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## WARTA KERAJAAN PERSEKUTUAN

### *FEDERAL GOVERNMENT GAZETTE*

#### PERATURAN-PERATURAN PENYIASATAN KAJI BUMI (PEMBERITAHUAN PEMAJUAN TELAGA DAN KOREKAN) 2013

*GEOLOGICAL SURVEY (NOTIFICATION OF DEVELOPMENT  
OF WELLS AND EXCAVATIONS) REGULATIONS 2013*



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## AKTA PENYIASATAN KAJI BUMI 1974

### PERATURAN-PERATURAN PENYIASATAN KAJI BUMI (PEMBERITAHUAN PEMAJUAN TELAGA DAN KOREKAN) 2013

PADA menjalankan kuasa yang diberikan oleh seksyen 13, 14 dan 22 Akta Penyiasatan Kaji Bumi 1974 [Akta 129], Menteri membuat peraturan-peraturan yang berikut:

#### **Nama**

1. Peraturan-peraturan ini bolehlah dinamakan **Peraturan-Peraturan Penyiasatan Kaji Bumi (Pemberitahuan Pemajuan Telaga dan Korekan) 2013.**

#### **Tafsiran**

2. Dalam Peraturan-Peraturan ini, melainkan jika konteksnya menghendaki makna yang lain—

“air” ertinya air yang ditemui di bawah permukaan bumi termasuk mata air dan punca-punca geotermal;

“korekan” ertinya suatu perbuatan atau proses untuk menembusi permukaan, bawah permukaan atau pemindahan isi bumi secara manual atau mekanikal dengan menggunakan mesin atau peralatan;

“lelubang” ertinya suatu lekuk atau lekukan kecil;

“lubang” ertinya suatu bukaan atau rongga atau ruang geronggang di permukaan atau bawah permukaan bumi;

“mencari” ertinya aktiviti pencarian, penemuan, penyiasatan dan penerokaan air;

“menggali” ertinya suatu proses membuat bukaan di permukaan atau di bawah permukaan bumi;

"menggerek" ertinya suatu proses memotong, menggerudi atau meletupkan, bagi tujuan membuat bukaan di permukaan atau bawah permukaan bumi;

"menggerudi" ertinya suatu proses untuk menembusi permukaan bumi, tanah atau batu-batan dengan menggunakan mesin atau peralatan;

"pengambilan" ertinya suatu proses mengeluarkan apa-apa bahan dari isi bumi;

"syaf" ertinya apa-apa bukaan menegak atau condong di bawah permukaan bumi;

"tarahan" ertinya suatu proses memindahkan atau memisahkan bahan dari permukaan atau bawah permukaan yang mendedahkan batu hampar;

"telaga" ertinya apa-apa lubang yang berlapik atau yang tidak berlapik atau struktur yang digunakan untuk pencarian, pemantauan, persampelan dan pengambilan air bawah tanah dan termasuk yang digunakan untuk imbuhan air bawah tanah;

"terowong" ertinya suatu korekan memanjang atau sempit di bawah tanah atau bukaan bawah air atau laluan yang lurus dengan panjang yang melebihi lebar atau ketinggiannya;

#### **Pemberitahuan mengenai pemajuan telaga**

3. (1) Mana-mana orang yang berhasrat untuk menggerek, menggerudi, menggali atau dengan cara lain memajukan suatu telaga bagi maksud mencari atau mengambil air daripadanya hendaklah memberitahu Ketua Pengarah mengenai apa-apa butir sebagaimana yang dinyatakan dalam Borang 1 Jadual dalam tempoh empat belas hari bekerja sebelum aktiviti yang dicadangkan itu dijalankan.

(2) Mana-mana orang yang telah menggerek, menggerudi, menggali atau dengan cara lain memajukan suatu telaga bagi maksud mencari atau mengambil air daripadanya hendaklah memberitahu Ketua Pengarah mengenai apa-apa butir

sebagaimana yang dinyatakan dalam Borang 2 Jadual dalam tempoh empat belas hari bekerja selepas menjalankan aktiviti itu.

(3) Mana-mana orang yang telah menggerek, menggerudi, menggali atau dengan cara lain memajukan suatu telaga bagi maksud mencari atau mengambil air daripadanya sebelum tarikh mula berkuat kuasanya Peraturan-Peraturan ini hendaklah memberitahu Ketua Pengarah mengenai apa-apa butir sebagaimana yang dinyatakan dalam Borang 2 Jadual dalam tempoh enam bulan dari tarikh mula berkuat kuasanya Peraturan-Peraturan ini.

#### **Pemberitahuan mengenai korekan**

4. (1) Mana-mana orang yang berhasrat untuk menggerek, menggerudi, menggali atau dengan cara lain memajukan suatu lubang, lelubang, syaf, terowong, tarahan atau korekan lain yang mendedahkan batu hampar hendaklah memberitahu Ketua Pengarah mengenai apa-apa butir sebagaimana yang dinyatakan dalam Borang 3 Jadual dalam tempoh empat belas hari bekerja sebelum aktiviti yang dicadangkan itu dijalankan.

(2) Mana-mana orang yang telah menggerek, menggerudi, menggali atau dengan cara lain memajukan suatu lubang, lelubang, syaf, terowong, tarahan atau korekan lain yang mendedahkan batu hampar hendaklah memberitahu Ketua Pengarah mengenai apa-apa butir sebagaimana yang dinyatakan dalam Borang 4 Jadual dalam tempoh empat belas hari bekerja selepas menjalankan aktiviti itu.

(3) Mana-mana orang yang telah menggerek, menggerudi, menggali atau dengan cara lain memajukan suatu lubang, lelubang, syaf, terowong, tarahan atau korekan lain yang mendedahkan batu hampar sebelum tarikh mula berkuat kuasanya Peraturan-Peraturan ini hendaklah memberitahu Ketua Pengarah apa-apa butir sebagaimana yang dinyatakan dalam Borang 4 Jadual dalam tempoh enam bulan dari tarikh mula berkuat kuasanya Peraturan-Peraturan ini.

## JADUAL

## BORANG 1

[Subperaturan 3(1)]

## PEMBERITAHUAN MENGENAI PEMAJUAN TELAGA

**Jabatan Mineral dan Geosains  
Malaysia**  
 Tingkat 20, Bangunan Tabung Haji,  
 Jalan Tun Razak,  
 50658 KUALA LUMPUR  
 No. Tel.: 603-21611033  
 No. Faks.: 603-21611036  
 Laman Web : [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>Untuk kegunaan pejabat sahaja</i> |  |
|--------------------------------------|--|
| <i>No. pemberitahuan:</i>            |  |
| <i>Tarikh diterima:</i>              |  |
| <i>No. ruj. telaga:</i>              |  |

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*Semua bahagian dalam pemberitahuan ini hendaklah diisi dan mudah dibaca.*

**1.0 Maklumat pemberi maklumat**

| <i>Untuk diisi jika pemberitahuan ini dibuat oleh individu</i> |                              |            |               |
|--|------------------------------|------------|---------------|
| Nama penuh:  |                              |            |               |
| No. K.P./No. pasport :   | Alamat yang boleh dihubungi: |            |               |
| No. tel.:  | No. tel. bimbit:             | No. faks.: | Alamat e-mel: |

| <i>Untuk diisi jika pemberitahuan ini dibuat bagi pihak syarikat/organisasi</i> |                        |
|---|------------------------|
| Nama syarikat/organisasi :  |                        |
| No. pendaftaran syarikat:   | No. lesen perdagangan: |
| Aktiviti utama syarikat:  |                        |

| <b>Butir-butir wakil syarikat</b> |                  |            |               |
|-----------------------------------|------------------|------------|---------------|
| Nama penuh:                       |                  |            |               |
| No. K.P./ No. pasport :           |                  | Jawatan:   |               |
| Alamat yang boleh dihubungi:      |                  |            |               |
| No. tel.:                         | No. tel. bimbit: | No. faks.: | Alamat e-mel: |

## **2.0 Jenis kerja**

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|                          |                           |                          |                  |                          |                                     |
|--------------------------|---------------------------|--------------------------|------------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Penggerudian lubang gerek | <input type="checkbox"/> | Pembinaan telaga | <input type="checkbox"/> | Pengubahsuaian telaga               |
| <input type="checkbox"/> | Pemulihan telaga          | <input type="checkbox"/> | Penutupan telaga | <input type="checkbox"/> | Lain-lain<br><i>(sila nyatakan)</i> |

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## **3.0 Cadangan kegunaan telaga**

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|                          |            |                          |            |                          |                                     |
|--------------------------|------------|--------------------------|------------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Domestik   | <input type="checkbox"/> | Pertanian  | <input type="checkbox"/> | Industri                            |
| <input type="checkbox"/> | Akuakultur | <input type="checkbox"/> | Pemantauan | <input type="checkbox"/> | Lain-lain<br><i>(sila nyatakan)</i> |

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## **4.0 Cadangan kaedah penggerudian**

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|                          |         |                          |         |                          |                                     |
|--------------------------|---------|--------------------------|---------|--------------------------|-------------------------------------|
| <input type="checkbox"/> | Putaran | <input type="checkbox"/> | Tukulan | <input type="checkbox"/> | Lain-lain<br><i>(sila nyatakan)</i> |
|--------------------------|---------|--------------------------|---------|--------------------------|-------------------------------------|

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**5.0 Cadangan jenis lumpur penggerudian yang digunakan**

Bentonit

Polimer

Lain-lain  
(sila nyatakan)

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**6.0 Butir-butir telaga**Cadangan kadar pengambilan  
(dalam m<sup>3</sup>/hari) : \_\_\_\_\_

Rujukan peta : \_\_\_\_\_ Utaraan: \_\_\_\_\_ Timuran: \_\_\_\_\_

Lokasi : \_\_\_\_\_

Alamat : \_\_\_\_\_

No. Lot : \_\_\_\_\_

Mukim : \_\_\_\_\_ Daerah : \_\_\_\_\_ Bahagian : \_\_\_\_\_

Negeri : \_\_\_\_\_

(Sila lampirkan peta yang menunjukkan cadangan lokasi lubang gerek/telaga/telaga sedia ada)

**Butir-butir cadangan lubang gerek/telaga:**

Cadangan kedalaman telaga (m): \_\_\_\_\_ Diameter telaga (mm): \_\_\_\_\_

**Butir-butir cadangan telaga yang hendak diubah suai/dipulihkan:**

Kedalaman telaga (m): \_\_\_\_\_ Cadangan kedalaman baru telaga (m): \_\_\_\_\_

Diameter telaga (mm): \_\_\_\_\_ Cadangan diameter baru telaga (mm): \_\_\_\_\_

Kaedah yang digunakan untuk pemulihan telaga: \_\_\_\_\_

Bahan kimia yang digunakan untuk pemulihan telaga: \_\_\_\_\_

**Butir-butir penutupan telaga:**

Kaedah yang digunakan untuk penutupan telaga: \_\_\_\_\_

Bahan-bahan yang digunakan untuk penutupan telaga: \_\_\_\_\_

**Jenis akuifer:**

Aluvium/Tanah

Batuan keras

**Cadangan bahan-bahan yang digunakan untuk binaan telaga :**

PVC

Besi bergalvani

Keluli tahan karat

Lain-lain  
(*sila nyatakan*)**7.0 Butir-butir syarikat penggerudian dan penggerudi berlesen**

Nama syarikat penggerudian : \_\_\_\_\_ No. Pendaftaran syarikat: \_\_\_\_\_

Nama penggerudi: \_\_\_\_\_ No. lesen: \_\_\_\_\_

*(Sila lampirkan salinan perakuan pendaftaran syarikat)***8.0 Butir-butir pemilik tanah**

Nama: \_\_\_\_\_ No. K.P.: \_\_\_\_\_

Alamat: \_\_\_\_\_

No. telefon: \_\_\_\_\_ No. faks: \_\_\_\_\_

Status tanah: \_\_\_\_\_

Kebenaran diberi:  Ya  Tidak

#### **9.0 Maklumat tambahan**

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Aktiviti guna tanah (dalam lingkungan 500m): \_\_\_\_\_

Badan air permukaan berhampiran (m): \_\_\_\_\_

Jarak dari telaga-telaga sedia ada (m): \_\_\_\_\_

Saya memperakui bahawa maklumat yang diberikan adalah benar dan tepat sepanjang pengetahuan saya.

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Tandatangan pemberi maklumat

Tarikh

## BORANG 2

[Subperaturan 3(2) dan (3)]

## PEMBERITAHUAN MAKLUMAT TELAGA

**Jabatan Mineral dan Geosains  
Malaysia**  
 Tingkat 20, Bangunan Tabung Haji,  
 Jalan Tun Razak,  
 50658 KUALA LUMPUR.  
 No. Tel: 603-21611033  
 Faks : 603-21611036  
 Laman Web: [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>Untuk kegunaan pejabat sahaja</i> |  |
|--------------------------------------|--|
| <i>No. pemberitahuan</i>             |  |
| <i>Tarikh diterima</i>               |  |
| <i>No. ruj. telaga</i>               |  |

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*Semua bahagian dalam pemberitahuan ini hendaklah diisi dan mudah dibaca*

**1.0 Maklumat pemberi maklumat**

| <i>Untuk diisi jika pemberitahuan ini dibuat oleh individu</i> |                              |           |               |
|--|------------------------------|-----------|---------------|
| Nama penuh:  |                              |           |               |
| No. K.P./No. pasport :   | Alamat yang boleh dihubungi: |           |               |
| No. tel.:  | No. tel. bimbit:             | No. faks: | Alamat e-mel: |

| <i>Untuk diisi jika permohonan ini dibuat bagi pihak syarikat/organisasi</i> |                        |
|--|------------------------|
| Nama syarikat/organisasi :   |                        |
| No. pendaftaran syarikat:  | No. lesen perdagangan: |
| Aktiviti utama syarikat:   |                        |

| <b>Butir-butir wakil syarikat</b> |                  |           |               |
|-----------------------------------|------------------|-----------|---------------|
| Nama penuh:                       |                  |           |               |
| No. K.P./No. pasport :            |                  | Jawatan:  |               |
| Alamat yang boleh dihubungi:      |                  |           |               |
| No. tel.:                         | No. tel. bimbit: | No. faks: | Alamat e-mel: |

## **2.0 Butir-butir lokasi telaga**

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Rujukan peta: \_\_\_\_\_ Utaraan \_\_\_\_\_ Timuran

Lokasi: Alamat : \_\_\_\_\_

No. Lot : \_\_\_\_\_

Mukim: \_\_\_\_\_ Daerah: \_\_\_\_\_ Bahagian: \_\_\_\_\_

Negeri: \_\_\_\_\_

(*Sila lampirkan peta yang menunjukkan lokasi lubang gerek/telaga*)

## **3.0 Kegunaan telaga**

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Domestik

Pertanian

Industri

Akuakultur

Pemantauan

Lain-lain (*sila nyatakan*)  
\_\_\_\_\_

**4.0 Data telaga**

Tarikh telaga disiapkan: \_\_\_\_\_ (hb/bln/thn)

Jenis akuifer: tak terkekang/terkekang/separa terkekang

Aras muka tanah: \_\_\_\_\_ m (aras laut min)

Aras air statik: \_\_\_\_\_ m (bawah aras permukaan bumi) atau \_\_\_\_\_ m (aras laut min)

Tarikh pengukuran: \_\_\_\_\_

Log geologi dan reka bentuk telaga: \_\_\_\_\_

*(Sila sediakan log litologi menggunakan Lampiran A, termasuk satu salinan log geofizik menuruni lubang, jika ada)***Ciri-ciri telaga dan akuifer: (diisi sekiranya berkaitan)**Luahan telaga ( $m^2/j$ ): \_\_\_\_\_Kapasiti spesifik ( $m^2/j$ ): \_\_\_\_\_

Kecekapan telaga (%): \_\_\_\_\_

Kebolehsimpanan/luahan spesifik: \_\_\_\_\_

Keterusan ( $m^2/j$ ): \_\_\_\_\_*(Sila sediakan maklumat ujian pengepaman menggunakan Lampiran B, C dan D. Sertakan salinan analisis ujian-ujian pengepaman)***Kualiti air tanah: (diisi sekiranya berkaitan)**

Tarikh pensampelan: \_\_\_\_\_ (hb/bln/thn)

Tarikh analisis: \_\_\_\_\_ (hb/bln/thn)

Konduktiviti: \_\_\_\_\_  $\mu S/cm$  pH: \_\_\_\_\_ Klorida: \_\_\_\_\_ mg/L

Oksigen terlarut: \_\_\_\_\_ mg/L

Jumlah pepejal terlarut: \_\_\_\_\_ mg/L

Jumlah besi: \_\_\_\_\_ mg/L

Jumlah kealkalian: \_\_\_\_\_ mg/L Bakteria (E-coli): \_\_\_\_\_ CPU/100mL

*(Sila sertakan satu salinan laporan makmal yang lengkap)*

Saya memperakui bahawa maklumat yang diberikan adalah benar dan tepat sepanjang pengetahuan saya.

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Tandatangan pemberi maklumat

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Tarikh

## LAMPIRAN A

## LOG GEOLOGI DAN REKABENTUK TELAGA

| PROJEK :                  |   |                               |                      |                 |  |         |                    |
|---------------------------|---|-------------------------------|----------------------|-----------------|--|---------|--------------------|
| NO. PROJEK :              | KAEDAH PENGGERUDIAN :                       |                               |                      |                 |  |         |                    |
| NO. TELAGA :              | (1) Kedalaman: Kaedah: TARIKH & MASA MULA : |                               |                      |                 |  |         |                    |
| LOKASI :                  | (2) Kedalaman: Kaedah: TARIKH & MASA SIAP : |                               |                      |                 |  |         |                    |
|                           | (3) Kedalaman: Kaedah: PEMILIK :            |                               |                      |                 |  |         |                    |
|                           | JUMLAH KEDALAMAN : m SYARIKAT PENGGERUDIAN: |                               |                      |                 |  |         |                    |
|                           | TINGGI KOLAR : m JURU GERUDI :              |                               |                      |                 |  |         |                    |
| KOORDINAT: U T            | ARAS AIR STATIK :                           | m [b.ap.b.]                   | MESIN PENGGERUDIAN : |                 |  |         |                    |
| KETINGGIAN :              | m (a.l.m.)                                  | TARIKH PENGUKURAN:            |                      |                 |  |         |                    |
| KEDALAMAN<br>(m)          | LITOLOGI<br>GRAFIK                          | PENEMUAN<br>ATH (m/m²/kuadra) | KENDAR<br>PEREMBAN   | LOG<br>GEOFIZIK | KETERANGAN<br>(Warna, tekstur, struktur,<br>batuan/tanah dsb...) | CATATAN | REKA BENTUK TELAGA |
| 10                        |   |                               |                      |                 |  |         |                    |
| 20                        |   |                               |                      |                 |  |         |                    |
| 30                        |   |                               |                      |                 |  |         |                    |
| 40                        |   |                               |                      |                 |  |         |                    |
| 50                        |   |                               |                      |                 |  |         |                    |
| 60                        |   |                               |                      |                 |  |         |                    |
| <b>PENYIAPAN TELAGA :</b> |   |                               |                      |                 |  |         |                    |
| Kedalaman telaga :        | .....                                       | [m]                           | Dilog oleh:          | .....           | Disahkan oleh:   | .....   |                    |
| Jenis skrin :             | .....                                       |                               | Jawatan :            | .....           | Jawatan :  | .....   |                    |
| Jenis selongsong :        | .....                                       |                               |                      |                 |  |         |                    |
| Anggaran luahan :         | .....                                       | (m³/h)                        | Tarikh :             | .....           | Tarikh :   | .....   |                    |

Nota: a.l.m. - aras laut min  
 b.a.p.b. - bawah aras permukaan bumi

**LAMPIRAN B****REKOD UJIAN PENGEPAMAN SURUTAN BERPERINGKAT**

|  |                 |                       |                           |
|--|-----------------|-----------------------|---------------------------|
| No. telaga:                              | .....           | Permulaan pengepaman: |                           |
| Kedalaman telaga:                        | ..... m         | Masa:                 | .....                     |
| Sela saringan:                           | ..... m         | Tarikh:               | .....                     |
| Jenis telaga:                            | .....           | Tamat pengepaman:     |                           |
| Jarak dari telaga<br>yang dipam:         | ..... m         | Masa:                 | .....                     |
| Tinggi kolar:                            | ..... m         | Tarikh:               | .....                     |
| Aras laras<br>permukaan bumi:            | ..... m(a.l.m.) | Aras air statik:      | ..... m(b.a.p.b.)         |
| Direkod oleh:                            | .....           | Kadar pengepaman:     | ..... m <sup>3</sup> /jam |
| Disahkan oleh ahli geologi<br>berdaftar: | .....           | Kedalaman pam:        | ..... m                   |
| Tarikh:                                  | .....           | Jenis pam:            | ..... m                   |

Nota: a.l.m. - aras laut min

b.a.p.b. - bawah aras permukaan bumi

| Masa dari<br>mula<br>pengepaman<br>(min) | Fasa 1                    |                | Fasa 2                    |                | Fasa 3                    |                | Fasa 4                    |                | Fasa 5                    |                | Catatan |  |
|--|---------------------------|----------------|---------------------------|----------------|---------------------------|----------------|---------------------------|----------------|---------------------------|----------------|---------|--|
|  | Luahan (Q) =<br>$m^3/jam$ |                | Luahan (Q) =<br>$m^3/jam$ |                | Luahan (Q) =<br>$m^3/jam$ |                | Luahan (Q) =<br>$m^3/jam$ |                | Luahan (Q) =<br>$m^3/jam$ |                |         |  |
|  | Aras Air<br>(m)           | Surutan<br>(m) |         |  |
| 0.0                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 0.5                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 1.0                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 1.5                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 2.0                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 2.5                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 3.0                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 3.5                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 4.0                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 4.5                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 5.0                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 7.5                                      |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 10.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 15.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 20.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 25.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 30.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 35.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 40.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 45.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |
| 50.0                                     |                           |                |                           |                |                           |                |                           |                |                           |                |         |  |



**LAMPIRAN C****REKOD UJIAN PENGEPAMAN LUAHAN TETAP**

No. telaga: ..... Permulaan pengepaman:

Kedalaman telaga: ..... m Masa: .....

Sela saringan: ..... m Tarikh: .....

Jenis telaga: .....

Jarak dari telaga yang dipam: ..... m Tamat pengepaman: .....

Ketinggian kolar: ..... m Masa: .....

Aras laras muka bumi: ..... m(a.l.m.) Tarikh: .....

Direkod oleh: ..... Aras air statik: ..... m(b.a.p.b.)

Diperakui oleh ahli geologi Kadar pengepaman: ..... m<sup>3</sup>/hari  
berdaftar: .....

Kedalaman pam ..... m

Tarikh: ..... Jenis pam: .....

| Tarikh/<br>Masa | Masa mula<br>pengepaman<br>(min) | Aras<br>air (m) | Surutan<br>(m) | Catatan | Tarikh/<br>Masa | Masa mula<br>pengepaman<br>(min) | Aras<br>air (m) | Surutan<br>(m) | Catatan |
|-----------------|----------------------------------|-----------------|----------------|---------|-----------------|----------------------------------|-----------------|----------------|---------|
|                 | 0.00                             |                 |                |         |                 | 160.00                           |                 |                |         |
|                 | 0.20                             |                 |                |         |                 | 200.00                           |                 |                |         |
|                 | 0.50                             |                 |                |         |                 | 250.00                           |                 |                |         |
|                 | 1.00                             |                 |                |         |                 | 300.00                           |                 |                |         |
|                 | 1.50                             |                 |                |         |                 | 350.00                           |                 |                |         |
|                 | 2.00                             |                 |                |         |                 | 400.00                           |                 |                |         |
|                 | 2.50                             |                 |                |         |                 | 450.00                           |                 |                |         |
|                 | 3.00                             |                 |                |         |                 | 500.00                           |                 |                |         |
|                 | 3.50                             |                 |                |         |                 | 550.00                           |                 |                |         |
|                 | 4.00                             |                 |                |         |                 | 600.00                           |                 |                |         |

|  |        |  |  |  |         |  |  |  |
|--|--------|--|--|--|---------|--|--|--|
|  | 4.50   |  |  |  | 700.00  |  |  |  |
|  | 5.00   |  |  |  | 800.00  |  |  |  |
|  | 6.00   |  |  |  | 900.00  |  |  |  |
|  | 7.00   |  |  |  | 1000.00 |  |  |  |
|  | 8.00   |  |  |  | 1200.00 |  |  |  |
|  | 9.00   |  |  |  | 1400.00 |  |  |  |
|  | 10.00  |  |  |  | 1600.00 |  |  |  |
|  | 15.00  |  |  |  | 1800.00 |  |  |  |
|  | 20.00  |  |  |  | 2000.00 |  |  |  |
|  | 25.00  |  |  |  | 2250.00 |  |  |  |
|  | 30.00  |  |  |  | 2500.00 |  |  |  |
|  | 35.00  |  |  |  | 3000.00 |  |  |  |
|  | 40.00  |  |  |  | 3400.00 |  |  |  |
|  | 45.00  |  |  |  | 3800.00 |  |  |  |
|  | 50.00  |  |  |  | 4200.00 |  |  |  |
|  | 55.00  |  |  |  | 4600.00 |  |  |  |
|  | 60.00  |  |  |  | 5000.00 |  |  |  |
|  | 70.00  |  |  |  | 5500.00 |  |  |  |
|  | 80.00  |  |  |  | 6000.00 |  |  |  |
|  | 90.00  |  |  |  | 6500.00 |  |  |  |
|  | 100.00 |  |  |  | 7000.00 |  |  |  |
|  | 120.00 |  |  |  | 7500.00 |  |  |  |

Nota: a.l.m. - aras laut min  
 b.a.p.b. - bawah aras permukaan bumi

**LAMPIRAN D**  
**REKOD UJI PULIH TELAGA**

No. telaga: ..... Permulaan pengepaman:

Kedalaman telaga: ..... m Masa: .....

Sela saringan: ..... m Tarikh: .....

Jenis telaga: .....

Jarak dari telaga yang dipam: ..... m Pengepaman tamat: .....

Ketinggian kolar: ..... m Masa: .....

Aras laras muka bumi: ..... m(a.l.m.) Tarikh: .....

Direkod oleh: ..... Aras air statik: ..... m (b.a.p.b.)  
Kadar pengepaman: ..... m<sup>3</sup>/hari

Diperakui oleh ahli geologi ..... berdaftar:

Tarikh: ..... Kedalaman pam ..... m  
Jenis pam: .....

| Tarikh/<br>Masa | Masa dari<br>mula<br>pengepa-<br>man<br>(min) | Masa dari<br>berhenti<br>mengepam<br>(min) | t/t' | Aras<br>air<br>(m) | Surutan<br>baki<br>(m) | Tarik<br>h/<br>Masa | Masa dari<br>mula<br>pengepa-<br>man<br>(min) | Masa dari<br>berhenti<br>mengepam<br>(min) | t/t' | Aras<br>air<br>(m) | Surutan<br>baki<br>(m) |
|-----------------|---|--|------|--------------------|------------------------|---------------------|---|--|------|--------------------|------------------------|
|                 |   | 0.00                                       |      |                    |                        |                     |   | 70.00                                      |      |                    |                        |
|                 |   | 0.50                                       |      |                    |                        |                     |   | 80.00                                      |      |                    |                        |
|                 |   | 1.00                                       |      |                    |                        |                     |   | 90.00                                      |      |                    |                        |
|                 |   | 1.50                                       |      |                    |                        |                     |   | 100.00                                     |      |                    |                        |
|                 |   | 2.00                                       |      |                    |                        |                     |   | 120.00                                     |      |                    |                        |
|                 |   | 2.50                                       |      |                    |                        |                     |   | 140.00                                     |      |                    |                        |
|                 |   | 3.00                                       |      |                    |                        |                     |   | 160.00                                     |      |                    |                        |
|                 |   | 3.50                                       |      |                    |                        |                     |   | 180.00                                     |      |                    |                        |
|                 |   | 4.00                                       |      |                    |                        |                     |   | 210.00                                     |      |                    |                        |

Nota: a.l.m. - aras laut min

b.a.p.b. – bawah aras permukaan bumi

## BORANG 3

[Subperaturan 4(1)]

## PEMBERITAHUAN MENGENAI KOREKAN

**Jabatan Mineral dan Geosains  
Malaysia**  
 Tingkat 20, Bangunan Tabung Haji,  
 Jalan Tun Razak,  
 50658 KUALA LUMPUR.  
 No.Tel: 603-21611033  
 Faks: 603-21611036  
 Laman Web: [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>Untuk kegunaan pejabat sahaja</i> |  |
|--------------------------------------|--|
| <i>No. pemberitahuan</i>             |  |
| <i>Tarikh diterima</i>               |  |
| <i>No. ruj. telaga</i>               |  |

---

*Semua bahagian dalam pemberitahuan ini hendaklah diisi dan mudah dibaca*

**1.0 Maklumat pemberi maklumat**

| <i>Untuk diisi jika pemberitahuan ini dibuat oleh individu</i> |                              |            |               |
|--|------------------------------|------------|---------------|
| Nama penuh:  |                              |            |               |
| No. K.P./No. pasport :   | Alamat yang boleh dihubungi: |            |               |
| No. tel.:  | No.tel. bimbit:              | No. faks.: | Alamat e-mel: |

| <i>Untuk diisi jika pemberitahuan ini dibuat bagi pihak syarikat/organisasi</i> |                        |
|---|------------------------|
| Nama syarikat/organisasi:   |                        |
| No. pendaftaran syarikat:   | No. lesen perdagangan: |
| Aktiviti utama syarikat:  |                        |

| <b>Butir-butir wakil syarikat</b> |                  |            |               |
|-----------------------------------|------------------|------------|---------------|
| Nama penuh:                       |                  |            |               |
| No. K.P./No. pasport :            |                  | Jawatan:   |               |
| Alamat yang boleh dihubungi:      |                  |            |               |
| No. tel.:                         | No. tel. bimbit: | No. faks.: | Alamat e-mel: |

## **2.0 Kaedah korekan yang dicadangkan**

---



Gerek



Gerudi



Gali



Lelubang



Syaf



Terowong



Tarahan

Lain-lain (*sila nyatakan*)  
\_\_\_\_\_

## **3.0 Tujuan korekan**

---

(*sila nyatakan*)  
\_\_\_\_\_

## **4.0 Butir-butir lokasi**

---

Rujukan Peta : \_\_\_\_\_ Utaraan \_\_\_\_\_ Timuran

Lokasi: Alamat: \_\_\_\_\_

No. Lot : \_\_\_\_\_

Mukim: \_\_\_\_\_ Daerah: \_\_\_\_\_ Bahagian: \_\_\_\_\_

Negeri: \_\_\_\_\_

(*Sila sertakan peta kunci menunjukkan lokasi sebenar*)

Aktiviti guna tanah (dalam lingkungan 500m): \_\_\_\_\_

Badan air permukaan berhampiran (m): \_\_\_\_\_

Jarak dari korekan-korekan sedia ada (m): \_\_\_\_\_

Cadangan kedalaman korekan (m): \_\_\_\_\_

Cadangan dimensi korekan (panjang x lebar x dalam) (m): \_\_\_\_\_

#### **5.0 Butir-butir kontraktor**

Nama kontraktor: \_\_\_\_\_ No. pendaftaran syarikat: \_\_\_\_\_

(*Sila sertakan satu salinan perakuan pendaftaran*)

#### **6.0 Butir-butir pemilik tanah**

Nama: \_\_\_\_\_

No. K.P./No. pasport: \_\_\_\_\_

Alamat: \_\_\_\_\_  
\_\_\_\_\_

No. tel.: \_\_\_\_\_ No. faks: \_\_\_\_\_

Status tanah: \_\_\_\_\_

Kebenaran diberi:  Ya  Tidak

(*Sila sertakan surat kebenaran daripada pemilik harta tanah dan pelan susun atur yang menunjukkan cadangan lokasi korekan*)

Saya memperakui bahawa maklumat yang diberikan adalah benar dan tepat sepanjang pengetahuan saya.

---

Tandatangan pemberi maklumat

---

Tarikh

BORANG 4

[Subperaturan 4(2) dan (3)]

PEMBERITAHUAN MAKLUMAT KOREKAN

**Jabatan Mineral dan Geosains  
Malaysia**

20<sup>th</sup> Floor, Tabung Haji Building,  
Jalan Tun Razak,  
50658 KUALA LUMPUR.

Tel: 603-21611033  
Faks: 603-21611036  
Laman web: [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>Untuk kegunaan pejabat sahaja</i> |  |
|--------------------------------------|--|
| <i>No. pemberitahuan</i>             |  |
| <i>Tarikh terima</i>                 |  |
| <i>No. ruj. telaga</i>               |  |

---

*Se semua bahagian dalam pemberitahuan ini hendaklah diisi dan mudah dibaca*

**1.0 Maklumat pemberi maklumat**

---

|  |                              |           |               |
|--|------------------------------|-----------|---------------|
| <i>Untuk diisi jika pemberitahuan ini dibuat oleh individu</i> |                              |           |               |
| Nama penuh:  |                              |           |               |
| No. K.P./No. pasport :   | Alamat yang boleh dihubungi: |           |               |
| No. tel.:  | No.tel. bimbit:              | No. faks: | Alamat e-mel: |

|  |                        |
|--|------------------------|
| <i>Untuk diisi jika permohonan ini dibuat bagi pihak syarikat/organisasi</i> |                        |
| Nama syarikat/organisasi :   |                        |
| No. pendaftaran syarikat:  | No. lesen perdagangan: |
| Aktiviti utama syarikat:   |                        |

| <b>Butir-butir wakil syarikat</b> |                  |          |               |
|-----------------------------------|------------------|----------|---------------|
| Nama penuh:                       |                  |          |               |
| No. K.P./No. pasport :            |                  | Jawatan: |               |
| Alamat yang boleh dihubungi:      |                  |          |               |
| No. tel.:                         | No. tel. bimbit: | No. Faks | Alamat e-mel: |

## **2.0 Kaedah korekan**

---



Gerek

Gerudi

Gali

Lelubang

Syaf

Terowong

Tarahan

Lain-lain (*sila nyatakan*)  
\_\_\_\_\_

## **3.0 Tujuan korekan**

---

(sila nyatakan)  
\_\_\_\_\_

## **4.0 Beban atas**

---

Ketebalan beban atas (m) : \_\_\_\_\_

Perincian bahan-bahan beban atas: \_\_\_\_\_

**5.0 Jenis batu hampar**Batuan  
sedimenBatuan  
metamorfBatuan  
igneusLain-lain (*sila  
nyatakan*)

Sila nyatakan jenis batuan dengan terperinci

---



---



---

**6.0 Butir-butir lokasi**

Rujukan peta : \_\_\_\_\_ Utaraan \_\_\_\_\_ Timuran

Lokasi: \_\_\_\_\_ Alamat: \_\_\_\_\_

No. Lot : \_\_\_\_\_

Mukim: \_\_\_\_\_ Daerah: \_\_\_\_\_ Bahagian: \_\_\_\_\_

Negeri: \_\_\_\_\_

*(Sila lampirkan peta yang menunjukkan lokasi sebenar)*

Terangkan semua pola saliran permukaan termasuk tanah bencah dan air pegun (dalam lingkungan 500m): \_\_\_\_\_

Topografi kawasan: \_\_\_\_\_

Aktiviti guna tanah (dalam lingkungan 500m):\_\_\_\_\_

Badan air permukaan berhampiran (m): \_\_\_\_\_

Jarak dari korekan-korekan sedia ada (m): \_\_\_\_\_

Dimensi kawasan korekan (panjang x lebar x dalam) (m): \_\_\_\_\_

(*Sila lampirkan pelan tapak dan/atau pelan susun atur*)

#### **7.0 Butir-butir syarikat**

Nama syarikat: \_\_\_\_\_ No. pendaftaran syarikat: \_\_\_\_\_

(*Sila lampirkan satu salinan perakuan pendaftaran*)

#### **8.0 Butir-butir pemilik tanah**

Nama : \_\_\_\_\_

No. K.P.: \_\_\_\_\_

Alamat: \_\_\_\_\_  
\_\_\_\_\_

No. tel.: \_\_\_\_\_ No. faks: \_\_\_\_\_

Status tanah: \_\_\_\_\_

Kebenaran diberi:  Ya  Tidak

Saya memperakui bahawa maklumat yang diberikan adalah benar dan tepat sepanjang pengetahuan saya.

\_\_\_\_\_  
Tandatangan pemberi maklumat

\_\_\_\_\_  
Tarikh

Dibuat 24 Julai 2013  
[NRE (S) 604-5/5; PN(PU2)681]

DATUK SERI PALANIVEL A/L GOVINDASAMY  
*Menteri Sumber Asli dan Alam Sekitar*

GEOLOGICAL SURVEY ACT 1974

GEOLOGICAL SURVEY (NOTIFICATION OF DEVELOPMENT OF WELLS AND EXCAVATIONS) REGULATIONS 2013

IN exercise of the powers conferred by sections 13, 14 and 22 of the Geological Survey Act 1974 [Act 129], the Minister makes the following regulations:

**Citation**

1. These regulations may be cited as the **Geological Survey (Notification of Development of Wells and Excavations) Regulations 2013**.

**Interpretation**

2. In these Regulations, unless the context otherwise requires—

"water" means water found beneath the surface of the earth including spring and geothermal sources;

"excavation" means an act or process to penetrate the surface, subsurface or removal content of the earth manually or mechanically using machinery or equipment;

"pit" means a small indentation or depression;

"hole" means an opening or cavity or hollow space in the surface or subsurface of the earth;

"search" means the activity of looking for, discovering, investigation and exploring of water;

"dig" means a process to create an opening in the surface or subsurface of the earth;

"bore" means a process to cut, drill or blast, for the purpose of creating an opening at the surface or subsurface of the earth;

"drill" means a process to penetrate surface of the earth, soil or rock using machinery or equipment;

"extraction" means a process that removes any material from the content of the earth;

"shaft" means any vertical or inclined opening in the subsurface of the earth;

"cutting" means a process of removal or separation of material from the surface or subsurface that exposes the bedrock;

"well" means any hole with or without lining or structure that is used for searching, monitoring, sampling and groundwater abstraction and include that is used for recharging groundwater;

"tunnel" means an elongated or narrow excavated underground or underwater opening or passage that is linear with a length that exceeds its width or height.

#### **Notification of well development**

3. (1) Any person who intends to bore, drill, dig or otherwise develop a well for the purpose of searching for or extracting water therefrom shall notify the Director General of such details as specified in Form 1 of the Schedule within fourteen working days before the proposed activity is carried out.

(2) Any person who has bored, drilled, dug or otherwise developed a well for the purpose of searching for or extracting water therefrom shall notify the Director General of such details as specified in Form 2 of the Schedule within fourteen working days after the carrying out of the activity.

(3) Any person who bored, drilled, dug or otherwise developed a well for the purpose of searching for or extracting water therefrom before the date of coming into operation of these Regulations shall notify the Director General of such details as specified in Form 2 of the Schedule within six months from the date of coming into operation of these Regulations.

**Notification of excavation**

4. (1) Any person who intends to bore, drill, dig or otherwise develop a hole, pit, shaft, tunnel, cutting or other excavation which exposes the bedrock, shall notify the Director General of such details as specified in Form 3 of the Schedule within fourteen working days before the proposed activity is carried out.

