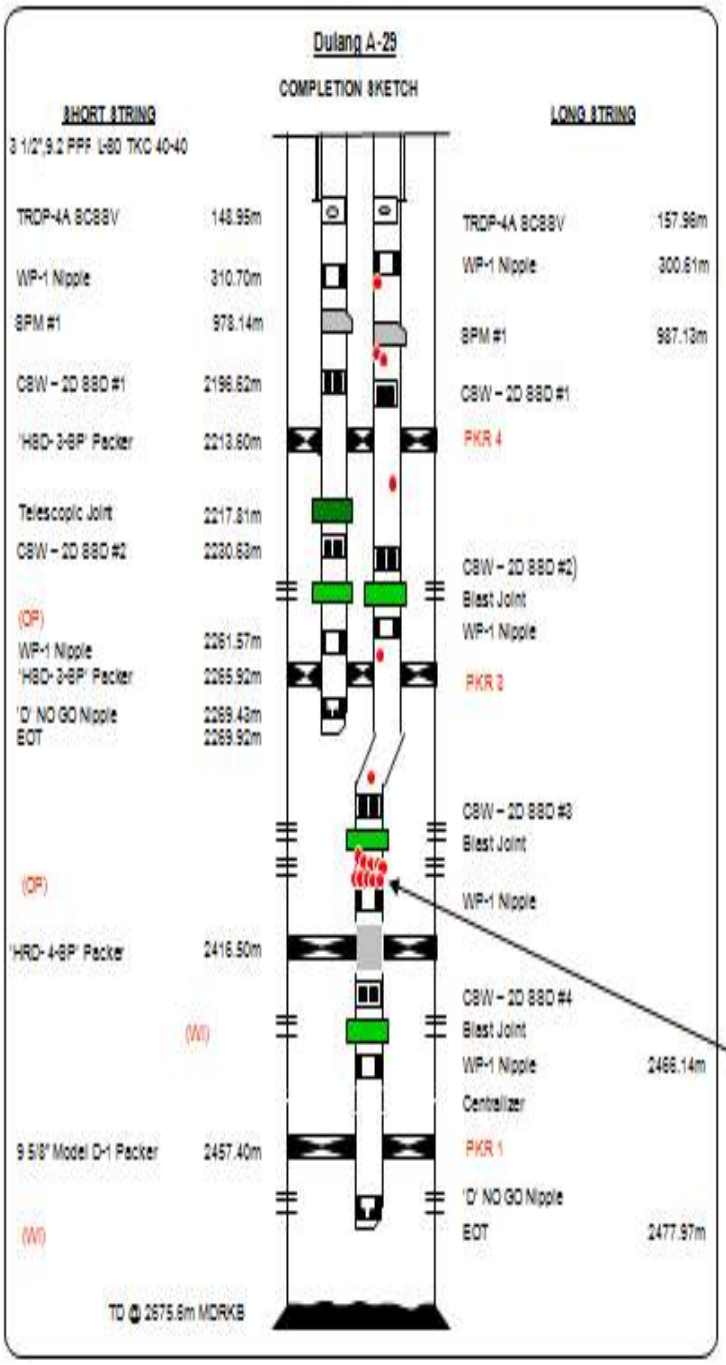
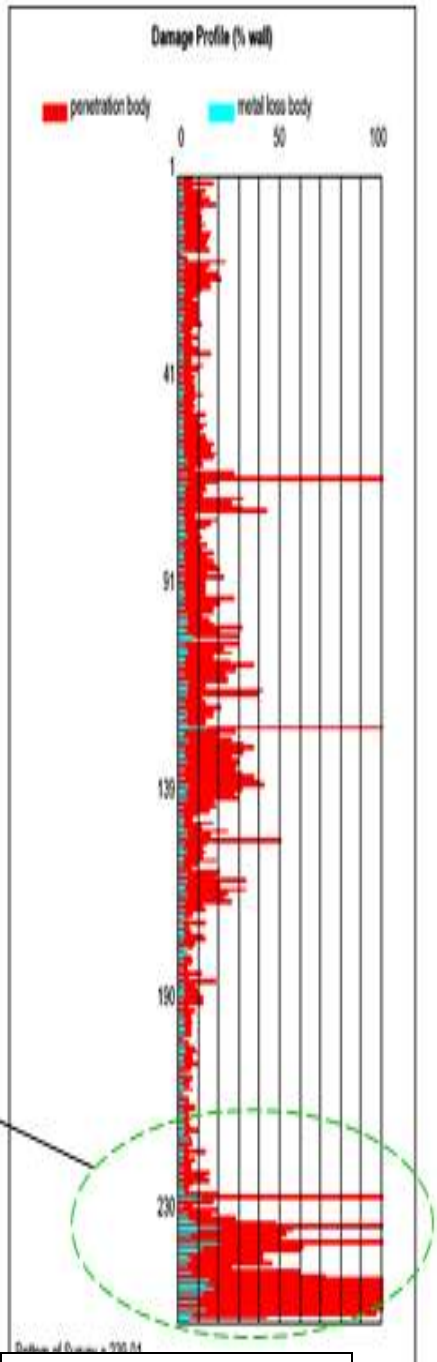
Appendix I: The Existing Completion Diagram on Well DLA-29





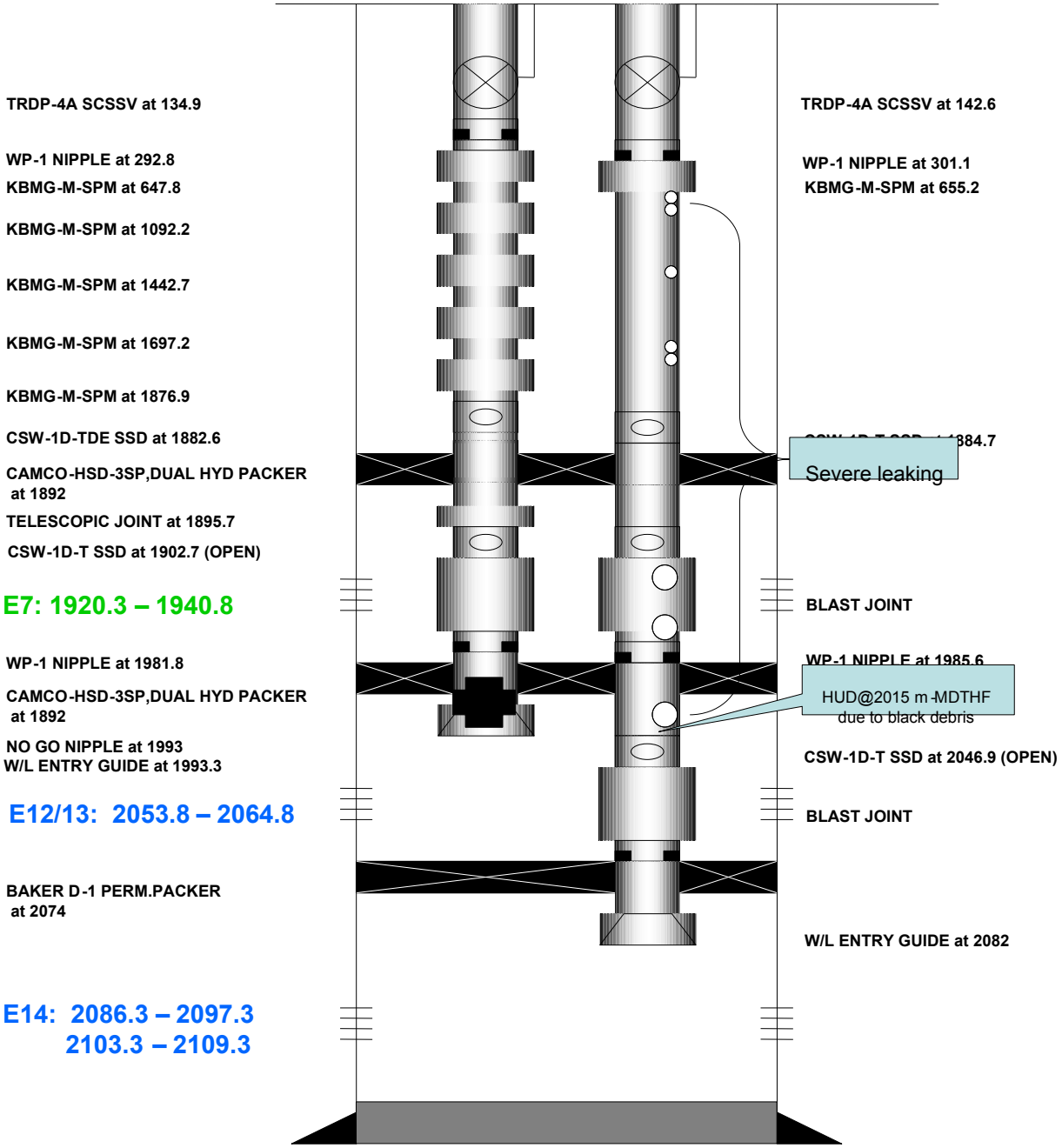
The MIT result shown 100% penetration of the tubing wall indicates that tubing has been leak.

Appendix II: The Existing Completion Diagram on Well DLA-32

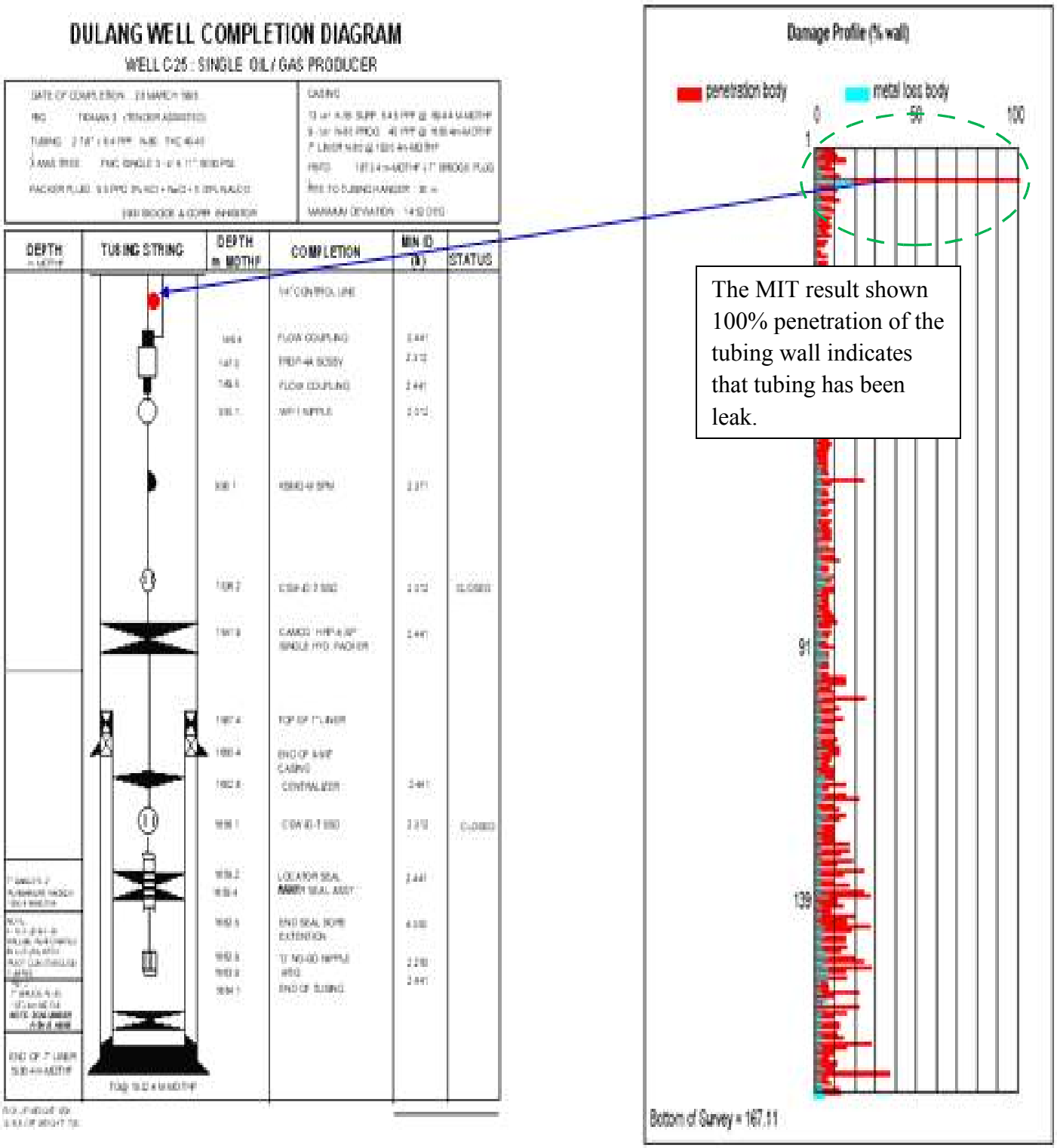
A-32 DUAL OIL PRODUCER/WATER INJECTOR WITH SHORT STRING SELECTIVE -EXISTING-

DATE OF COMPLETION: **31 MARCH 1994**
RIG: **TEKNIK BENAKAT**
TUBING: **3-1/2" 9.2 PPF L-80 TKC 40/40**
X-MAS TREE: **INGRAM CACTUS, DUAL 3 -1/8"X3-1/8"X11",3M**
PACKER FLUID: **8.8 PPG 3%KCL+NaCl+0.05%NALCO 3900 BIOCIDE & CORROSION INHIBITOR**

CASING: **18-5/8" X-56 COND.87.5 PPF@.....m -MDDF**
13-3/8" X-55 SURF.54.5 PPF@.....m -MDDF
9-5/8" L-80 PROD.40 PPF@ 2177 m -MDDF
PBTD: .....**m-MDDF**
RTE TO TUBING HANGER: **14.7 m**
MAXIMUM DEVIATION: **63 DEGREE**



Appendix III: The Existing Completion Diagram on Well DLC-25



Appendix IV: Glossary of Terms

Barrels Water Per Day The unit measurement of water in oil field unit.

