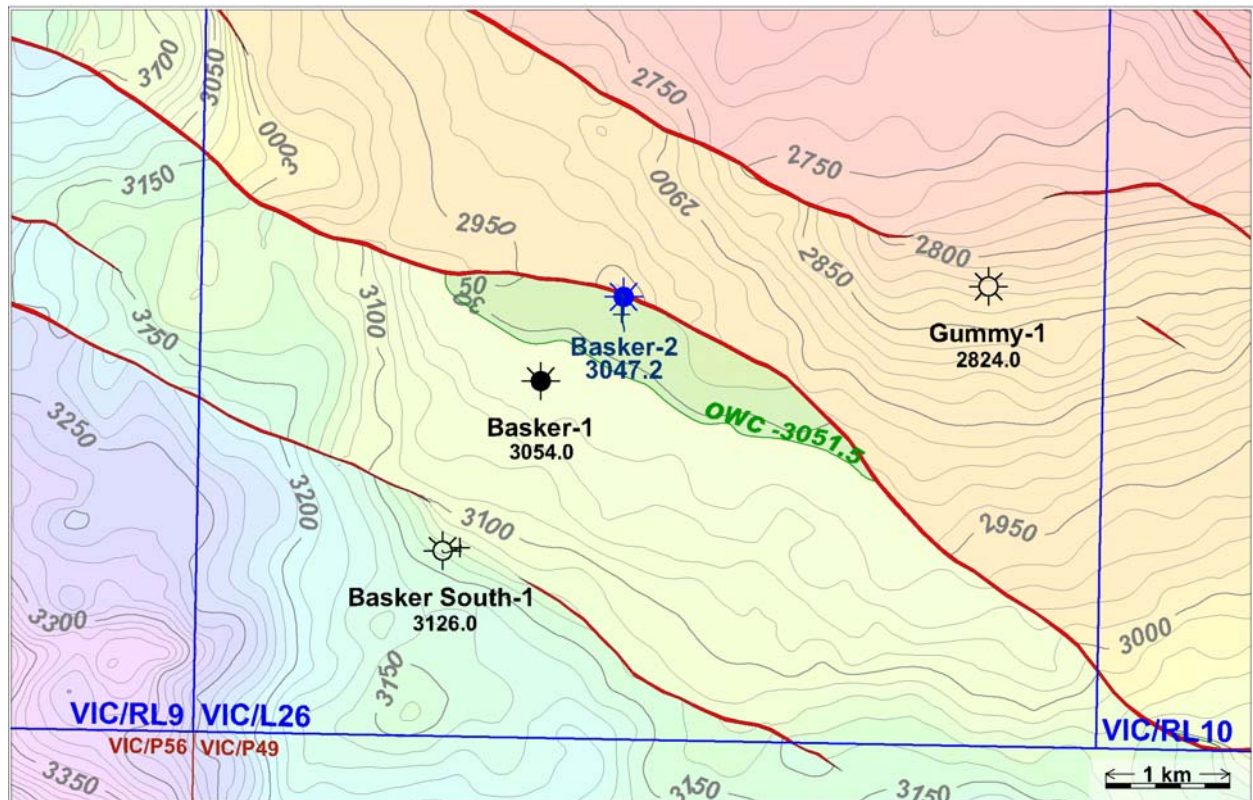


Figure 12 Structure Map, Top of Basker Zone 1.2 Reservoir (Contour Interval 10m)

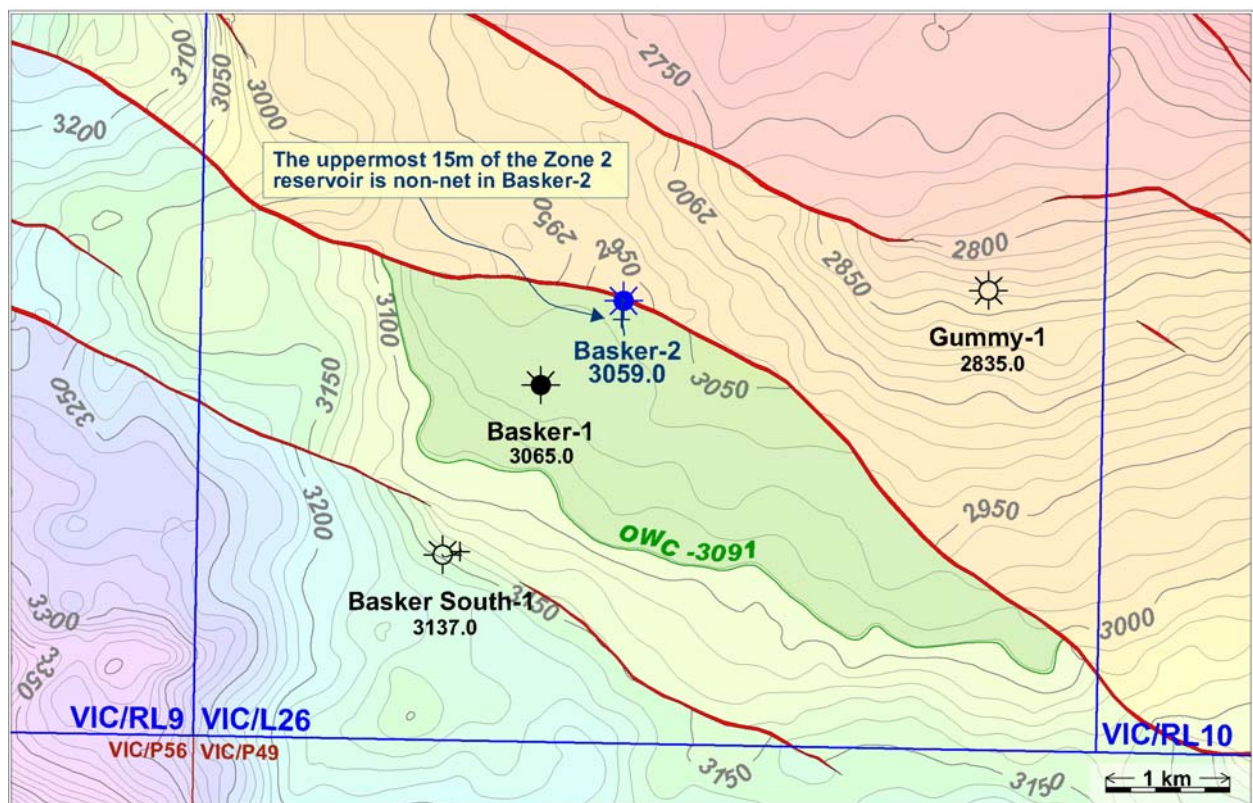


Figure 13 Structure Map, Top of Basker Zone 2 Reservoir (Contour Interval 10m)

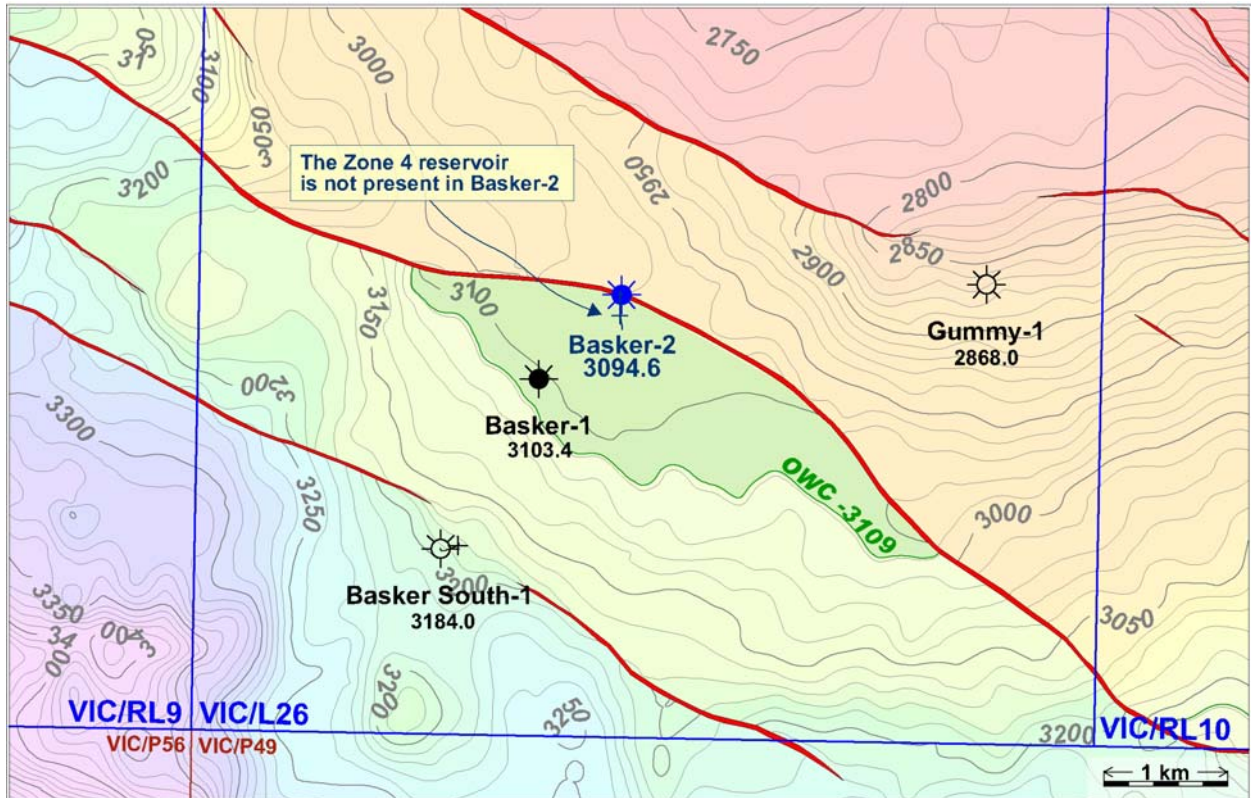


Figure 14 Structure Map, Top of Basker Zone 4 Reservoir (Contour Interval 10m)

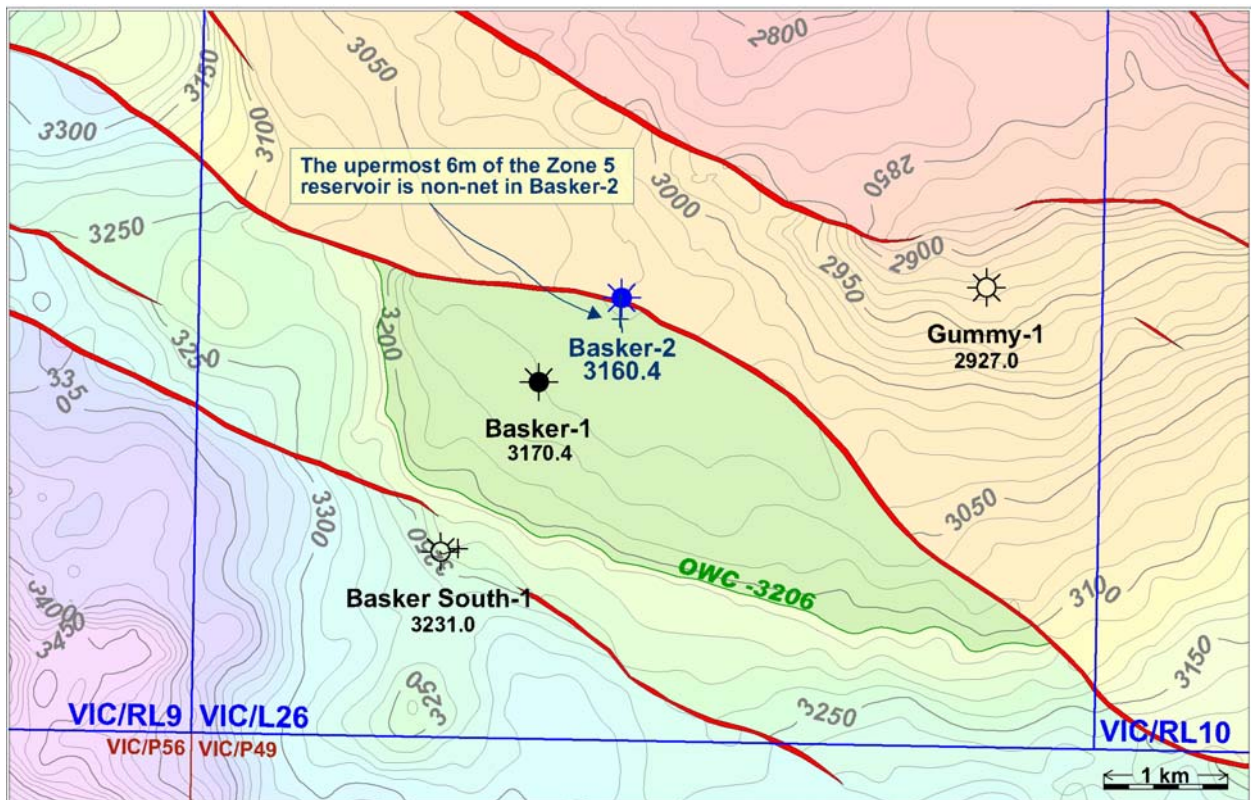


Figure 15 Structure Map, Top of Basker Zone 5 Reservoir (Contour Interval 10m)

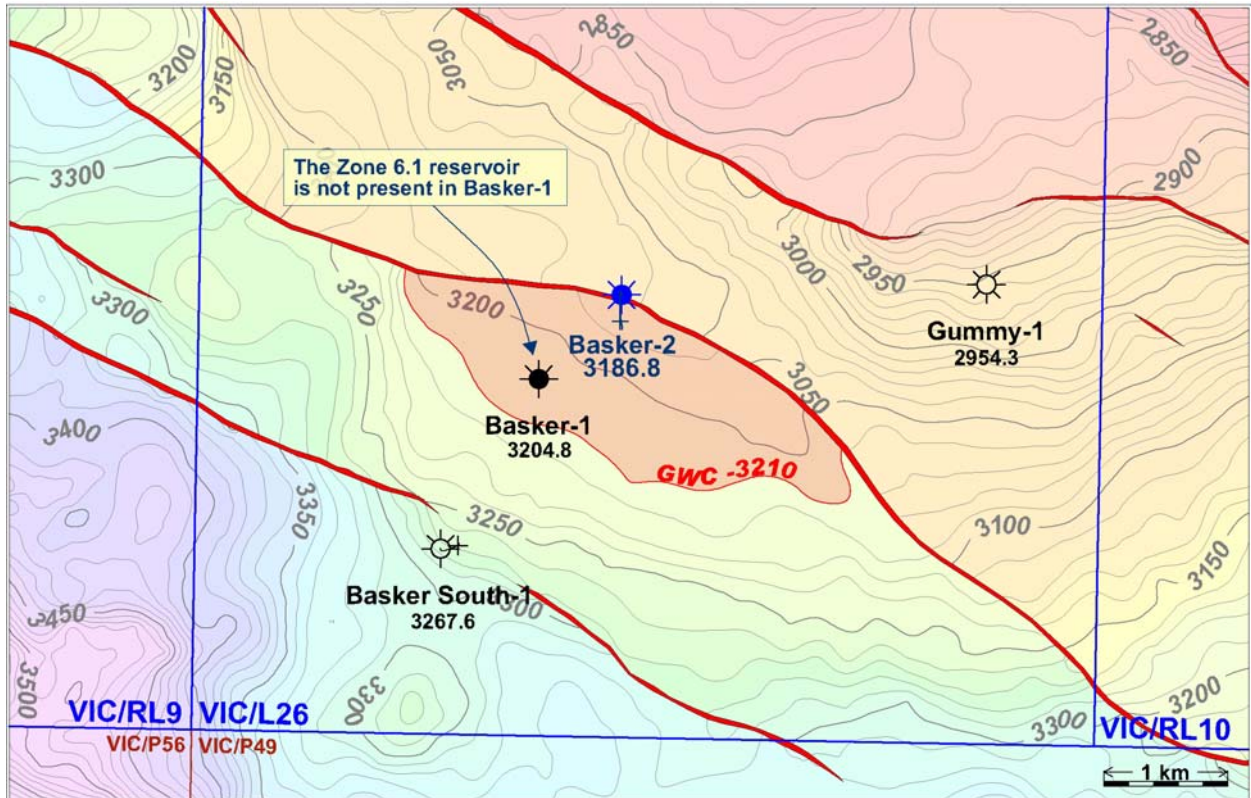


Figure 16 Structure Map, Top of Basker Zone 6.1 Reservoir (Contour Interval 10m)

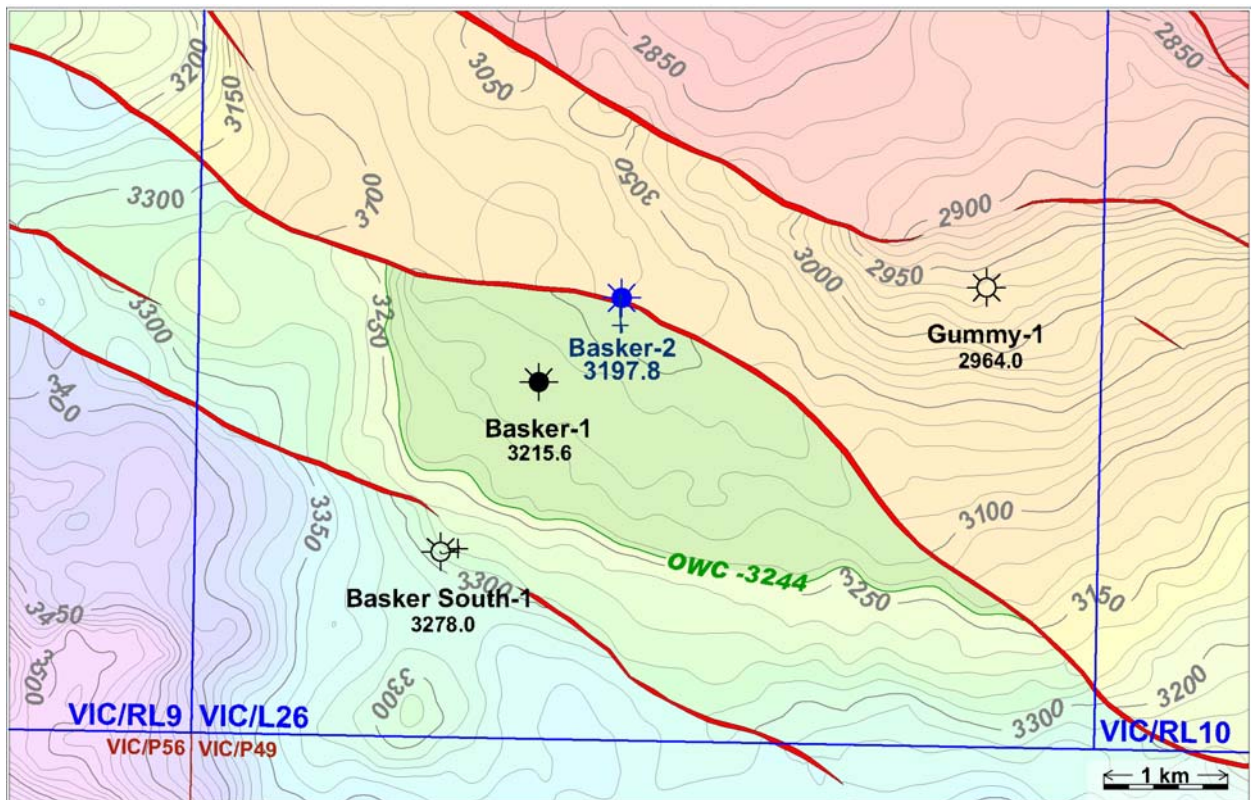


Figure 17 Structure Map, Top of Basker Zone 6.2 Reservoir (Contour Interval 10m)

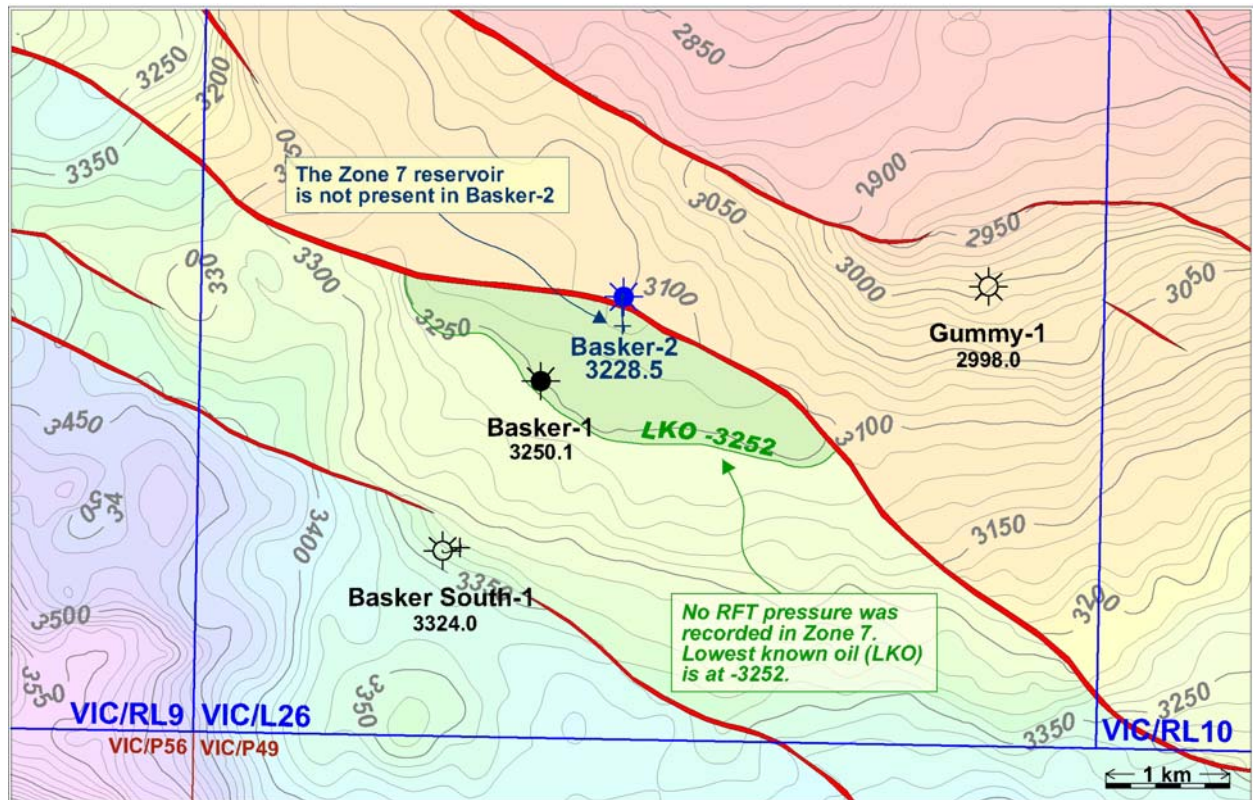


Figure 18 Structure Map, Top of Basker Zone 7 Reservoir (Contour Interval 10m)

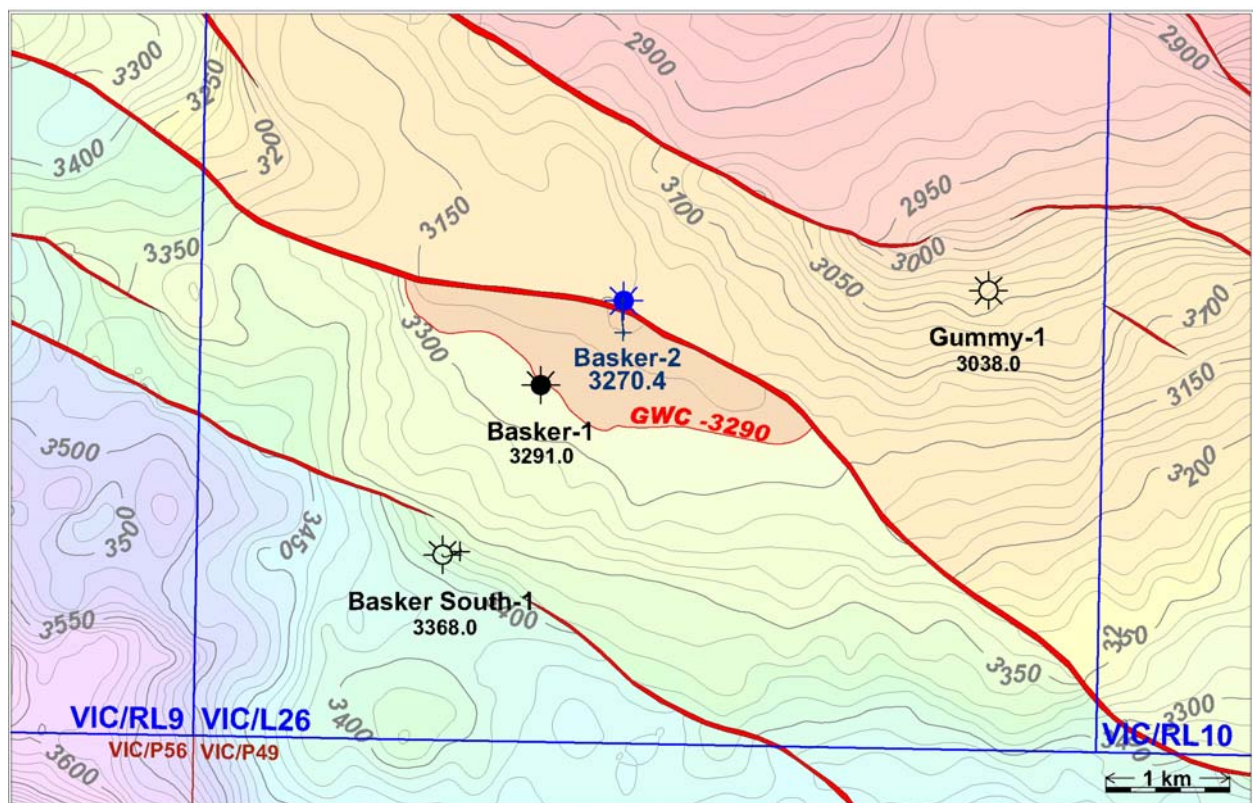


Figure 19 Structure Map, Top of Basker Zone 8 Reservoir (Contour Interval 10m)

6. BASKER-1 TO BASKER-2 RESERVOIR CORRELATION

Although gross correlations of the Lower Campanian section can be made between Basker-1 and Basker 2, individual sandstone beds within the lower coastal plain facies cannot be correlated with confidence between the wells on the basis of well logs. This is because rapid lateral facies variations appear to be present, as is typical of coastal plain sediments.

The difficulty with correlation on the basis of well logs presents a significant problem. It is not clear whether stratigraphic correlation of the sands in one well should be made to similar sands in the other well or to non-net parts of the reservoir interval. A number of sand-to-sand correlations have been developed between Basker-1 and Basker-2. For example, the sands of Zone 2 (which have a similar appearance in both wells) may be assumed to be stratigraphically equivalent. However, the current preferred correlation has been derived from the seismic and differs from this correlation. The seismic-based correlation uses six seismic markers (MZN2, ZC1, ZC2, ZC3, ZC4 and ZC5) which have been identified in both wells to derive a “skeleton” from which the reservoir correlation has been developed. The seismic markers were carried over the reservoir interval, on seismic, between the wells, on zero-crossings. The synthetics were then used to derive the equivalent correlation.

For example: Table 3 shows that the depth of 2963mTVDSS in Basker-1 is predicted (on the basis of the seismic correlation) to be stratigraphically equivalent to the depth of 2949mTVDSS in Basker-2. The problem with correlating this way is that it is prone to errors, because of the limits to seismic resolution. The potential error is probably at least 5m. In other words, the equivalent level in Basker-2 (to 2963mTVDSS in Basker-1) could be anywhere between 2944 and 2954mTVDSS.

Figure 20 shows a section of the correlation, with some examples of the key considerations adopted.

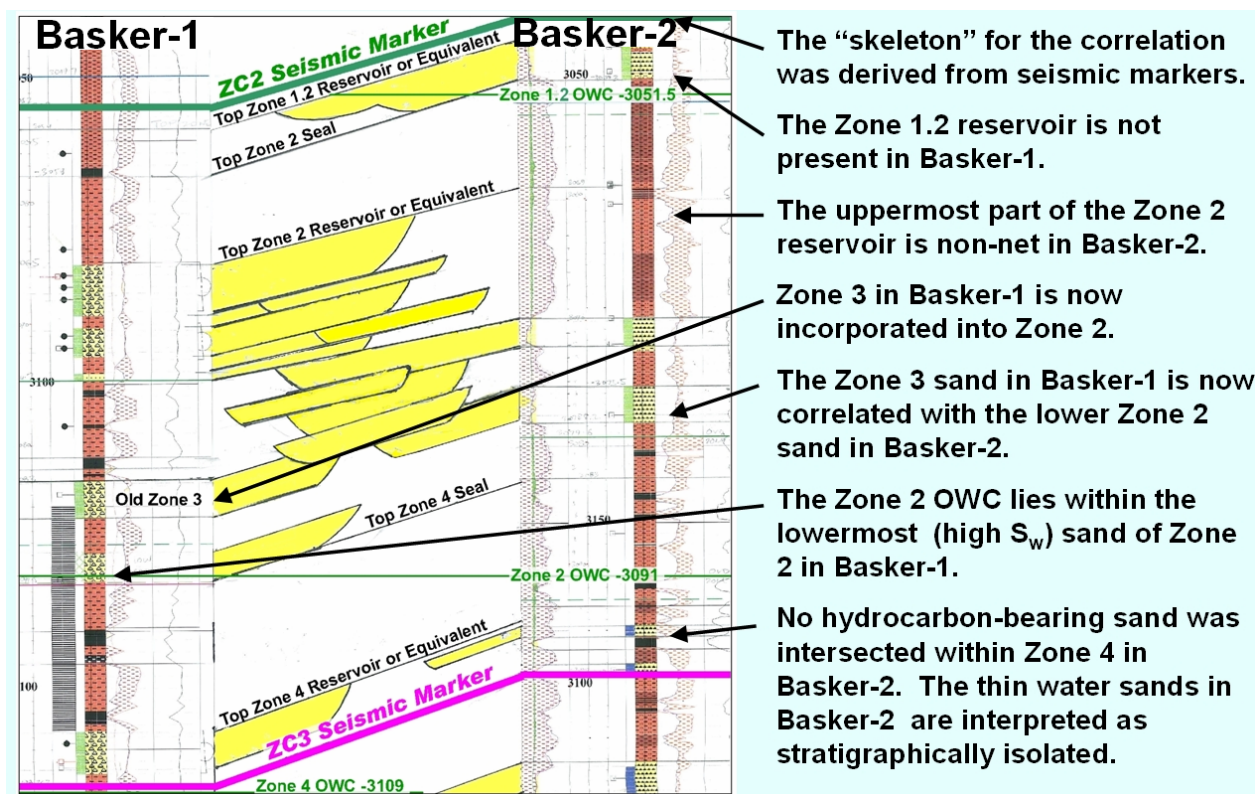


Figure 20 Correlation Example Between Basker-1 and Basker-2 (Zone 1.2, Zone 2 and Zone 4)

This correlation incorporates the revised seismic correlation (based on a revised checkshot integration, which used a revised drift curve, as detailed in the Velocity Survey Report within Volume 1 of the Basker-1 Well Completion Report).

The correlation is based on the view that (in a coastal plain depositional environment) sand-to-sand correlation over long distances (more than a few hundred metres) is not possible. This view is emphasised by the correlation of the seismic markers between the wells, which leaves few options for sand-to-sand correlation.

Most of the sands seen in Basker-1 appear to have no stratigraphic equivalent in Basker-2 and vice versa. Hence, in order to generate structure maps for the reservoirs, a stratigraphic equivalent to the highest sand in each reservoir Zone has been developed, using the seismic marker correlation as a guide. These equivalents are listed, with the reservoir tops, in Table 3.

The seismic shows that the elevation of Basker-2 above Basker-1 gradually increases through the reservoir interval, from around 0m at the top of Zone 0 to about 21m at the top of Volcanics (Column 6 in Table 3).

Ten separate reservoir pressure “Zones” are interpreted on the basis of data from Basker-1 and Basker-2: 0, 1.1, 1.2, 2, 4, 5, 6.1, 6.2, 7 and 8. Zone 8 is an Intra-Volcanics reservoir. Zone 3 in Basker-1 is now interpreted as being within the combined Zone 2 for both wells. The old Zone 3 sand in Basker-1 now correlates approximately with the lower Zone 2 sand in Basker-2. Both of the Zone 2 sands in Basker-1 are interpreted to be stratigraphically higher than the Zone 2 sands in Basker-2.

7. OPEN-HOLE WIRELINE LOG ANALYSIS

Summary

Basker-2 was drilled as a development well in VIC/RL6. The well spudded on 14 August 2005 and reached a total depth in 8.5" hole at 3414m (Drillers Depth) on 11 September 2005.

During drilling the Sperry Drilling Services LWD logging system recorded GR-Resistivity in real time from 200-3415mMDRT. After total depth was reached Schlumberger using the PEX system provided wireline-logging services.

