

Projekt robót geologicznych na wykonanie dwóch studni zastępczych nr IVz i IXz, likwidację studni zastępczej nr IX, przeznaczenie studni nr IVz na piezometr P-1 oraz na wykonanie dwóch piezometrów P-2 i P-3 położonych na działkach nr: 948 (IVz, P-I), 959/1 (IX), 930 (IXz), 947/2 (P-2), 1054 (P-3) obręb 0008 Piszczowice w miejscowości Piszczowice

Przewidywany profil litologiczny studni zastępczej nr IXz i sposób jej zabudowy.

Oznaczenia archiwalne

Nr zał.



Data:  
rozpoczęcia wiercenia .....  
zakończenia wiercenia.....  
pogłębiania.....  
rekonstrukcji.....  
Głębokość.....*55,0*..... Skala 1: *150*.....  
Współrzędne  
x.....*5666739.69*..... y.....*5516305.99*.....  
z.....*247,60 m n.p.m.*.....  
w układzie.....*2000*.....  
Arkusz topograficzny  
1:10 000 .....*M-33-31-C-b-2*.....  
1:100 000 .....

Cel wiercenia  
*studnia na cele pitne*

System wiercenia (aparatury)  
*wiercenie obrotowe systemem mechanicznym na sucho*

Miejsce przechowywania próbek  
*próbki czasowego przechowywania*

Zlecający  
*LPWIK  
ul. Mickiewicza 1b  
59 - 800 Lubań*

Wykonawca

Kierownik otworu

Nadzór geologiczny  
*mgr Grzegorz Pacia  
upr. MSZ.NIL IV-0354  
uprawnienia dozoru ruchu*

Specjalne pomiary i obliczenia

1. Pompowanie oczyszczające: Q = ca 14,0-42,0 m<sup>3</sup>/h  
2. Próbné pompowanie w studni zastępczej nr IVz na trzech stopniach wydajności w warunkach filtracji ustalonej:  
Q1 = 14,0 m<sup>3</sup>/h - 24 h  
Q2 = 28,0 m<sup>3</sup>/h - 24 h  
Q3 = 42,0 m<sup>3</sup>/h - 24 h

Objaśnienia: (cyfry z lewej strony znaków oznaczają rubryki w których należy je umieścić)

|   |                        |   |                                                            |   |                                         |    |                                        |    |                               |    |                     |
|---|------------------------|---|------------------------------------------------------------|---|-----------------------------------------|----|----------------------------------------|----|-------------------------------|----|---------------------|
| 1 | Zerowanie otworu       | 2 | 3m Δ wypływ artestyjski (poz. hydrostat. pow. pow. terenu) | 4 | 6 fauna słodkowodna                     | 7  | S skrobak                              | 14 | Rs obrotowo z rdzeniem śrutem | 16 | zalamo gesta pługka |
| 1 | zamknięcie wody na gł. | 2 | ← słaby wypływ gazu                                        | 7 | 9 fauna morska                          | 7  | P sito, osadnik, itp.                  | 15 | S krzywi                      | 16 | ⊕ bentonit          |
| 1 | rury wyciągnięte       | 2 | ← silny wypływ gazu                                        | 7 | ↓ Cb próba węgla                        | 14 | SZ szapa                               | 15 | korci                         | 16 | ⊕ kompaktont        |
| 2 | poziom ustalony        | 2 | ← wybuch gazu                                              | 7 | ↓ Cw próba wody                         | 14 | SI szlamówka                           | 15 | sciska                        | 16 | ○ obsypka żwirowa   |
| 2 | poziom nawiercony      | 2 | ← ślady ropy                                               | 7 | ↓ Cg próba do badań geotechnicznych     | 14 | SW świder                              | 16 | zailowano bez ubijania        | 16 | ○ pospółka          |
| 2 | wypływ solanki         | 3 | ← strefa zawadniona                                        | 7 | ↓ Ckr próba do badań granulometrycznych | 14 | Pr podwierzeczny                       | 16 | zailowano z ubijaniem         | 16 | likwidacja urobkiem |
|   |                        | 4 | ← flora                                                    | 7 | ↓ R rdzeń                               | 14 | Og obrotowo gryzerm                    | 16 | wbito pal                     | 16 | przybitka           |
|   |                        |   |                                                            | 7 | Z zasyp                                 | 14 | R obrotowo z rdzeniem z poj. koronka   |    |                               |    |                     |
|   |                        |   |                                                            | 7 | N szapa, świder, itp.                   | 14 | RZ obrotowo z rdzeniem z podw. koronka |    |                               |    |                     |

| Zarządzanie i zamykanie poziomów wodonośnych                   | Woda                         |                  | Profil        |                 | OPIS WARSTW  |                |                         |                |                   |                              |                                             | Sposób wierc. i średn. Krzywi. ścisła. sypie tworzą się korki | Sposób likwidacji | Interpretacja geofizyczna złoża   |                                |                        | Sposób zabudowy | Sposób zabudowy  |           |                    | Uwagi |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------|------------------------------|------------------|---------------|-----------------|--------------|----------------|-------------------------|----------------|-------------------|------------------------------|---------------------------------------------|---------------------------------------------------------------|-------------------|-----------------------------------|--------------------------------|------------------------|-----------------|------------------|-----------|--------------------|-------|----------------|-----------|----|----|-----|------|-----|--|--|--|-------------|---------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                                                                | Poziom nawiercony i ustalony | Strefa wodonośna | Flora i fauna | Stratygraficzny | Litologiczny | Próby do badań | Głębokość spagu warstwy | Rzędna warstwy | Miaższość warstwy | Miaższość warstwy bilansowej | Głębokość spagu i stropu warstwy bilansowej |                                                               |                   | Opis warstw wg mgr Grzegorz Pacia | Graficzne przedstawienie złoża | Głębokość spagu warstw |                 | Miaższość warstw | Spąg rury | Obsypka i izolacja |       | Centralizatory | Spąg rury |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1                                                              | 2                            | 3                | 4             | 5               | 6            | 7              | 8                       | 8a             | 9                 | 10                           | 11                                          | 12                                                            | 13                | 14                                | 15                             | 16                     | 17              | 18               | 19        | 20                 | 21    | 22             | 23        | 24 | 25 |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <div><div></div><div>1.0</div><div></div><div>13.0</div></div> |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl | 0,2  | 0,2 |  |  |  | gleba szara |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl | 1,0  | 0,8 |  |  |  |             | pył piaszczysty                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl | 3,0  | 2,0 |  |  |  |             | piasek gruboziarnisty ze żwirem             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl |      | 4,0 |  |  |  |             | głina zwalowa                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl |      | 7,0 |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl |      | 5,0 |  |  |  |             | piasek gruboziarnisty ze żwirem             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl | 12,0 |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl | 13,0 | 1,0 |  |  |  |             | głina zwalowa                               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl |      | 5,0 |  |  |  |             | piasek gruboziarnisty ze żwirem i otoczkami |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                                                |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    | Qpl | 18,0 |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            | 19,0                         | 1,0              |               |                 |              |                | głina zwalowa           |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              | 10,0             |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              | 29,0             |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Qpl                                                            |                              |                  |               |                 |              |                |                         |                |                   |                              |                                             |                                                               |                   |                                   |                                |                        |                 |                  |           |                    |       |                |           |    |    |     |      |     |  |  |  |             |                                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |