

## DAFTAR ISI

|                                                        |             |
|--------------------------------------------------------|-------------|
| <b>HALAMAN JUDUL .....</b>                             | <b>i</b>    |
| <b>LEMBAR PENGESAHAN .....</b>                         | <b>ii</b>   |
| <b>PERNYATAAN KEASLIAN KARYA ILMIAH.....</b>           | <b>iii</b>  |
| <b>HALAMAN PERSEMBAHAN .....</b>                       | <b>iv</b>   |
| <b>PRAKATA .....</b>                                   | <b>v</b>    |
| <b>ABSTRAK .....</b>                                   | <b>vi</b>   |
| <b><i>ABSTRACT</i> .....</b>                           | <b>vii</b>  |
| <b>DAFTAR ISI .....</b>                                | <b>viii</b> |
| <b>DAFTAR GAMBAR.....</b>                              | <b>x</b>    |
| <b>DAFTAR TABEL .....</b>                              | <b>xi</b>   |
| <b>DAFTAR LAMPIRAN .....</b>                           | <b>xii</b>  |
| <b>DAFTAR SINGKATAN DAN LAMBANG .....</b>              | <b>xiii</b> |
| <b>BAB I PENDAHULUAN.....</b>                          | <b>1</b>    |
| 1.1. Latar Belakang.....                               | 1           |
| 1.2. Rumusan Masalah .....                             | 2           |
| 1.3. Tujuan.....                                       | 2           |
| 1.4. Batasan Masalah .....                             | 2           |
| 1.5. Lokasi Penelitian .....                           | 2           |
| 1.6. Luaran Penelitian.....                            | 3           |
| 1.7. Manfaat Penelitian.....                           | 3           |
| <b>BAB II TINJAUAN PUSTAKA DAN LANDASAN TEORI.....</b> | <b>4</b>    |
| 2.1. Tinjauan Pustaka .....                            | 4           |
| 2.2. Landasan Teori .....                              | 6           |
| 2.2.1. Tinjauan Lapangan .....                         | 6           |
| 2.2.2. Casing Setting Depth.....                       | 9           |
| 2.2.3. Log Analysis.....                               | 11          |
| 2.2.4. Sifat Mekanika Batuan .....                     | 13          |

|                                                                                                   |                                                               |           |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------|
| 2.2.5.                                                                                            | Tekanan Bawah Permukaan.....                                  | 15        |
| 2.2.6.                                                                                            | Analisis <i>Tubing Performance</i> .....                      | 22        |
| 2.2.7.                                                                                            | Hole Geometry .....                                           | 23        |
| <b>BAB III METODOLOGI PENELITIAN .....</b>                                                        |                                                               | <b>26</b> |
| 3.1.                                                                                              | Metode Penelitian.....                                        | 26        |
| 3.2.                                                                                              | Tahapan Penelitian .....                                      | 26        |
| 3.2.1.                                                                                            | Tahapan Studi Literatur.....                                  | 26        |
| 3.2.2.                                                                                            | Tahapan Pengumpulan Data.....                                 | 26        |
| 3.2.3.                                                                                            | Tahapan Pengolahan dan Analisis Data .....                    | 27        |
| 3.2.4.                                                                                            | Tahapan Penyelesaian dan Penyusunan Laporan .....             | 27        |
| <b>BAB IV PENENTUAN CASING SETTING DEPTH DAN HOLE<br/>GEOMETRY DENGAN PREDIKSI PPF MODEL.....</b> |                                                               | <b>29</b> |
| 4.1.                                                                                              | Data Sumur “MH-01”.....                                       | 29        |
| 4.2.                                                                                              | Penentuan Casing Setting Depth .....                          | 30        |
| 4.2.1.                                                                                            | Penyajian Data Log .....                                      | 30        |
| 4.2.2.                                                                                            | Penentuan Data <i>Sonic Log</i> pada <i>Shale Point</i> ..... | 31        |
| 4.2.3.                                                                                            | Penentuan Normal Compaction Trendline .....                   | 33        |
| 4.2.4.                                                                                            | Penentuan Tekanan <i>Overburden</i> .....                     | 34        |
| 4.2.5.                                                                                            | Penentuan Tekanan Pori .....                                  | 36        |
| 4.2.6.                                                                                            | Penentuan Poisson Ratio .....                                 | 38        |
| 4.2.7.                                                                                            | Penentuan Tekanan Rekah Formasi .....                         | 39        |
| 4.2.8.                                                                                            | Validasi Tekanan Pori dan Tekanan Rekah Formasi .....         | 41        |
| 4.2.9.                                                                                            | Penentuan <i>Mud Weight</i> .....                             | 43        |
| 4.2.10.                                                                                           | Penentuan Tekanan Hidrostatik.....                            | 45        |
| 4.2.11.                                                                                           | Penentuan <i>Equivalent Circulating Density</i> .....         | 47        |
| 4.2.12.                                                                                           | Penentuan Tekanan Hidrodinamis.....                           | 48        |
| 4.2.13.                                                                                           | Perencanaan <i>Casing Setting Depth</i> .....                 | 50        |
| 4.3.                                                                                              | Penentuan Ukuran Tubing.....                                  | 51        |
| 4.4.                                                                                              | Penentuan <i>Hole Geometry</i> .....                          | 53        |
| <b>BAB V HASIL DAN PEMBAHASAN .....</b>                                                           |                                                               | <b>56</b> |
| <b>BAB VI KESIMPULAN.....</b>                                                                     |                                                               | <b>59</b> |
| <b>DAFTAR PUSTAKA.....</b>                                                                        |                                                               | <b>60</b> |
| <b>LAMPIRAN</b>                                                                                   |                                                               |           |