For the purpose of formation evaluation the logs acquired by the Schlumberger PEX system have been interpreted with Crocker Data Processing Petrolog Modules. The results obtained and methods used are summarised in this report.

Net Pay calculations were based on cut-off parameters PHIE \geq 10%; Vclay \leq 50%; SWE \leq 70% which results in 20.19m net hydrocarbon pay; 17.88m total net oil pay and 2.31m total net gas pay (refer Table 7).

7.1 General Information

All depths quoted in this section of the well completion report are mMDRT.

Well Name	Basker-2
Country	Australia
Company	Anzon
Location	VIC/RL6
State	Victoria
Permanent Dat.	MSL
Elevation of Rotary Table (m)	21.5
Depth to SF (m)	177
Logging Co.	Schlumberger
Logging Date	11th September 2005
Logs Recorded	FMI_DSI_HRLA_TLD_040LUP
Bottom depth (m)	3415.28 (Loggers depth) 2905.20 13-3/8" @ 1000 8.5 KCL/PHPA/Glycol 1.12
Top depth (m)	
Casing shoe (m)	
Bit size (inch)	
Fluid Type	
Density g/cm³	1.12
RM (Ohmm) @ TEMP (DegC)	0.129 @22.00
RMF (Ohmm) @ TEMP (DegC)	0.122 @ 17
RMC (Ohmm) @ TEMP (DegC)	0.155 @ 22
Recorded by	N Sabanegh/Kasian S

7.2 Deviation

Telemetry and directional data from the Sperry Sun LWD run was used as the basis to convert measured depth to true vertical in this interpretation.

The maximum hole deviation measured was 30.08° at 2981.1mMDRT and the final measured deviation was 25.96° at 3414m.

7.3 Data Acquisition and Quality Control

All curves were recorded in the same run and there were no cycle skips observed on the sonic log.

Digital data received was of acceptable quality, no further processing undertaken (other than environmental correction to the TNPH).

7.4 Log Editing

No problems were encountered during acquisition of the data and log quality is acceptable.

Depth offsets occur between LWD curve data and PEX-HALS-GR curve data but no depth alignments were carried out between the two data sets. The PEX-GR has been assigned as the depth reference log and all PEX curves were examined for alignment using this reference. Depth shifts were applied to all logs and referenced to the PEX-GR. A composite display of input logs is presented together with the results composite plot (Enclosure 5).

7.5 Environmental Corrections

Borehole corrections were undertaken at wellsite. No further corrections were applied.

7.6 Logs Used

The primary logs used in the interpretation were GR, RLA5, RLA4, RXO8, RHO8, HTNP, HDRA, PEF8, and DTCO. Due to different lengths back to measure points for the various logging tools, full log analysis was conducted down to 3385.0m.

7.7 Temperature Gradient

An extrapolated formation temperature was determined from recorded bottom hole temperatures using the Horner method.

Table 5 Circulation Times and Bottom Hole Temperatures

Dates and Times						
Activity	Time	Depth mRT	delta t Hrs	t Hrs	delta t/ (delta t + t)	Temp (deg C)
Drilling Stopped	11/09/2005 14:00					
Circulating Commenced	11/09/2005 14:00					
Circulating Stopped	11/09/2005 15:30					
Circulation Time	1:30					
1st log on bottom	12/09/2005 5:00	3368	13:30	1:30	0.9000	108
2nd log on bottom	12/09/2005 16:00	3330	24:30	1:30	0.9423	108
3rd log on bottom	13/09/2005 15:00	3366	47:30	1:30	0.9694	118
4th log on bottom	15/09/2005 1:30	3361	82:00	1:30	0.9820	119
Extrapolated BHT=	121	deg C				

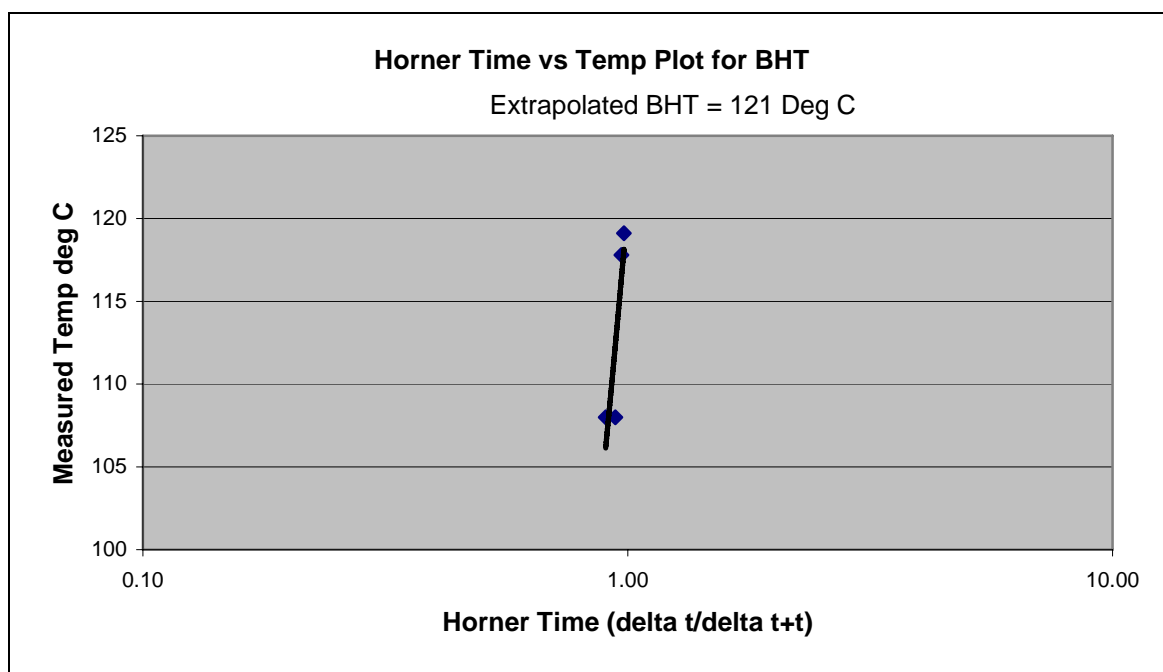


Figure 21 Basker-2 Generalised Horner Plot

7.8 Hydrocarbon Type Identification

A combination of the neutron-density log character, resistivity anomaly, total density near and far counts, ditch gas readings and fluorescence shows described from cuttings were used to determine the hydrocarbon types present in the reservoirs. An example of the methodology is presented in Figure 22.

Identification of hydrocarbon type based on log character at Basker-2 was complicated as the reservoir sands are associated with low salinity formation water as well as displaying a low resistivity-contrast between the reservoir and non-reservoir units.

In order to reduce the uncertainty of hydrocarbon type within the potential reservoir units an MDT (Modular Dynamics Tester) program consisting of pretests and fluid recovery from MDT pump-outs and samples, were conducted to confirm hydrocarbon type and the results were integrated into this interpretation (refer Analysis of the Basker-2 MDT Pressures W.S. Yee September 2005 and Section 8 of this WCR).

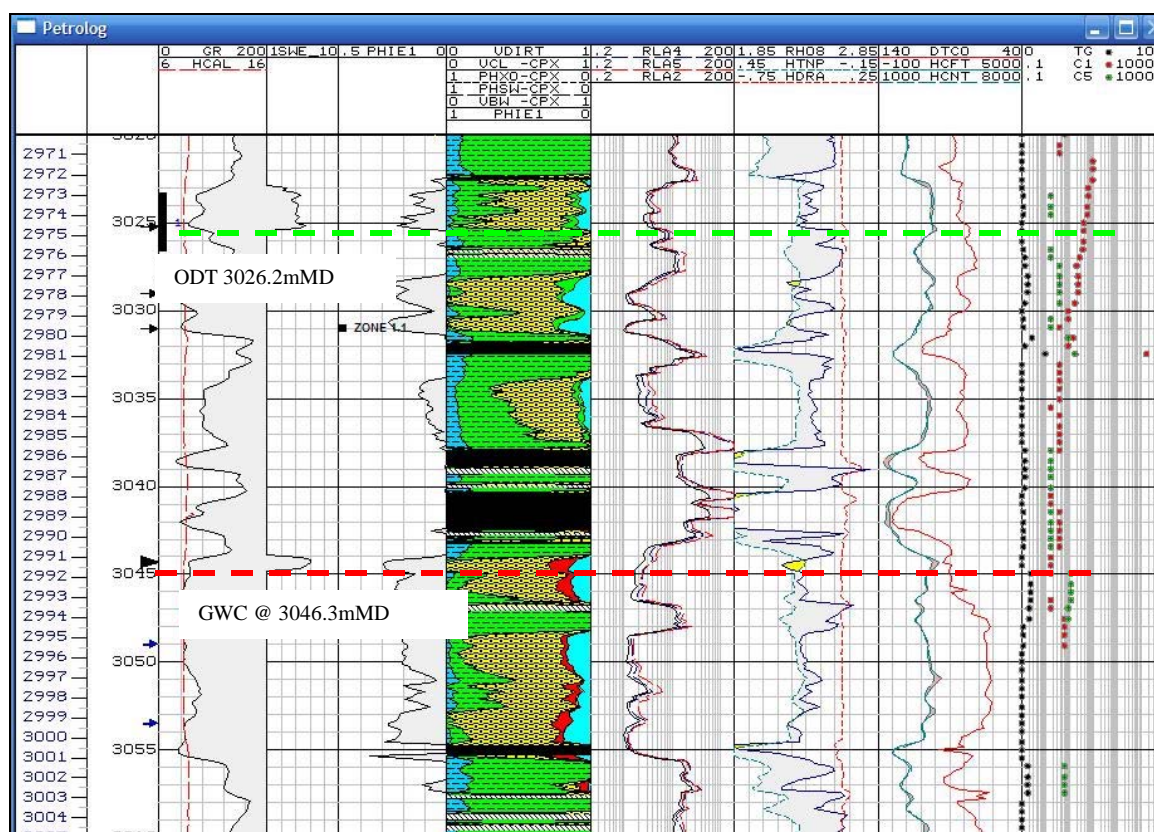


Figure 22. Basker-2 Hydrocarbon Type Example of Methodology

7.9 Petrolog Model Selection

The Complex Lithology Model (CPX) was selected for the interpretation. This is a deterministic model that computes V_{clay}, V_{silt}, V_{sand}, total porosity (PHIT), effective porosity (PHIE), total water saturation (SWT), and effective water saturation (SWE).

7.10 V_{clay}, V_{silt}, V_{sand} Determination

The CPX program used VGR; VN; VS; and VD-N; to compute V_{clay}, V_{silt} and V_{sand}.

7.11 Porosity Determination

Total porosity (PHIT) was calculated using input logs Density and Neutron. Effective porosity was calculated after Vclay determination.

$$PHIE = PHIT (1-Vcl)$$

7.12 Determination of Water Resistivity

An R_w equivalent to 30000ppm NaCl formation water salinity was used. PHIT-RT crossplot across the water sand interval 3085-3090mMDRT is presented in Figure 23 supports the use of this value.

Eight water samples were obtained during the MDT program and analysed by Petrolob. A summary of the results is presented in Table 6.

Table 6 Basker-2 Petrolab Water Sample Measurements

Depth mMDRT	Sample #	TDS mg/L
3009.0	MPSR286	37000
3066.5	MPSR192	39000
3133.4	MRSC33	52000
3175.0	MPSR487	37000
3201.0	MPSR477	36000
3243.0	MDT51	58000
3263.5	MDT23	53000

As the measured R_{mf} (0.122@17°C) approximates to 58000ppm NaCl equivalent most of the samples are contaminated with varying amounts of filtrate.

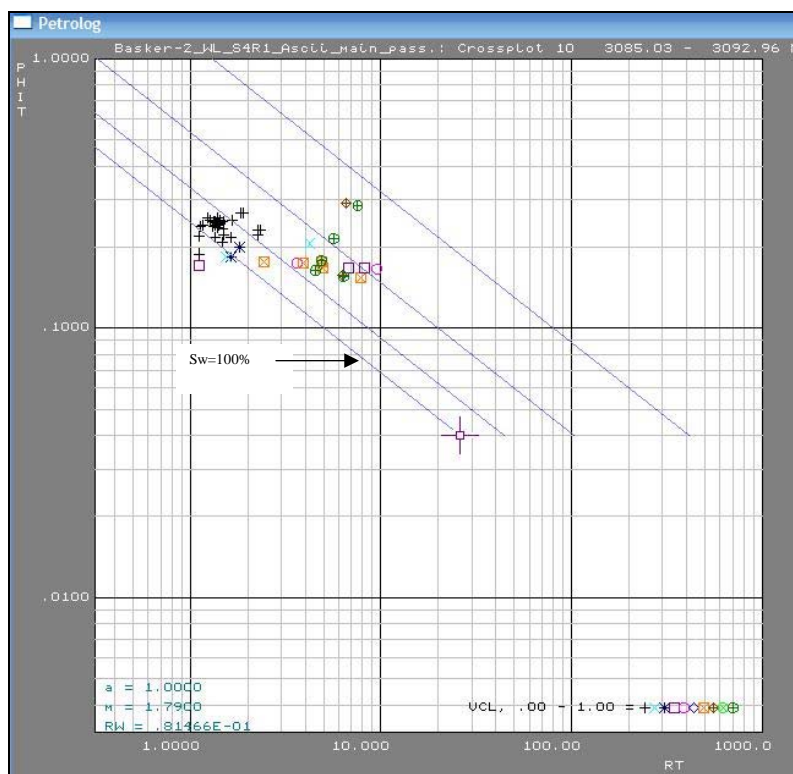


Figure 23 Basker-2 PHIT-RT crossplot interval 3084-3093mMDRT

7.13 Determination of Sw, a, m, n

For this interpretation the **Indonesia equation** was used to compute water saturation (Sw) and is defined as follows:

$$\text{and } \begin{aligned} \text{SWE} &= (1.0 / (Y * \text{SQRT}(RT)))^{(2.0/n)} \\ Y &= \text{VCL}^{(1.0 - \text{VCL}/2)} / \text{SQRT}(\text{RCL}) + \text{PHIE}^{(m/2)} / \text{SQRT}(a * R_w) \end{aligned}$$

In this interpretation a=1, m= 1.79 and n=1.83

The values a=1, m= 1.79 and n=1.83 were obtained from the Basker-1 Special Core Analysis Report. A study of the Capillary Pressure measurements from Basker-1 conventional core was undertaken (refer Anzon Australia Ltd Report September 2005, Determination of Irreducible Water Saturation using the Basker-1 Capillary Pressure Curves by Wong Shau Yee) where an average capillary pressure curve was converted to a height versus water saturation curve and used to calculate an average water saturation in Basker-1 Zone 2 (PcSw=24%). A good match was achieved between the Log derived Sw across Zone 2 and the PcSw validating the use of the parameters in Basker-2.

7.14 Results

Net Pay calculations were based on cut-off parameters PHIE \geq 10%; Vclay \leq 50%; SWE \leq 70% which results in a total 20.19m net hydrocarbon pay; 17.88m net oil pay and 2.31m net gas pay (refer Table 7).

Identification of hydrocarbon type based on log character at Basker-2 was complicated as the reservoir sands are associated with low salinity formation water as well as displaying a low resistivity-contrast between the reservoir and non-reservoir units.

Several oil and gas bearing sandstone units were intersected by the well but no oil-water, gas-oil or gas-water contacts were seen on logs.

The MDT program consisting of pretests and fluid recovery from MDT pump-out and sampling assisted in hydrocarbon type identification and the results were incorporated into the log interpretation.

Further refinement of reservoir input parameters is recommended in order to reduce uncertainties of porosity estimates and hydrocarbon saturations using conventional log interpretation techniques.

The input parameters are presented in Table 8.

Log Header information is presented in Table 9.

A 1:200 scale Log Interpretation Plot is presented in Enclosure 5.