End Of Tubing The end of the lowermost of the tubing part.

Held Up Depth The depth at which the downhole tool get stuck during entering the well.

Long String The longest of the tubing part which is installed inside well.

Multi-finger Imaging Tool The downhole equipment that used to analyse the cross section of the tubing.

Measured Depth Derick Floor The well depth that has been measured from derrick floor (datum) which is taken during drilling operation.

Measured Depth Tubing Head Flange The well depth that has been measured from tubing hanger (datum) which is taken during completing the well.

Measured Depth Rotary Kelly Bushing The well depth that has been measured from rotary kelly bushing (datum) which is taken during drilling operation.

Oil Producer The well producing is oil.

Production Casing Pressure The pressure contain in the gap between the casing and tubing.

Production Logging Tool The downhole tool that has used to check the tubing integrity.

Pound Per Foot The unit measurement of the casing or tubing weight.

Packer The well accessory that used to isolate the hydrocarbon producing zones or fluids injection zones for well management purpose.

Plug Back Total Depth The depth of access cement that has been displaced during the casing cementing job.

Short String The shortest of the tubing part which is installed inside the well.

Side Pocket Mandrel The well accessory that used to provide communication between casing and tubing for well circulation purpose.

Sliding Side Door The well accessory that used to provide communication between hydrocarbon zone and tubing so that allow fluid flowing out to the surface facilities.

Surface Controlled Subsurface Safety Valve The well accessory that used to seal off the downhole tubing in order to prevent the well flowing pressure from coming out to surface during sudden emergency.

Total Depth The total well depth that has been drilled.

Tubing Head Pressure The tubing pressure that has been taken at the Christmas tree (series of valves) at any well flowing or static conditions.

True Vertical Depth The well vetical depth that has been measured from mean sea level (datum) which is taken during drilling operation.

Water Injector The injection well fluid is water.

Wireline Method used to convey the downhole tools in and out of the wells under pressure.

Appendix V: Project Milestone for the First Semester of 2-Semester Final Year Project

No	Detail/Week	1	2	3	4	5	6	7	8	9	10		11	12	13	14
1	**Literature Review**	■	■	■	■							Mid-Semester Break				
	Background History															
	Corrosion															
	Similar Cases Happen															
2	**Submission of Preliminary Report**				●											
3	**Acquire the Sample**				■	■	■	■								
4	**Preliminary Examinations**						■	■								
	Visual Examination															
5	**NDT**								■	■						
	Magnetic Particle Test (MPT/MPI)															
6	**Mechanical Testing**								■	■	■					
	Hardness Tests - Rockwell C															
7	**Seminar 1**								●							
8	**Submission of Progress Report**										●					
9	**Macroscopic Examinations**										■		■	■		
	Magnifications ranging from 1-100x															
	Using Optical Microscope (OM)															
10	**Analysis of Metallographic Specimens**												■	■		
11	**Microscopic Examinations**													■	■	■
	Scanning Electron Microscope (SEM)															
12	**Submission of Interim Report**														●	
13	**Oral Presentation**															●

■ Process

● Suggested milestone

Appendix VI: Project Milestone for the Second Semester of 2-Semester Final Year Project

No	Detail/Week	1	2	3	4	5	6	7	8	9		10	11	12	13	14
1	**Project Work Continue**	■	■	■							Mid-Semester Break					
	Mechanical Testing															
	Acquire new sample															
2	**Submission of Progress Report 1**				●											
3	**Project Work Continue**				■	■	■	■	■	■						
	Mechanical Testing (new sample)															
	Optical Microscopy (new sample)															
	Scanning Electron Microscope															
4	**Submission of Progress Report 2**								●							
5	**Seminar 2**								●							
6	**Project Work Continue**											■	■			
	Chemical Analysis															
	Final Analysis & Conclusion															
7	**Poster Exhibition**											●				
8	**Submission of Dissertation (soft bound)**													●		
9	**Oral Presentation**														●	
10	**Submission of Dissertation (hard bound)**															●

■ Process

● Suggested milestone