Table 7 Basker-2 Reservoir Summation

	CUT-OFFS: PHIE >=10%; VCLAY <50%; SWE <70%													COMMENTS
	Measured Depth RESERVOIR				True Vertical PAY									
	FROM	TO	NET RES	NET PAY	FROM	TO	FROM	TO	NET RES	NET PAY	VCL _{av}	PHIE _{av}	SWE _{av}	
	mMD	mMD	mMD	mMD	mTVDKB	mTVDKB	mTVDSS	mTVDSS	mTVT	mTVT	%	%	%	
Zone 0	3022.6	3022.9	0.30	0.30	2996.2	2996.4	2974.7	2974.9	0.27	0.27	22.3	15.15	20.18	
	3023.3	3023.6	0.30	0.30	2996.8	2997.1	2975.3	2975.6	0.27	0.27	25.45	14.85	59.65	Oil: MDT Smpl 3023.4mMD; CFA GOR 1350scf/bbl
	3023.8	3024.2	0.46	0.46	2997.2	2997.6	2975.7	2976.1	0.40	0.40	29.93	12.68	61.17	
	3024.5	3026.2	0.91	0.76	2997.9	2999.3	2976.4	2977.8	0.80	0.66	15.52	18.06	51.75	Oil: ODT 3026.2mMD (Logs); OWC 3028.6mMD (MDT)
	3028.2	3029.9	1.68		3001.1	3002.5	2979.6	2981.0	1.46					
	3030.3	3031.5	1.07		3002.9	3004.0	2981.4	2982.5	0.93					
Zone 1.1	3034.1	3035.2	1.07		3006.2	3007.2	2984.7	2985.7	0.93					
	3038.9	3040.2	0.15		3010.4	3011.6	2988.9	2990.1	0.13					
	3044.2	3046.3	2.13	0.76	3015.0	3016.9	2993.5	2995.4	1.87	0.67	1.6	23.3	51.9	MDT Gas: GWC 3046.3mMD(Logs); GWC 3044.7mMD (MDT)
	3046.5	3048.3	0.15		3017.0	3018.6	2995.5	2997.1	0.13					
	3048.5	3050.7	2.29		3018.8	3020.8	2997.3	2999.3	2.00					
	3051.4	3052.6	1.22		3021.3	3022.4	2999.8	3000.9	1.07					
	3052.7	3055.5	2.13		3022.5	3024.9	3001.0	3003.4	1.87					
	3061.1	3061.6	0.46		3029.8	3030.3	3008.3	3008.8	0.40					
	3062.9	3071.8	6.71		3031.5	3039.2	3010.0	3017.7	5.88					
	3074.4	3075.1	0.76		3041.5	3042.2	3020.0	3020.7	0.67					
	3075.7	3077.4	1.68		3042.7	3044.2	3021.2	3022.7	1.47					
3085.0	3090.4	5.33		3050.8	3055.5	3029.3	3034.0	4.68						
Zone 1.2	3099.5	3104.5	0.61	0.61	3063.5	3068.0	3042.0	3046.5	0.54	0.54	20.2	25.1	25.6	
	3105.0	3108.2	2.90	2.90	3068.4	3071.2	3046.9	3049.7	2.55	2.55	20.9	15.6	40.8	Oil: MDT Smpl 3106mMD; CFA GOR 925cf/bbl
	3108.4	3108.7	0.30	0.30	3071.3	3071.6	3049.8	3050.1	0.27	0.27	21.0	17.5	21.1	Oil: ODT 3108.7mMD (Logs); OWC 3111.9mMD (MDT)
Zone 2	3130.9	3133.8	2.90	2.90	3091.2	3093.8	3069.7	3072.3	2.56	2.56	2.8	21.8	18.6	Oil: MDT Smpl 3133mMD; CFA GOR 1010cf/bbl
	3134.3	3134.7	0.46	0.46	3094.2	3094.6	3072.7	3073.1	0.40	0.40	45.7	10.9	47.2	
	3137.5	3137.9	0.46	0.46	3097.0	3097.4	3075.5	3075.9	0.40	0.40	16.8	15.0	42.5	
	3138.2	3138.7	0.46	0.46	3097.7	3098.1	3076.2	3076.6	0.40	0.40	12.0	17.3	32.7	
	3138.8	3140.8	1.98	1.98	3098.2	3100.0	3076.7	3078.5	1.75	1.75	15.3	17.9	26.5	Oil: ODT 3140.8mMD (Logs); OWC 3157.2mMD (MDT)
Zone 4	3149.8	3150.3	0.46		3107.9	3108.3	3086.4	3086.8	0.40					
	3152.6	3155.3	0.15		3110.3	3112.8	3088.8	3091.3	0.13					
	3157.7	3161.8	0.30		3114.9	3118.5	3093.4	3097.0	0.27					
	3163.5	3164.1	0.61		3120.0	3120.6	3098.5	3099.1	0.54					
	3167.8	3168.6	0.15		3123.8	3124.5	3102.3	3103.0	0.14					
	3171.8	3171.9	0.15		3127.3	3127.5	3105.8	3106.0	0.14					
	3173.1	3176.2	3.05		3128.5	3131.2	3107.0	3109.7	2.70					
	3177.2	3177.8	0.61		3132.2	3132.7	3110.7	3111.2	0.54					
	3178.5	3180.0	1.52		3133.3	3134.6	3111.8	3113.1	1.35					
	3200.6	3201.5	0.91		3152.9	3153.7	3131.4	3132.2	0.82					
	3201.6	3202.4	0.76		3153.9	3154.5	3132.4	3133.0	0.68					
	3202.5	3202.8	0.30		3154.7	3155.0	3133.2	3133.5	0.27					
	3207.7	3208.3	0.46		3159.3	3159.9	3137.8	3138.4	0.41					
	3223.0	3225.6	2.29		3172.9	3175.3	3151.4	3153.8	2.05					
	3226.3	3227.1	0.76		3175.9	3176.6	3154.4	3155.1	0.68					
	3227.2	3227.5	0.30		3176.8	3177.0	3155.3	3155.5	0.27					

Table 7 Basker-2 Reservoir Summation (Continued)

	CUT-OFFS: PHIE >=10%; VCLAY <50%; SWE <70%													COMMENTS
	Measured Depth RESERVOIR				True Vertical PAY									
	FROM	TO	NET RES	NET PAY	FROM	TO	FROM	TO	NET RES	NET PAY	VCL _{av}	PHIE _{av}	SWE _{av}	
	mMD	mMD	mMD	mMD	mTVDKB	mTVDKB	mTVDSS	mTVDSS	mTVT	mTVT	%	%	%	
Zone 5	3237.3	3237.4	0.15	0.15	3185.8	3185.9	3164.3	3164.4	0.14	0.14	43.1	11.5	40.3	LOGS: ML Oil
	3241.2	3246.1	2.13	1.98	3189.3	3193.7	3167.8	3172.2	1.91	1.78	12.1	17.8	22.9	MDT Smpl 3241.5mMD; CFA GOR 850scf/bbl; MDT Smpl 3243.0mMD; CFA 1175scf/bbl (Low Confidence)
Zone 6.1	3256.2	3258.0	0.15		3202.7	3204.4	3181.2	3182.9	0.14					
	3262.3	3264.4	2.13	1.83	3208.2	3210.1	3186.7	3188.6	1.92	1.64	7.7	16.4	23.9	MDT P/o Oil+Gas GOR out of CFA range
	3265.6	3265.8	0.15		3211.2	3211.3	3189.7	3189.8	0.14					
Zone 6.2	3274.6	3274.8	0.15		3219.3	3219.4	3197.8	3197.9	0.14					
	3276.9	3279.2	0.91	0.91	3221.4	3223.4	3199.9	3201.9	0.82	0.82	16.5	16.4	26.6	
	3279.5	3279.7	0.15	0.15	3223.7	3223.8	3202.2	3202.3	0.14	0.14	28.1	11.2	1.4	
	3281.5	3281.9	0.46	0.46	3225.5	3225.9	3204.0	3204.4	0.41	0.41	10.9	18.0	24.4	
	3282.2	3282.7	0.46	0.46	3226.1	3226.6	3204.6	3205.1	0.41	0.41	23.4	14.7	32.3	
	3287.6	3289.6	1.98	1.98	3230.9	3232.7	3209.4	3211.2	1.78	1.78	10.4	17.8	35.2	MDT Smpl 3289.3mMD; CFA GOR 1435scf/bbl
	3289.9	3290.0	0.15	0.15	3233.0	3233.1	3211.5	3211.6	0.14	0.14	28.9	12.6	26.8	MDT CFA GOR 1410scf/bbl
	3290.5	3290.6	0.15	0.15	3233.5	3233.7	3212.0	3212.2	0.14	0.14	18.5	17.0	28.9	Oil: ODT 3290.6mMD (Logs); OWC 3133.7mMD (MDT)
	3297.2	3297.3	0.15	0.15	3239.6	3239.7	3218.1	3218.2	0.14	0.14	29.5	10.4	1.0	
	3298.1	3298.7	0.61	0.61	3240.4	3240.9	3218.9	3219.4	0.55	0.55	0.0	14.9	46.7	Log N-D mnrr sep; Neut N-F sepr
	3299.9	3300.5	0.61	0.61	3242.0	3242.6	3220.5	3221.1	0.55	0.55	27.6	13.3	15.8	
	3301.0	3301.9	0.46	0.46	3243.0	3243.8	3221.5	3222.3	0.41	0.41	35.4	12.7	30.4	
Volcanics	3355.4	3356.2	0.61	0.61	3291.9	3292.6	3270.4	3271.1	0.55	0.55	13.4	20.1	25.6	
	3357.1	3358.1	1.07	1.07	3293.4	3294.4	3271.9	3272.9	0.96	0.96	1.1	23.8	29.3	MDT GWC 3382.7mMD; MDT Smpl 3357.3mMD; CFA GOR 7750scf/bbl
	3359.2	3359.4	0.15	0.15	3295.3	3295.5	3273.8	3274.0	0.14	0.14	0.0	26.1	32.8	
	3363.8	3363.9	0.15	0.15	3299.4	3299.6	3277.9	3278.1	0.14	0.14	23.6	11.5	62.5	
	3366.5	3366.7	0.15	0.15	3301.9	3302.0	3280.4	3280.5	0.14	0.14	20.7	13.4	47.3	
	Total Net HC Pay (excluding Volcanics)									20.2				
	Total Net Oil Pay (excluding Volcanics)									17.9				
	Total Net Gas Pay (excluding Volcanics)									2.3				
	HC type unresolved									0				

Table 8 Basker-2 Petrophysical Input Parameters (Part 1)

Petrolog								
Zone no.		1	2	3	4	5	6	7
Top depth M		2945.130	3041.142	3085.033	3093.110	3161.081	3232.099	3321.101
Bottom depth M		3040.990	3084.881	3092.958	3160.928	3231.947	3320.948	3414.979
Formation Name								
Top depth M		2945.130	3041.142	3085.033	3093.110	3161.081	3232.099	3321.101
Bottom depth M		3040.990	3084.881	3092.958	3160.928	3231.947	3320.948	3414.979
Model(CPX,SS		CPX	CPX	CPX	CPX	CPX	CPX	CPX
Facies		.000	.000	.000	.000	.000	.000	.000
No logs		DT	DT	DT	DT	DT	DT	DT
RM	ohmm	.300	.300	.300	.300	.300	.300	.300
Temp. RM	degC	23.889	23.889	23.889	23.889	23.889	23.889	23.889
RMF	ohmm	.200	.200	.200	.200	.200	.200	.200
Temp. RMF	degC	23.889	23.889	23.889	23.889	23.889	23.889	23.889
RMC	ohmm	.500	.500	.500	.500	.500	.500	.500
Temp. RMC	degC	23.889	23.889	23.889	23.889	23.889	23.889	23.889
Bit size	inch	8.500	8.500	8.500	8.500	8.500	8.500	8.500
Mud wt	gm/cc	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Mud pres PSI		4251.952	4351.325	4388.238	4442.255	4540.979	4654.642	4784.650
SSP		.000	.000	.000	.000	.000	.000	.000
RW (SP)	ohmm	.0752819	.0742821	.0739174	.0733902	.0724458	.0713881	.0702156
Temperature	degC	92.132	93.662	94.230	95.062	96.582	98.332	100.333
RW @ FT	ohmm	.0847375	.0836121	.0832016	.0826081	.0815452	.0803547	.0790349
RWA75F(23.9C	ohmm	.212	.212	.212	.212	.212	.212	.212
RW salinity	ppm	30000	30000	30000	30000	30000	30000	30000
RMF @ FT	ohmm	.0799288	.0788673	.0784801	.0779203	.0769176	.0757947	.0745498
RMF salinity	parts	.0320217	.0320217	.0320217	.0320217	.0320217	.0320217	.0320217
RM @ FT	ohmm	.120	.118	.118	.117	.115	.114	.112
RHO H	gm/cc	.800	.200	.800	.800	.800	.800	.800
Gas Flag		.000	1.000	.000	.000	.000	.000	.000
RHO F	gm/cc	1.011	1.011	1.011	1.010	1.010	1.010	1.010
t F	us/ft	188.992	188.992	188.992	188.992	188.992	188.992	188.992
RHOMA	gm/cc	2.650	2.650	2.650	2.650	2.650	2.650	2.650
PHIN min		-.0350000	-.0350000	-.0350000	-.0350000	-.0350000	-.0350000	-.0350000
t MA	us/ft	55.500	55.500	55.500	55.500	55.500	55.500	55.500
t MA min	us/ft	48.000	48.000	48.000	48.000	48.000	48.000	48.000
Sonic option		1.000	1.000	1.000	1.000	1.000	1.000	1.000
Compact/Ovrt		1.000	1.000	1.000	1.000	1.000	1.000	1.000
CAL cut off	inch	16.000	16.000	16.000	16.000	16.000	16.000	16.000
RUGO cut off	inch	1.000	1.000	1.000	1.000	1.000	1.000	1.000
DRHO cut off	gm/cc	.150	.150	.150	.150	.150	.150	.150

Table 8 Basker-2 Petrophysical Input Parameters (Part 2)

Petrolog								
Zone no.		1	2	3	4	5	6	7
Top depth M		2945.130	3041.142	3085.033	3093.110	3161.081	3232.099	3321.101
Bottom depth M		3040.990	3084.881	3092.958	3160.928	3231.947	3320.948	3414.979
Formation Name								
Bad Hole		1.000	1.000	1.000	1.000	1.000	1.000	1.000
No clay		SP GR RT	SP GR RT	SP GR RT	SP GR RT	SP GR RT	SP GR RT	SP GR RT
Uclay Flag		.000	.000	.000	.000	.000	.000	.000
Uclay type		.000	.000	.000	.000	.000	.000	.000
Uclay inp1		.200	.200	.200	.200	.200	.200	.200
Uclay out1		.150	.150	.150	.150	.150	.150	.150
Uclay inp2		.800	.800	.800	.800	.800	.800	.800
Uclay out2		.800	.800	.800	.800	.800	.800	.800
Uclay 50%		.500	.500	.500	.500	.500	.500	.500
UclayGR type		1.000	1.000	1.000	1.000	1.000	1.000	1.000
GR clean		40.000	40.000	40.000	40.000	40.000	40.000	40.000
GR clay		100.000	100.000	100.000	100.000	100.000	100.000	100.000
GR1		41.000	41.000	41.000	41.000	36.000	36.000	41.000
UGR1		.100	.100	.100	.100	.100	.100	.100
GR2		84.000	84.000	84.000	84.000	84.000	84.000	84.000
UGR2		.800	.800	.800	.800	.800	.800	.800
GR50%		70.000	70.000	70.000	70.000	70.000	70.000	70.000
R clay		2.000	2.000	2.000	2.000	2.000	2.000	2.000
R limit		1000.000	1000.000	1000.000	1000.000	1000.000	1000.000	1000.000
Rclay1 flag		.000	.000	.000	.000	.000	.000	.000
Rclay1		1.000	1.000	1.000	1.000	1.000	1.000	1.000
Ucl @ Rclay1		.150	.150	.150	.150	.150	.150	.150
RHOB sand	gm/cc	2.150	2.150	2.150	2.150	2.150	2.150	2.150
RHOB silt	gm/cc	2.680	2.680	2.680	2.680	2.680	2.680	2.680
RHOB clay	gm/cc	2.400	2.400	2.400	2.400	2.400	2.400	2.400
RHO Dry Clay	gm/cc	2.700	2.700	2.700	2.700	2.700	2.700	2.700
Rhob Calcite		2.850	2.850	2.850	2.850	2.850	2.850	2.850
PHIN Sand		.250	.250	.250	.250	.250	.250	.250
PHIN silt		.0200000	.0200000	.0200000	.0200000	.0200000	.0200000	.0200000
PHIN clay		.270	.270	.270	.270	.270	.270	.270
Phin Calcite		.100	.100	.100	.100	.100	.100	.100
PHISILT		-.0183034	-.0183005	-.0182994	-.0182977	-.0182948	.000	.000
Calcite Flag		.000	.000	.000	.000	.000	.000	.000
t clay	us/ft	100.000	100.000	100.000	100.000	100.000	100.000	100.000
M clay		.641	.641	.641	.640	.640	.640	.640
N clay		.526	.525	.525	.525	.525	.525	.525

Table 8 Basker-2 Petrophysical Input Parameters (Part 3)

Petrolog								
Zone no.		1	2	3	4	5	6	7
Top depth M		2945.130	3041.142	3085.033	3093.110	3161.081	3232.099	3321.101
Bottom depth M		3040.990	3084.881	3092.958	3160.928	3231.947	3320.948	3414.979
Formation Name								
PHIN 2.2		.235	.235	.235	.235	.235	.235	.235
t 2.2	us/ft	90.000	90.000	90.000	90.000	90.000	90.000	90.000
a		1.000	1.000	1.000	1.000	1.000	1.000	1.000
A1		1.000	1.000	1.000	1.000	1.000	1.000	1.000
m		1.790	1.790	1.790	1.790	1.790	1.790	1.790
m1		2.000	2.000	2.000	2.000	2.000	2.000	2.000
m Function		1.000	1.000	1.000	1.000	1.000	1.000	1.000
n		1.830	1.830	1.830	1.830	1.830	1.830	1.830
n1		2.000	2.000	2.000	2.000	2.000	2.000	2.000
B from BQU		13.492	13.683	13.753	13.856	14.042	14.255	14.496
A(QU)		.0003050	.0003050	.0003050	.0003050	.0003050	.0003050	.0003050
B(QU)		-3.450	-3.450	-3.450	-3.450	-3.450	-3.450	-3.450
SX0 limit		.200	.200	.200	.200	.200	.200	.200
PHI max		.400	.400	.400	.400	.400	.400	.400
PHI min c.o.		.0050000	.0050000	.0050000	.0050000	.0050000	.0050000	.0050000
EXPX		1.500	1.500	1.500	1.500	1.500	1.500	1.500
Pay Flag typ		.000	.000	.000	.000	.000	.000	.000
Clay cut off		.500	.500	.500	.500	.500	.500	.500
PHIe cut off		.100	.100	.100	.100	.100	.100	.100
PHIt cut off		.350	.350	.350	.350	.350	.350	.350
SWe cut off		1.000	1.000	1.000	1.000	1.000	1.000	1.000
SWt cut off		1.000	1.000	1.000	1.000	1.000	1.000	1.000
GrossRockVol	Mbbl	.000	.000	.000	.000	.000	.000	.000
Oil Exp.Fact		1.200	1.200	1.200	1.200	1.200	1.200	1.200
FormGeom.Fac		1.000	1.000	1.000	1.000	1.000	1.000	1.000
RecoveryFact		.200	.200	.200	.200	.200	.200	.200
SWB max		1.000	1.000	1.000	1.000	1.000	1.000	1.000
RWB	ohmm	.100	.100	.100	.100	.100	.100	.100
SWB cut off		.300	.300	.300	.300	.300	.300	.300
RWF	ohmm	.0847375	.0836121	.0832016	.0826081	.0815452	.0803547	.0790349
RMFF	ohmm	.0799288	.0788673	.0784801	.0779203	.0769176	.0757947	.0745498
Sw Eq. CPX		1.000	1.000	1.000	1.000	1.000	1.000	1.000
Sw Eq. SSS		1.000	1.000	1.000	1.000	1.000	1.000	1.000
Glauconite		.000	.000	.000	.000	.000	.000	.000
SWirr.cutoff		.300	.300	.300	.300	.300	.300	.300
Perm Expon.		6.000	6.000	6.000	6.000	6.000	6.000	6.000

Table 8 Basker-2 Petrophysical Input Parameters (Part 4)

Petrolog								
Zone no.		1	2	3	4	5	6	7
Top depth M		2945.130	3041.142	3085.033	3093.110	3161.081	3232.099	3321.101
Bottom depth M		3040.990	3084.881	3092.958	3160.928	3231.947	3320.948	3414.979
Formation Name								
PERM K coef		62500	62500	62500	62500	62500	62500	62500
RHOMA 1	gm/cc	2.650	2.650	2.650	2.650	2.650	2.650	2.650
RHOMA 2	gm/cc	2.895	2.895	2.895	2.895	2.895	2.895	2.895
RHOMA 3	gm/cc	2.937	2.937	2.937	2.937	2.937	2.937	2.937
UMA 1		4.800	4.800	4.800	4.800	4.800	4.800	4.800
UMA 2		10.903	10.903	10.903	10.903	10.903	10.903	10.903
UMA 3		7.117	7.117	7.117	7.117	7.117	7.117	7.117
UF		.400	.400	.400	.400	.400	.400	.400
UMACL		14.027	14.027	14.027	14.027	14.027	14.027	14.027
GR Dispersed		30.000	30.000	30.000	30.000	30.000	30.000	30.000
PHIT Dispers		.0200000	.0200000	.0200000	.0200000	.0200000	.0200000	.0200000
PHIT Laminat		.0500000	.0500000	.0500000	.0500000	.0500000	.0500000	.0500000
PHIT Sand		.100	.100	.100	.100	.100	.100	.100
Up/Us Sand		1.500	1.500	1.500	1.500	1.500	1.500	1.500
Up/Us LS		1.900	1.900	1.900	1.900	1.900	1.900	1.900
Up/Us DOL		1.800	1.800	1.800	1.800	1.800	1.800	1.800
Up/Us UCL		1.700	1.700	1.700	1.700	1.700	1.700	1.700
Up/Us Salt		1.810	1.810	1.810	1.810	1.810	1.810	1.810
Up/Us Trona		2.250	2.250	2.250	2.250	2.250	2.250	2.250
Up/Us Anhyd		1.840	1.840	1.840	1.840	1.840	1.840	1.840
Up/Us Gypsum		2.450	2.450	2.450	2.450	2.450	2.450	2.450

Table 9 Basker-2 Log Header Information (Part 1)

~VERSION INFORMATION		
VERS.	2.0	:CMLS Log ASCII Standard - VERSION 2.0
WRAP.	NO	:One Line per depth step
PROD.	Schlumberger	:LAS Producer
PROG.	DLIS to ASCII 13C0-300	:LAS Program name and version
CREA.	2005/09/12 09:20	:LAS Creation date {YYYY/MM/DD hh:mm}
SOURCE.	FMI_DSI_HRLA_TLD_040LUP.DLIS	:DLIS File Name
FILE-ID.	FMI_DSI_HRLA_TLD_040LUP	:File Identification Number
~WELL INFORMATION		
#MNEM	UNIT DATA	DESCRIPTION
STRT	.M 3415.2840	:START DEPTH
STOP	.M 2905.2012	:STOP DEPTH
STEP	.M -0.1524	:STEP
NULL	. -999.25	:NULL VALUE
COMP	. Anzon	:COMPANY
WELL	. Basker 2	:WELL
FLD	. Basker	:FIELD
LOC	. VIC/RL6	:LOCATION
CNTY	. Ocean Patriot	:COUNTY
STAT	. Victoria	:STATE
CTRY	. Australia	:COUNTRY
API	.	:API NUMBER
UWI	.	:UNIQUE WELL ID
DATE	. 11-Sep-2005	:LOG DATE {DD-MMM-YYYY}
SRUC	. Schlumberger	:SERVICE COMPANY
LATI	.DEG 38 17' 58.51" S	:LATITUDE
LONG	.DEG 148 42' 24.72" E	:LONGITUDE
GDAT	.	:GeoDetic Datum

Table 9 Basker-2 Log Header Information (Part 2)

~PARAMETER INFORMATION		
#MNEM	UNIT VALUE	DESCRIPTION
RUN	. 1	:RUN NUMBER
PDAT	. MSL	:Permanent Datum
EPD	.M 0.000000	:Elevation of Permanent Datum above Mean Sea Level
EPD	.M 0.000000	:Elevation of tool zero above Mean Sea Level
LMF	. DF	:Logging Measured From (Name of Logging Elevation Reference)
APD	.M 21.500000	:Elevation of Depth Reference (LMF) above Permanent Datum
~CURVE INFORMATION		
#MNEM	UNIT API CODE	DESCRIPTION
DEPT	.M	:DEPTH (BOREHOLE) {F10.4}
SP	.MU	:SP Shifted {F13.4}
RM_HRLT	.OHMM	:HRLT Mud Resistivity {F13.4}
RLA1	.OHMM	:HRLT Borehole Corrected Resistivity 1 {F13.4}
RLA2	.OHMM	:HRLT Borehole Corrected Resistivity 2 {F13.4}
RLA3	.OHMM	:HRLT Borehole Corrected Resistivity 3 {F13.4}
RLA4	.OHMM	:HRLT Borehole Corrected Resistivity 4 {F13.4}
RLA5	.OHMM	:HRLT Borehole Corrected Resistivity 5 {F13.4}
HTHO	.PPM	:HNGS Formation Thorium Concentration {F13.4}
HURA	.PPM	:HNGS Formation Uranium Concentration {F13.4}
HFK	.U/U	:HNGS Formation Potassium Concentration {F13.4}
HSGR	.GAPI	:HNGS Standard Gamma Ray {F13.4}
HCCR	.GAPI	:HNGS Computed Gamma Ray {F13.4}
GR	.GAPI	:Gamma-Ray {F13.4}
HCAL	.IN	:HRCC Cal. Caliper {F13.4}
DS08	.IN	:HRDD High Resolution Density Standoff {F13.4}
HDRA	.G/C3	:HRDD Density Correction {F13.4}
PEF8	.	:HRDD High Resolution Formation Photoelectric Fa
RH08	.G/C3	:HRDD High Resolution Formation Density {F13.4}
RX08	.OHMM	:MCFL High Resolution Invaded Zone Resistivity {
RS08	.IN	:MCFL High Resolution Resistivity Standoff {F13.
EHGR	.GAPI	:HiRes Gamma-Ray {F13.4}
HTNP	.U/U	:HiRes Thermal Neutron Porosity {F13.4}
DEVI	.DEG	:Hole Deviation {F13.4}
ANOR	.M/S2	:Acceleration Computed Norm {F13.4}
FNOR	.A/M	:Magnetic Field Computed Norm {F13.4}

Table 9 Basker-2 Log Header Information (Part 3)

FNOR	.A/M	:Magnetic Field Computed Norm {F13.4}
HAZI	.DEG	:Hole Azimuth {F13.4}
P1AZ	.DEG	:Pad 1 Azimuth {F13.4}
RB	.DEG	:Relative Bearing {F13.4}
C1	.IN	:Caliper 1 {F13.4}
C2	.IN	:Caliper 2 {F13.4}
CDF	.N	:Calibrated Downhole Force {F13.4}
ITT	.S	:Integrated Transit Time {F13.4}
DTCO	.US/F	:Delta-T Compressional {F13.4}
DTSM	.US/F	:Delta-T Shear {F13.4}
PR	.	:Poisson's Ratio {F13.4}
UPVS	.	:Compressional to Shear Velocity Ratio {F13.4}
DT1	.US/F	:Delta-T Shear - Lower Dipole {F13.4}
DT2	.US/F	:Delta-T Shear - Upper Dipole {F13.4}
DT4P	.US/F	:Delta-T Compressional - Monopole P&S {F13.4}
DT4S	.US/F	:Delta-T Shear - Monopole P&S {F13.4}
TENS	.LBF	:Cable Tension {F13.4}
HDAR	.IN	:Hole Diameter from Area {F13.4}

8. PRESSURE DATA, SAMPLING AND INTERPRETATION

Summary

A large number of MDT (Modular Dynamics Tester) pressures were acquired in Basker-2. The results have achieved the following objectives:

- To determine if any pressure depletion had occurred in the Basker Field as a result of pressure decline in the Gippsland Basin aquifer
- To establish the base water line through the water sands intersected by Basker-2 to aid the identification of hydrocarbon bearing sands and any hydrocarbon-water contacts
- To identify hydrocarbon bearing zones based on fluid gradients drawn through the pressure points in the various sands, and
- To determine if any common OWC's exist between Basker-1 and Basker-2.

The MDT pressures in Basker-2 are generally lower than those measured in Basker-1 by 25 to 40 psi. The pressure difference is believed to be due to pressure depletion, resulting from basin-wide production. The average depletion is about 35 psi. The pressure depletion provides strong evidence that the Basker aquifer is connected with the main Gippsland Basin aquifer, and that the water drive may be stronger than previously thought.

A clear water line with a gradient of 1.5 psi/m (0.457 psi/ft) was established through the clean water sands in Basker-2. This is similar to the Basker-1 water gradient of 1.476 psi/m (0.45 psi/ft).

Several oil bearing sands in Basker-2 have 3 to 4 pressure points in each. The oil gradients through these points are not uniform, being within the range 0.87–0.96 psi/m.

The identification of hydrocarbons in Basker-2 was aided by log analysis, pressure gradients and fluid recovery, either by pump-out with the MDT or by sampling. Several OWC's have been identified in Basker-2. The OWC of Zone 2 in Basker-2 was found to be the same as the OWC of Zone 2 in Basker-1. Since log correlation between Basker-1 and Basker-2 is difficult, the identification of equivalent sands between the two wells will depend on reservoir fluid characterisation. For example, gas was recovered by sampling in Zone 6.1 at 3263.5mMDRT (3187.8mTVDSS). Subsequent laboratory analysis indicates that this gas is not in equilibrium with the oil in zone 6.2 below. The zone 6.1 gas therefore appears to be an isolated accumulation, and there is no GOC between the two zones.

The main results of the MDT pressure analysis are summarised below.

Zone	OWC (mSS)	Oil Column (m)	Oil Gradient (psi/m)	Comments
0	2977.5	0.5	1.0	New oil zone not seen in B-1
1.1		Gas		Gas zone
1.2	3051.5	9	0.87	New oil zone not seen in B-1
2	3091.0	21	1.0	OWC identical to Zone 2 of B-1
3				No net pay in B-2
4		Water		
5		Oil		Not connected to aquifer ?
6.1		Gas		Not seen in B-1
6.2	3244	44	0.96	Not in communication with 6.1

8.1 Comparison Between Basker-1 and Basker-2 Pretest Pressures

Figure 1 compares the pre-test pressures of Basker-1 and Basker-2. The difference is not uniform but varies generally from 25 to 40 psi, with an average of about 35 psi. One or two data points exhibit no pressure depletion, such as point #28 and #28/1 at 3169.2mTVDSS. The sand surrounding this point is probably not connected to the aquifer and is of limited extent.

8.2 Basker-2 Water Line and MDT Pressures

The MDT pressures measured in the water sands in Basker-2 are displayed in **Figure 2**. The best fit trend line has the equation $p = -1.5 \times \text{Depth} - 175$ psia where depth is expressed as a negative value. This water line is applicable to Basker-2 only due to pressure depletion in the Gippsland Basin aquifer.

Figure 3 displays all the MDT pressures measured in Basker-2 and the water line calculated with the trend line equation. The OWC's in the oil bearing intervals are determined by zooming into each portion of Figure 2 as described below.

Zone 0 (Oil) Perforations 3022.3 – 3026.6mMDRT (2974.5 – 2978.2mTVDSS)

This zone is absent in Basker-1. The enlarged MDT chart is shown in **Figure 4**. Since there is only one data point, we arbitrarily used an oil gradient of 1.0 psi/m. The MDT pre-test #3 is 0.5m above the OWC at 2977.5mTVDSS. A shale break occurs immediately below 2977.5mTVDSS. It is possible that the actual OWC may be deeper.

Zone 1.1 (Gas) (Not perforated)

A gas sample was recovered at 3044.5mMDRT (2993.8mTVDSS). If a gas gradient is drawn through this point, a possible GWC at 2995mTVDSS may be interpreted.

Zone 1.2 (Oil) Perforations 3097.6 - 3102.3mMDRT (3040.4 - 3044.5mTVDSS) and 3104.6 - 3109.0mMDRT (3046.6 - 3050.4mTVDSS)

This is a new oil zone seen in Basker-2 only. The enlarged MDT pressure plot is shown in **Figure 5**. There are three MDT pre-test points which appear to lie in a straight line with an oil

gradient of 0.87 psi/m. The OWC is picked at 3051.5mTVDSS, and the vertical oil column height is 9m from MDT pre-test #15.

Zone 2 (Oil) Perforations 3130.6 - 3141.6mMDRT (3069.5 - 3079.2mTVDSS)

The enlarged MDT plot is shown in **Figure 6**. There are three data points which appear to lie in a straight line with an oil gradient of 1.0 psi/m. The OWC is picked at 3091mTVDSS, and the vertical oil column is 21m from MDT pre-test #18 to the OWC.

Zone 5 (Oil) Perforations 3239.6 - 3243.6mMDRT (3166.4 - 3170.0mTVDSS)

There were two pretests in this sand and one 450cc oil sample was recovered. The pressures (#28 and #28/1) on **Figure 7** appear to be the same as those measured in Basker-1 at the same depths. Either the pretest pressures were supercharged or the sand is limited in extent and not connected to the Gippsland Basin aquifer.

Zone 6.1 (Gas) Perforations 3261.7 – 3269.3mMDRT (3186.2 – 3193.1mTVDSS)

The two pretests (#29 and 29/1) in **Figure 7** were very close to each other. One 2 ¾ gallon gas + condensate sample was recovered from this sand. It was included in the perforation interval and later found to produce gas during the EPT. If a gas gradient is drawn through the pretest pressures, it intersects the water line at 3210mTVDSS.

**Zone 6.2 (Oil) Perforations 3273.0 – 3283.0mMDRT (3196.4 – 3205.4mTVDSS)
3287.0 – 3291.0mMDRT (3209.0 – 3212.6mTVDSS)**

The two sand bodies in this zone appear to be in the same pressure system. A line through the pretests #30 and 32 (#31 is tight) on **Figure 7** has a gradient of 0.96 psi/m which indicates oil. The oil gradient intersects the water line at 3244mTVDSS.

Intra Volcanics Below 3268.7mTVDSS

The intra volcanics sands were not perforated. Analysis of a 450 cc sample recovered from 3257.3mMDRT (3272.12mTVDSS) indicates it is gas condensate. The enlarged MDT pressure plot is shown in **Figure 8**. The depth of the hydrocarbon-water contact was not determined as no fluid density at reservoir conditions is available.

8.3 Basker-1 RFT Pressures and Oil Water Contacts

The OWC's in Basker-1 were interpreted from the RFT pressures by RISC, and the procedure was documented in the RISC 1998 reservoir simulation report. The results were widely used by Shell, Woodside and Anzon prior to Basker-2. In this report, the Basker-1 OWC's are reviewed by the same procedure as described for Basker-2.

Basker-1 Water Line

The water points of the three wells Basker-1, Basker-South-1 and Manta-1 are plotted together on **Figure 9**, a few stray points were edited out. The trend lines through the data points of each well virtually coincided with each other. An average water line has been derived with the equation

$$p = 1.4755 * \text{Depth} - 72.935 \quad \text{psia} \quad (\text{Depth is in metres})$$

The average water gradient is the same as the value derived by RISC.

Figure 10 shows all the Basker-1 RFT pressures, with the calculated water line included. There is significant uncertainty with interpretation of column heights for the deeper reservoirs

(below 3100mTVDSS), because of a paucity of reliable pressure readings to define the gradient and position of the water line.

The Oil Gradient

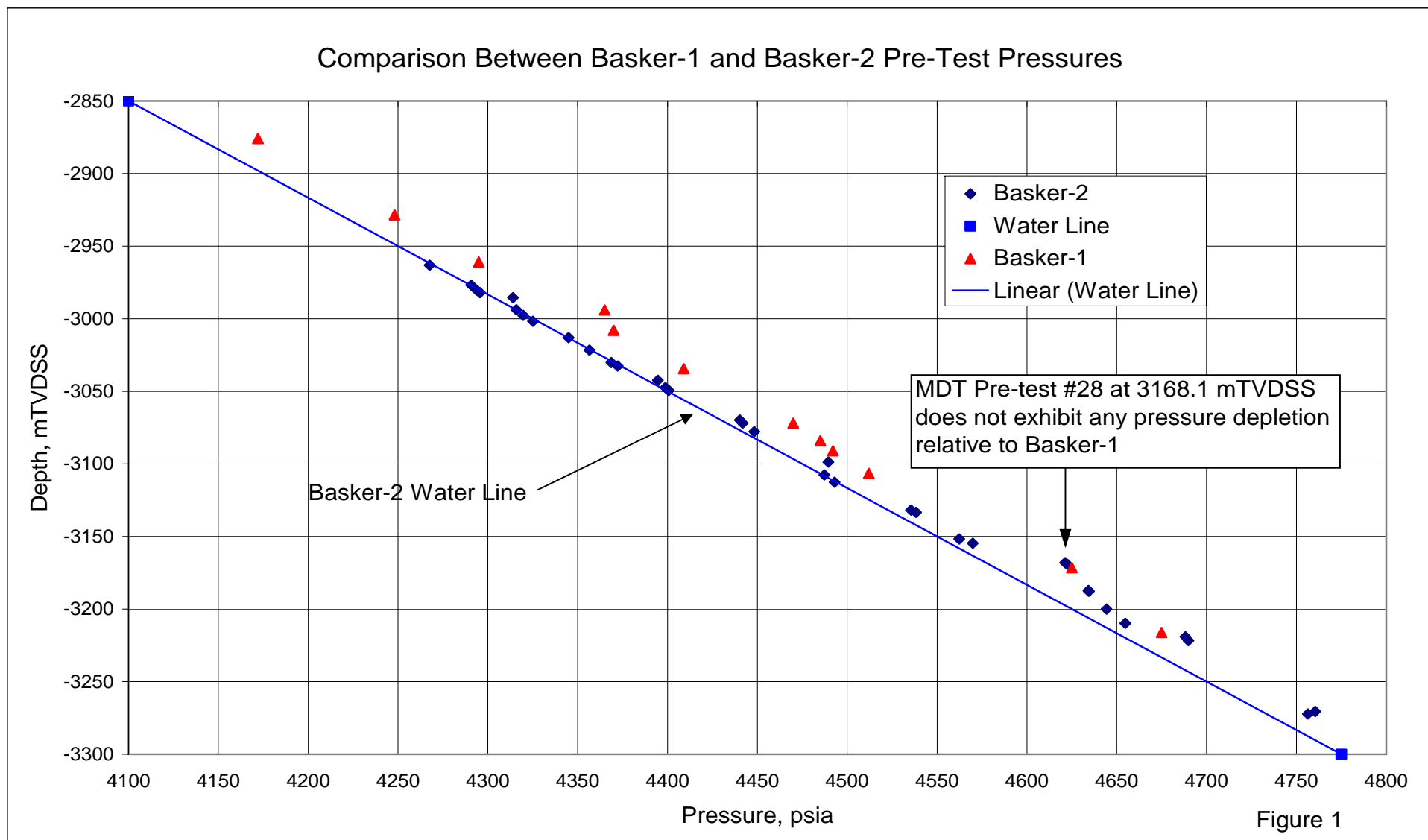
There was only one RFT pressure for each oil reservoir in Basker-1 except Zone 3 which has two points. RISC used an oil gradient of 0.908 psi/m, but their plots were on a scale too small to be considered accurate. Based on the oil density of 0.644 g/cc measured on a PVT sample at reservoir conditions and the water density derived from the water line, the oil gradient was calculated to be equal to $0.644 * 1.4755 = 0.95$ psi/m which will be used instead of RISC's gradient.

Basker-1 OWC's

It was seen in Basker-2 that even if 2 or 3 data points are available, the oil gradient is not uniform. The OWC's in Basker-1 were re-determined with an oil gradient of 0.95 psi/m by zooming into the various reservoir intervals on Figure 10. The results are plotted on **Figures 11 and 12**, and compared with the original OWC's determined by RISC in the following table.

Zone	Anzon 2005 0.95 psi/m	RISC 1998 0.908 psi/m
2	3091	3088
3	3099	3091
4	3109	3108
5	3206	3209
6	3220	3227

In Zones 2, 3 and 4, the corrected OWC's are slightly deeper than the 1998 values determined by RISC. In Zones 5 and 6, the corrected OWC's are slightly shallower. One important result is that the corrected OWC at 3091mTVDSS in Zone 2 in Basker-1 becomes identical to the OWC in Zone 2 in Basker-2.



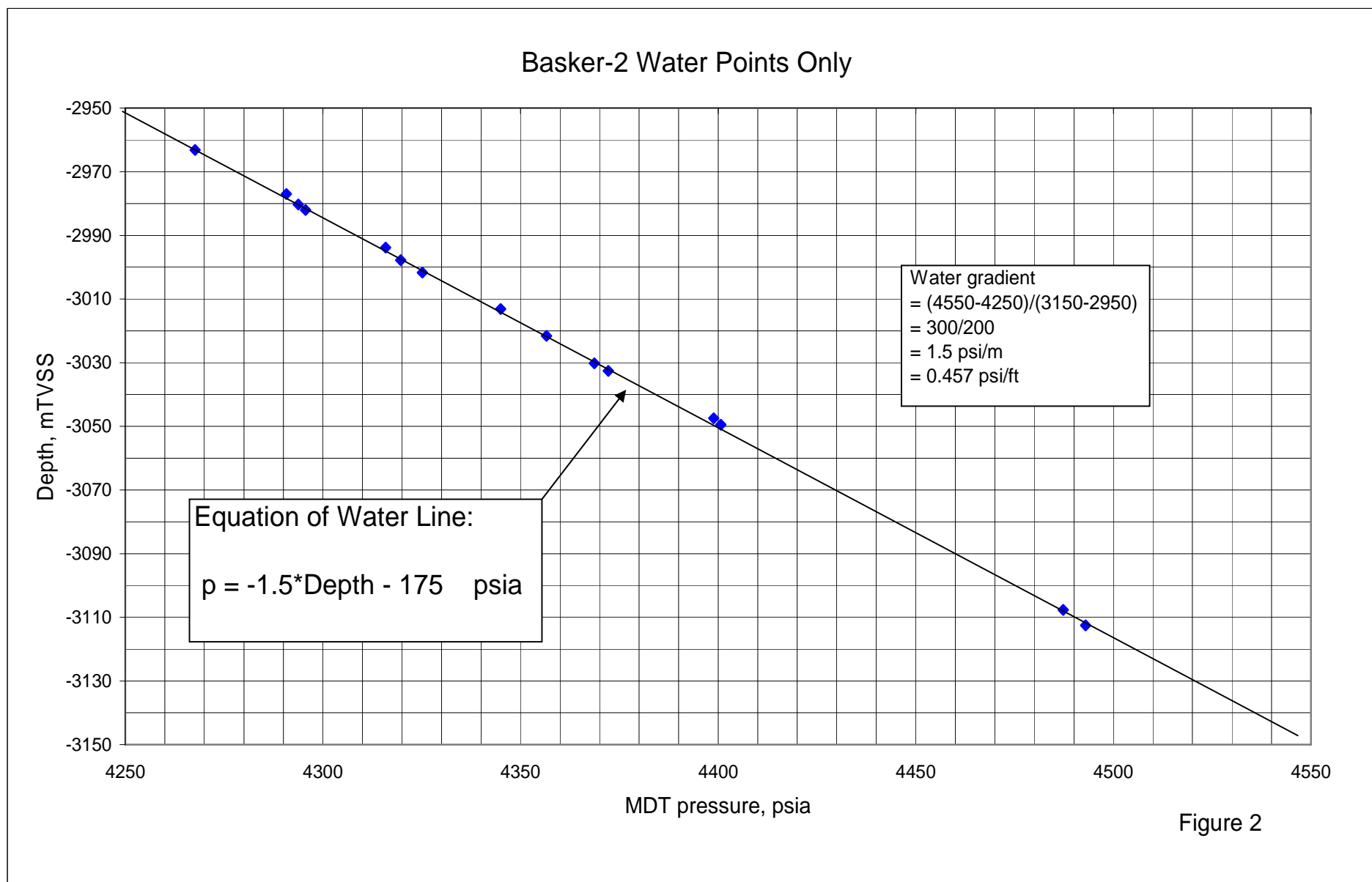
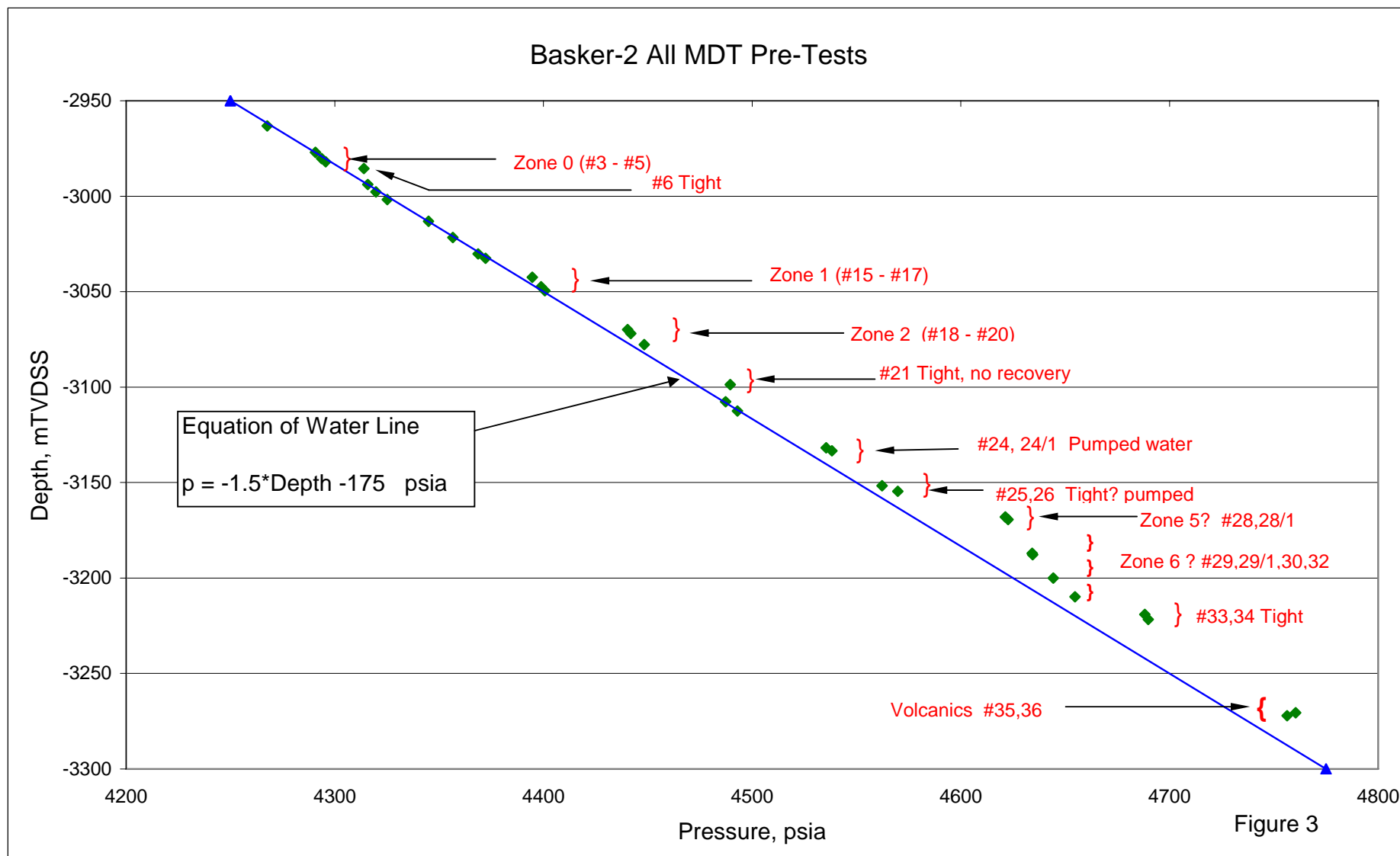
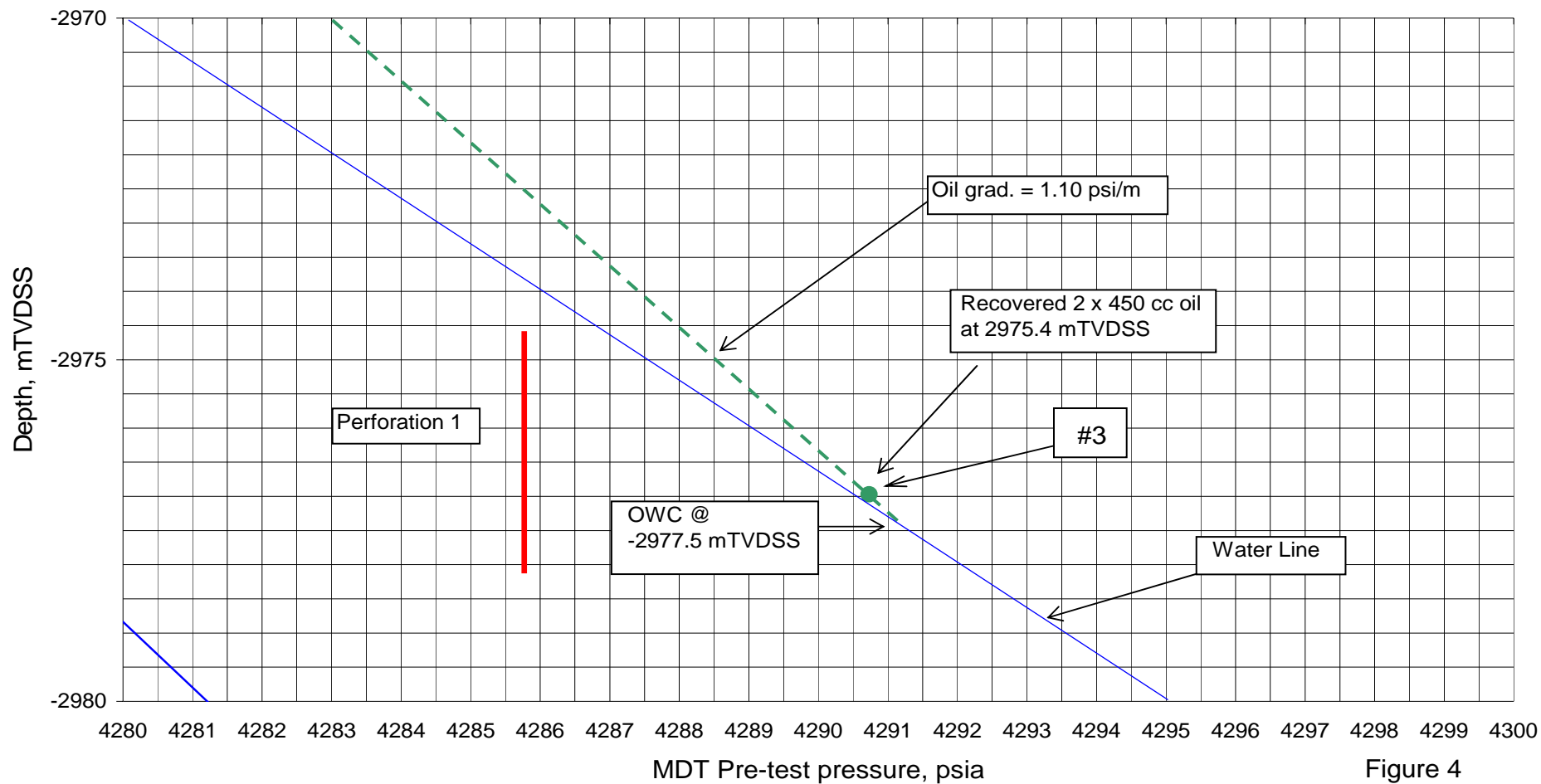
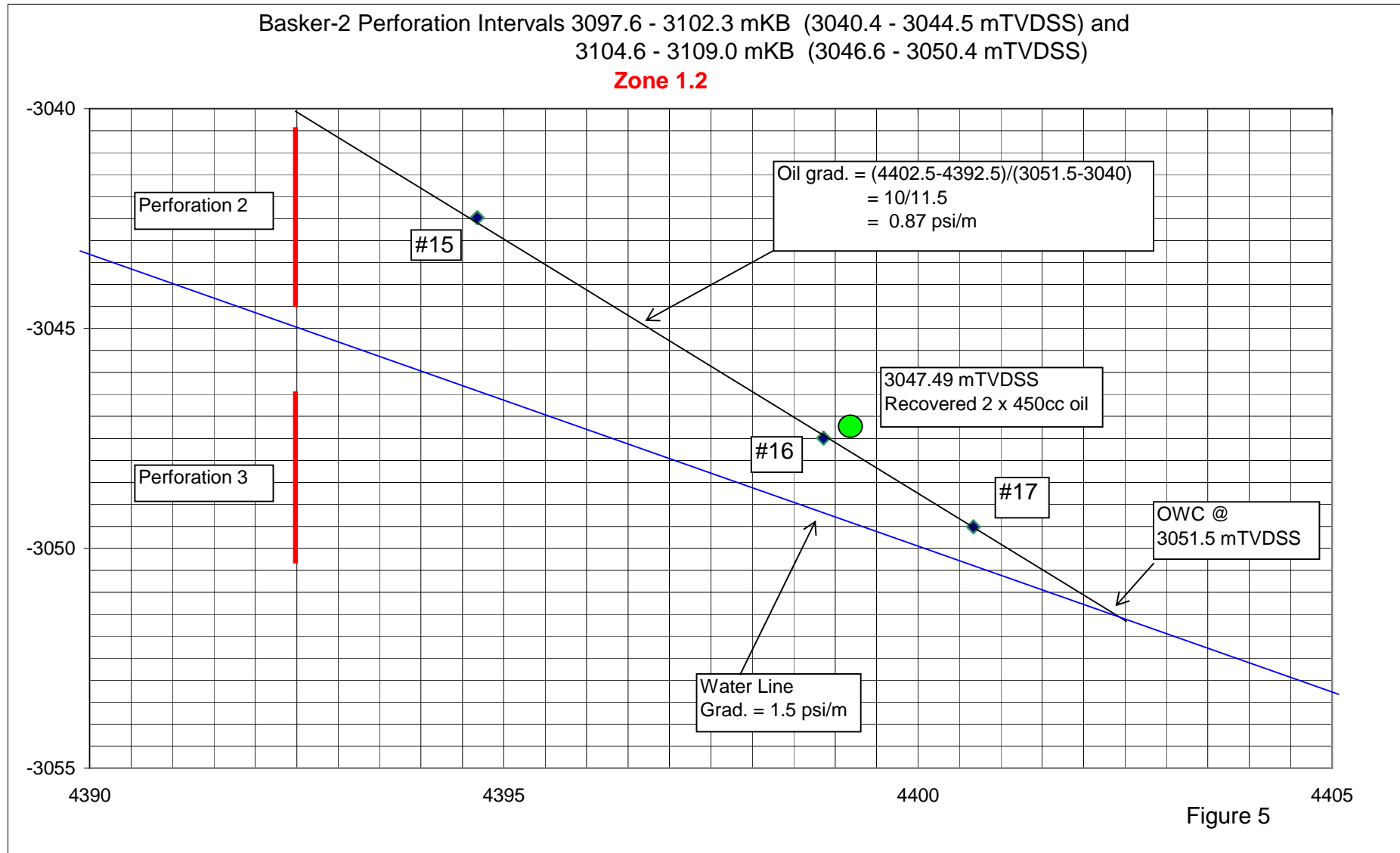


Figure 2



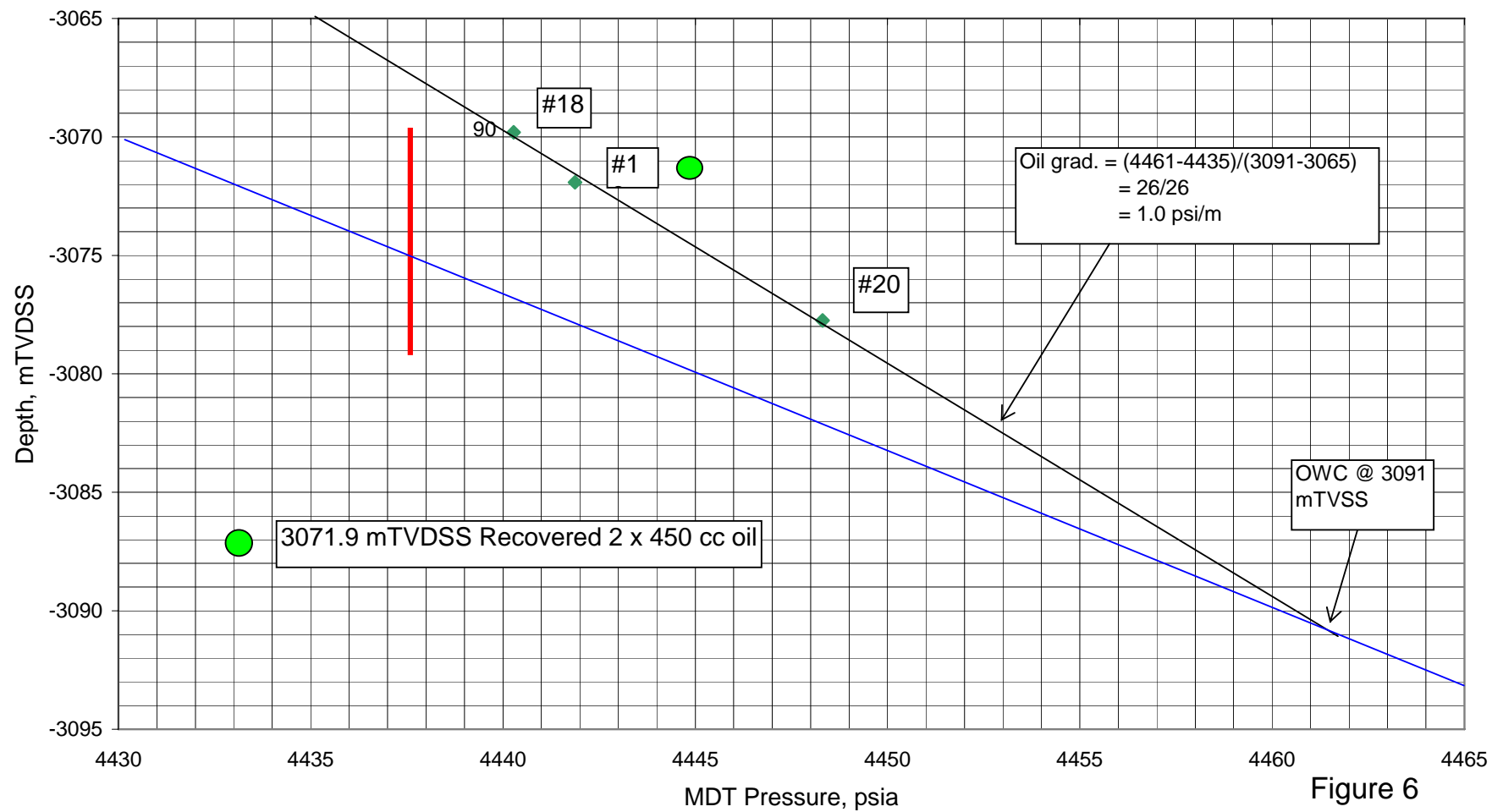
Basker-2 Perforation Interval 3022.3 - 3026.6 mKB (2974.5 - 2978.2 mTVDSS)
Zone 0





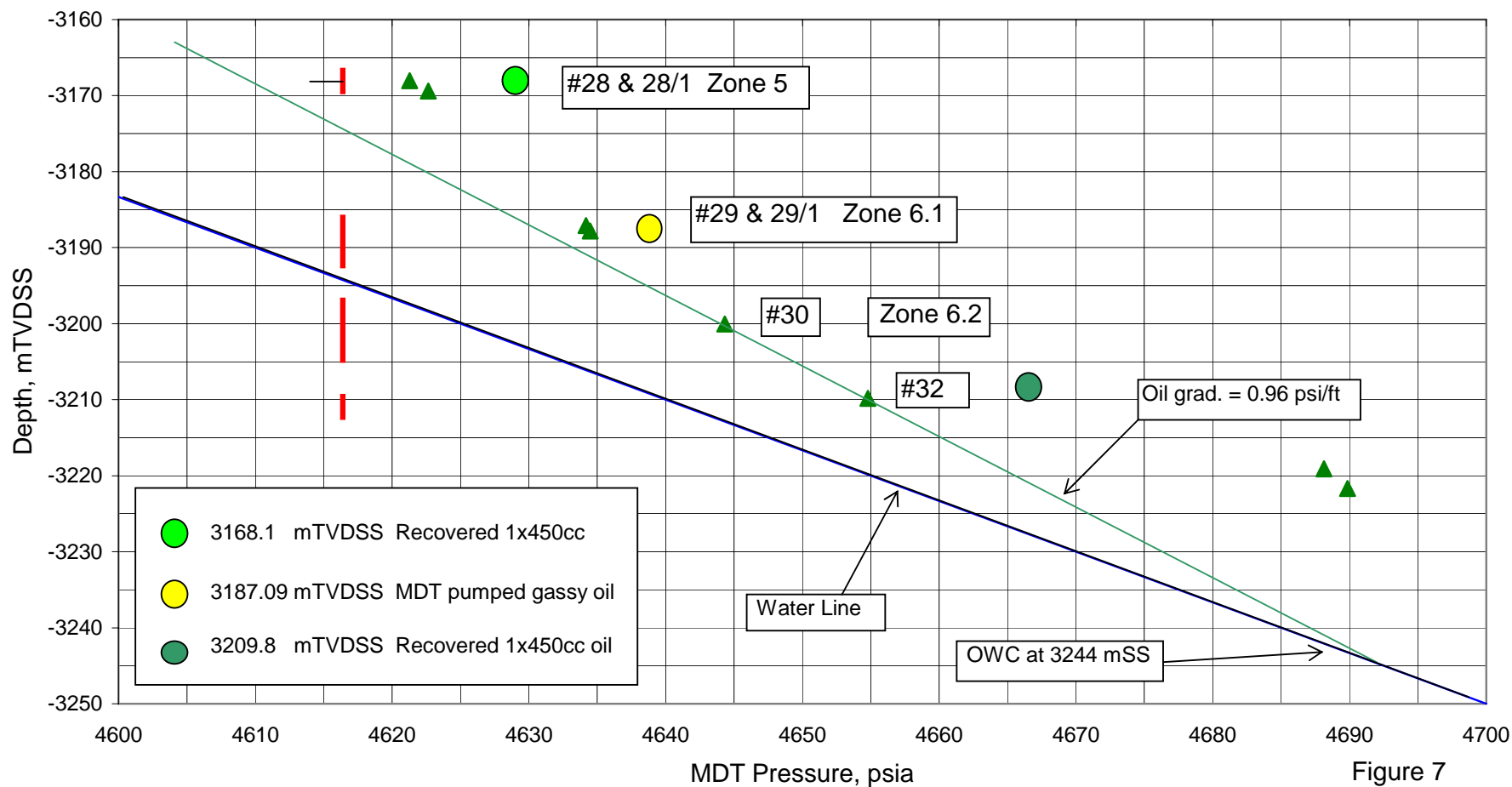
Basker-2 Perforation Interval 3130.6 - 3141.6 mKB (3069.5 - 3079.2 mTVDSS)

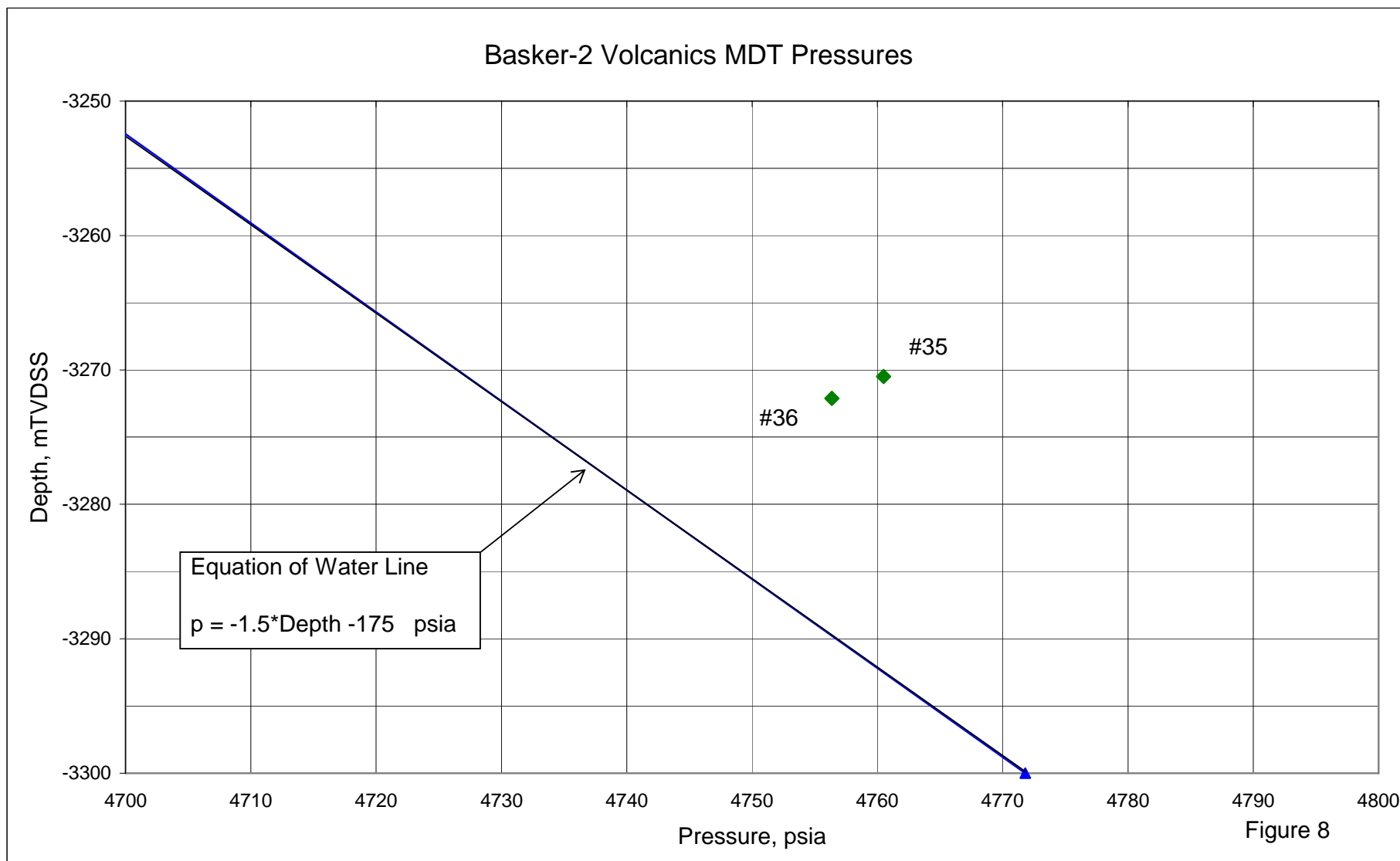
Zone 2

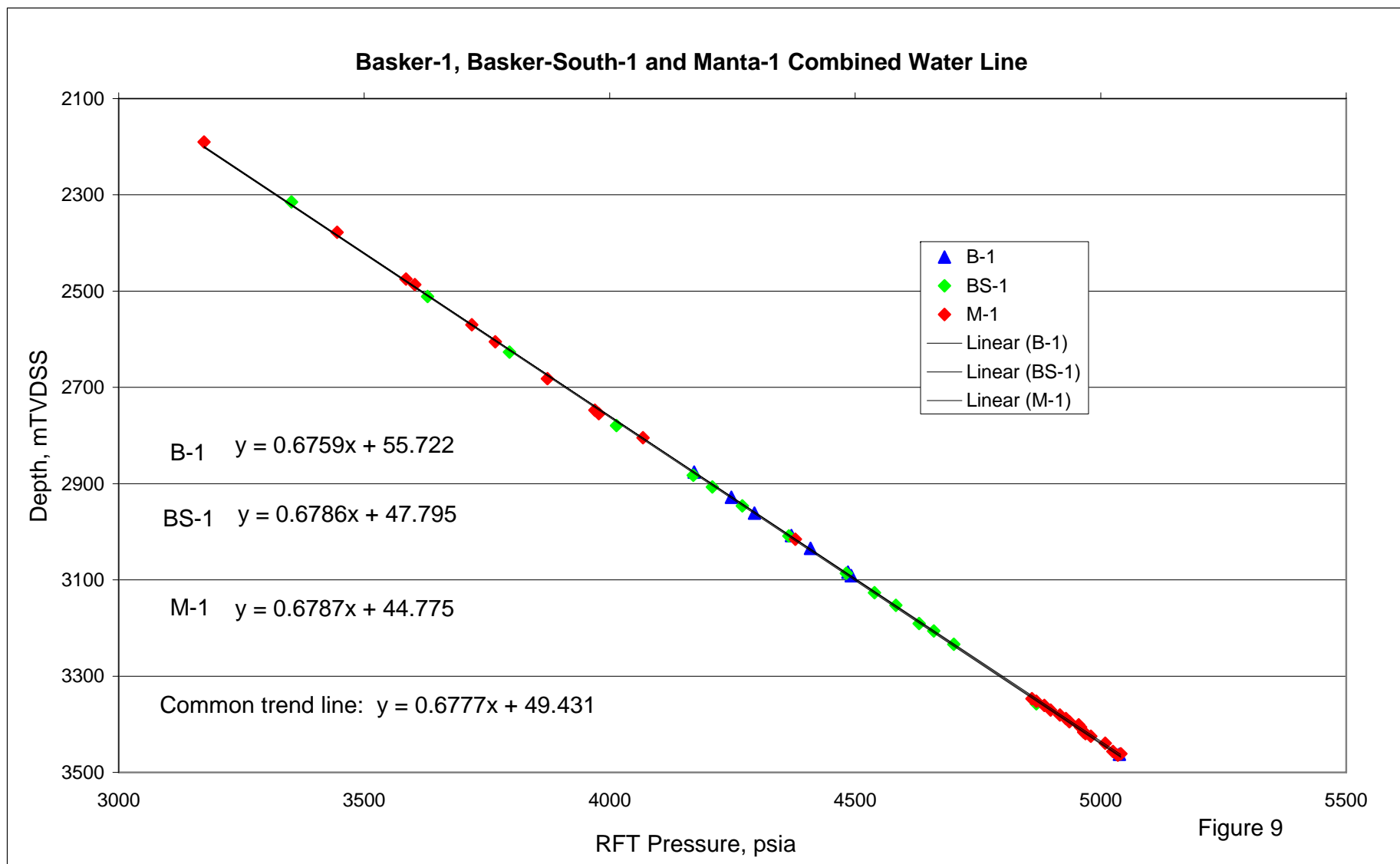


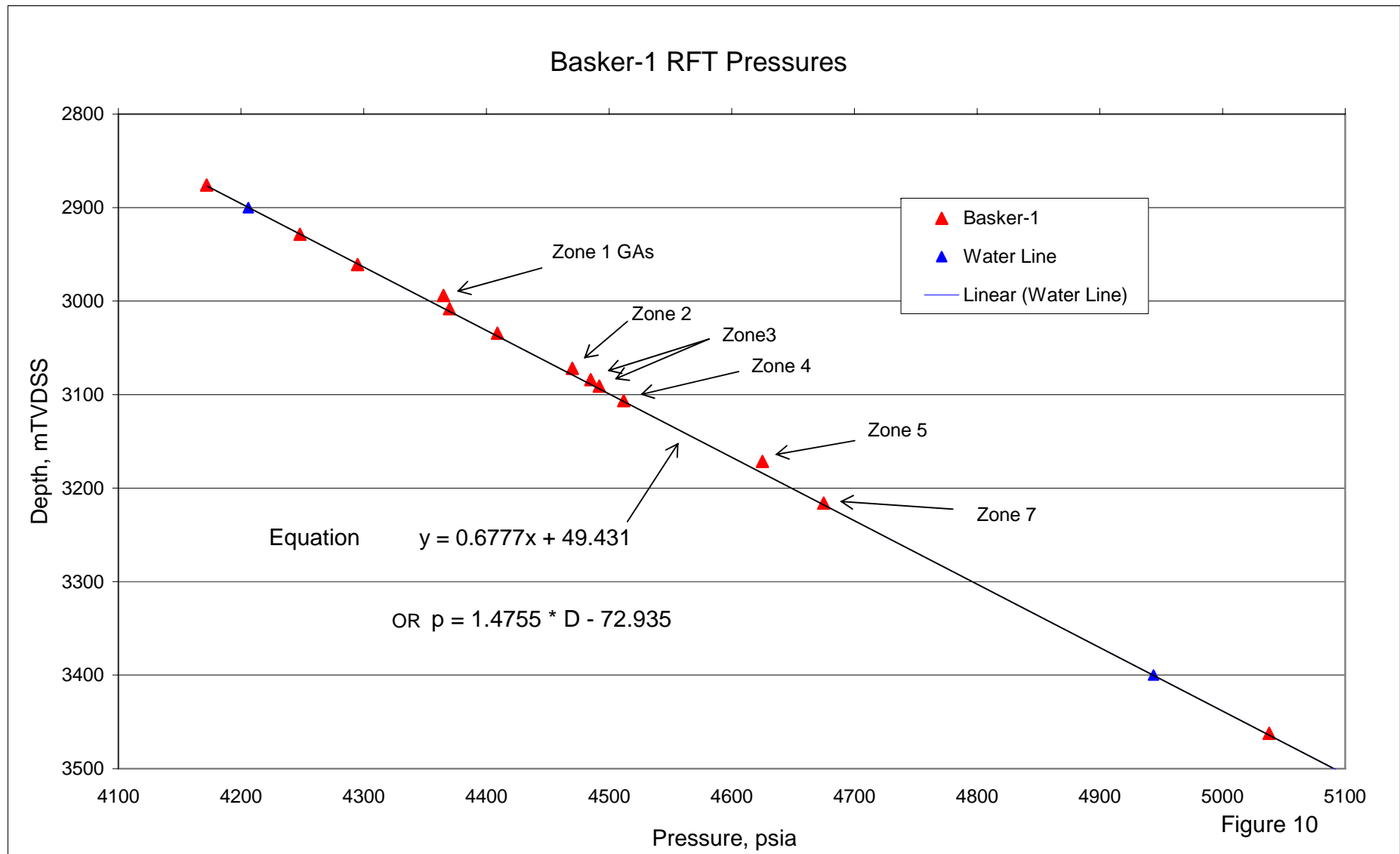
Basker-2 Perforation Intervals 3239.6 - 3243.6 mKB (3166.4 - 3170.0 mTVDSS) and
 3261.7 - 3291.0 mKB (3186.2 - 3212.6 mTVDSS)

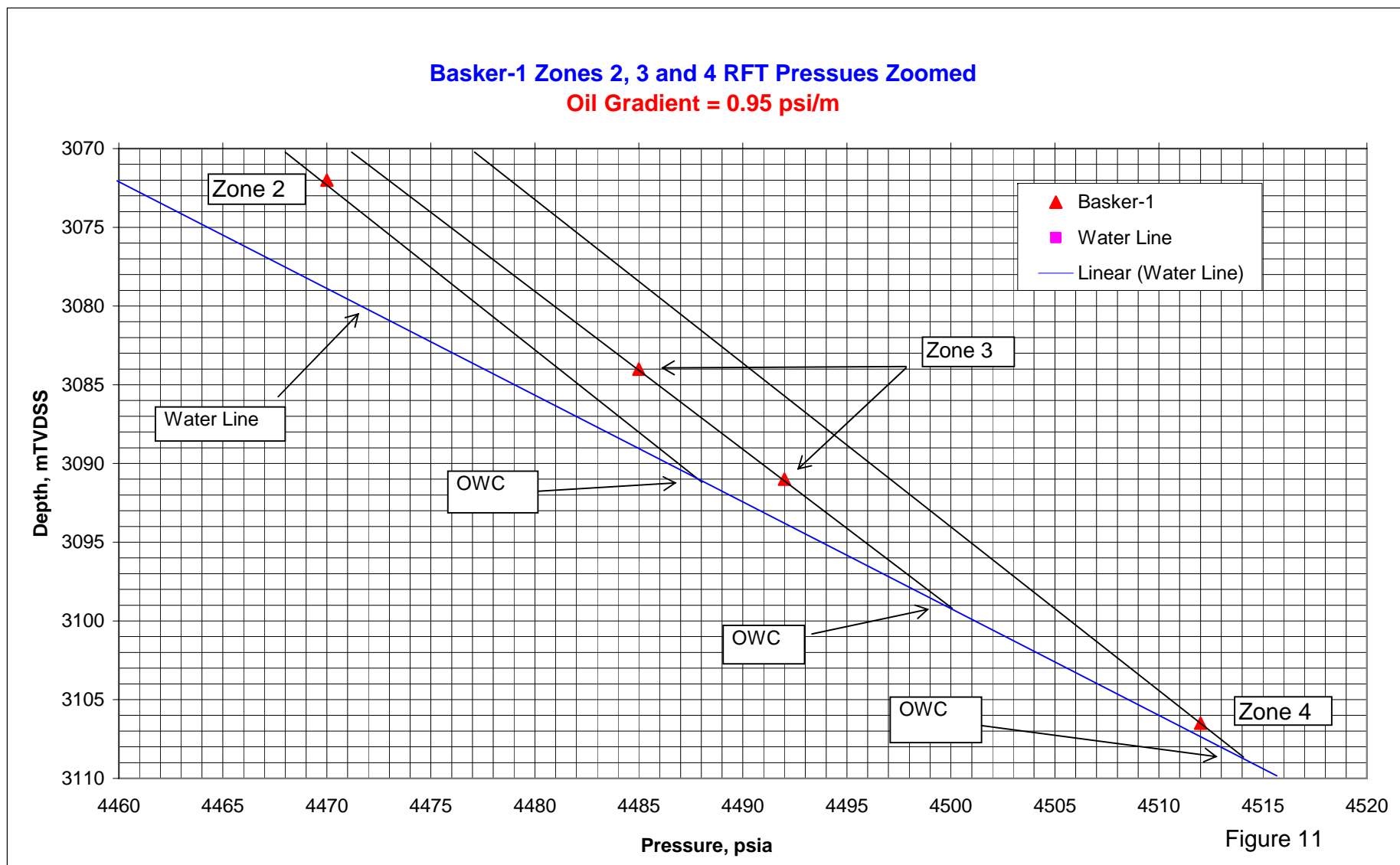
Zone 5 / 6.1 / 6.2











Basker-1 Zone 5 and Zone 6 RFT Ppressures Zoomed

Oil Gradient = 0.95 psi/m

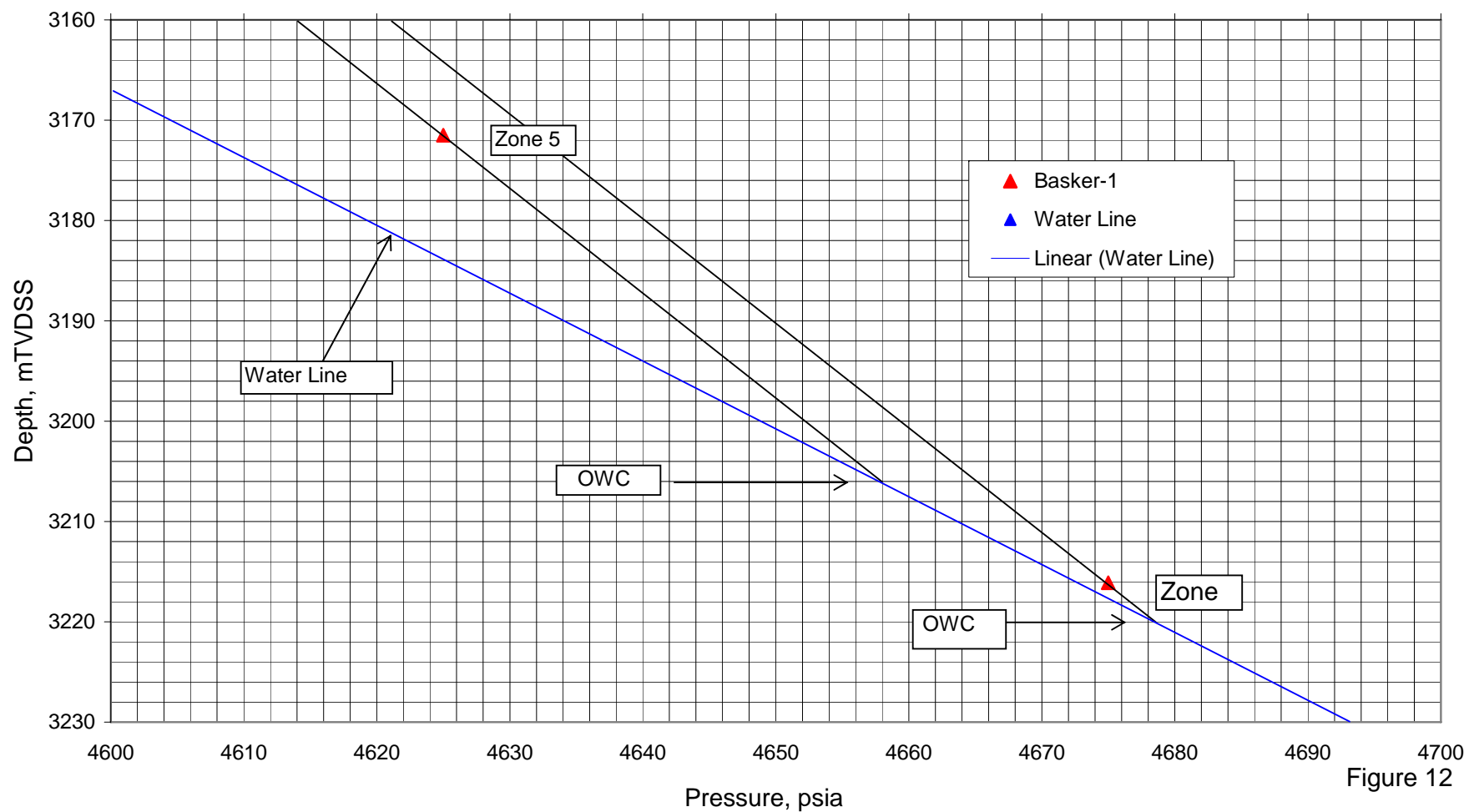


Figure 12