(2) Any person who has bored, drilled, dug or otherwise developed a hole, pit, shaft, tunnel, cutting or other excavation which exposes the bedrock, shall notify the Director General of such details as specified in Form 4 of the Schedule within fourteen working days after the carrying out of the activity.

(3) Any person who has bored, drilled, dug or otherwise developed a hole, pit, shaft, tunnel, cutting or other excavation which exposes the bedrock before the date of coming into operation of these Regulations shall notify the Director General of such details as specified in Form 4 of the Schedule within six months from the date of coming into operation of these Regulations.

## SCHEDULE

## FORM 1

[Subregulation 3(1)]

## NOTIFICATION FOR WELL DEVELOPMENT

**Jabatan Mineral dan Geosains  
Malaysia**  
20<sup>th</sup> Floor, Tabung Haji Building,  
Jalan Tun Razak,  
50658 KUALA LUMPUR

| <i>For office use only</i> |  |
|----------------------------|--|
| <i>Notification no.:</i>   |  |
| <i>Date received:</i>      |  |
| <i>Well ref. no.:</i>      |  |

Tel. No.: 603-21611033

Fax No.: 603-21611036

Website: [www.img.gov.my](http://www.img.gov.my)*All sections of this notification should be filled in and legible***1.0 Informer's information**

| <i>To be filled if notification is made by an individual</i> |                  |          |                 |
|--|------------------|----------|-----------------|
| Full name:   |                  |          |                 |
| I.C. no. /Passport no.:                                      | Contact address: |          |                 |
| Tel. no.:  | Mobile no.:      | Fax no.: | E-mail address: |

| <i>To be filled if notification is made on behalf of a company/organization</i> |                      |
|---|----------------------|
| Name of company/organization:   |                      |
| Company registration no.:   | Trading license no.: |
| Company main activity:  |                      |

| <b>Details of company representative</b> |              |          |                 |
|--|--------------|----------|-----------------|
| Full name:                               |              |          |                 |
| I.C. no. /Passport no.:                  | Designation: |          |                 |
| Contact address:                         |              |          |                 |
| Tel. no.:                                | Mobile no.:  | Fax no.: | E-mail address: |

**2.0 Type of work**

|                          |                        |                          |                      |                          |                            |
|--------------------------|------------------------|--------------------------|----------------------|--------------------------|----------------------------|
| <input type="checkbox"/> | Bore hole<br>drilling  | <input type="checkbox"/> | Well<br>construction | <input type="checkbox"/> | Well<br>modification       |
| <input type="checkbox"/> | Well<br>rehabilitation | <input type="checkbox"/> | Well closure         | <input type="checkbox"/> | Others<br>(please specify) |

---

**3.0 Proposed usage of well**

|                          |             |                          |             |                          |                            |
|--------------------------|-------------|--------------------------|-------------|--------------------------|----------------------------|
| <input type="checkbox"/> | Domestic    | <input type="checkbox"/> | Agriculture | <input type="checkbox"/> | Industry                   |
| <input type="checkbox"/> | Aquaculture | <input type="checkbox"/> | Monitoring  | <input type="checkbox"/> | Others<br>(please specify) |

---

**4.0 Proposed drilling method(s)**

|                          |        |                          |            |                          |                            |
|--------------------------|--------|--------------------------|------------|--------------------------|----------------------------|
| <input type="checkbox"/> | Rotary | <input type="checkbox"/> | Percussion | <input type="checkbox"/> | Others (please<br>specify) |
|--------------------------|--------|--------------------------|------------|--------------------------|----------------------------|

---

**5.0 Proposed type of drilling mud used**

|                          |           |                          |         |                          |                            |
|--------------------------|-----------|--------------------------|---------|--------------------------|----------------------------|
| <input type="checkbox"/> | Bentonite | <input type="checkbox"/> | Polymer | <input type="checkbox"/> | Others (please<br>specify) |
|--------------------------|-----------|--------------------------|---------|--------------------------|----------------------------|

---

**6.0 Details of well**Proposed abstraction rate (in m<sup>3</sup>/day): \_\_\_\_\_

Map reference: \_\_\_\_\_ Northing \_\_\_\_\_ Easting \_\_\_\_\_

Location: \_\_\_\_\_

Address: \_\_\_\_\_

Lot No.: \_\_\_\_\_

Mukim: \_\_\_\_\_ District: \_\_\_\_\_ Division: \_\_\_\_\_

State: \_\_\_\_\_

(Please attach map showing the proposed location of bore hole/well/existing well)

**Details of proposed bore hole/well:**

Proposed depth of well (m): \_\_\_\_\_ Diameter of well (mm): \_\_\_\_\_

**Details of proposed well to be modified/rehabilitated:**

Depth of well (m): \_\_\_\_\_ Proposed new depth of well (m): \_\_\_\_\_

Diameter of well (mm): \_\_\_\_\_ Proposed new diameter of well (mm): \_\_\_\_\_

Method used for well rehabilitation: \_\_\_\_\_

Chemical used for well rehabilitation: \_\_\_\_\_

**Details of well closure:**

Method used for well closure: \_\_\_\_\_

Material used for well closure: \_\_\_\_\_

**Type of aquifer:**

Alluvium/Soil

Hardrock

**Proposed materials used for well construction:**

PVC

Galvanised iron

Stainless steel

Others  
(please specify)

**7.0 Details of drilling company and licensed driller**

Name of drilling company: \_\_\_\_\_ Company registration no.: \_\_\_\_\_

Name of driller: \_\_\_\_\_ License no.: \_\_\_\_\_

(Please attach a copy of the company registration certificate)

**8.0 Particulars of land owner**

Name: \_\_\_\_\_ I.C no.: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone no.: \_\_\_\_\_ Fax no.: \_\_\_\_\_

Status of land: \_\_\_\_\_

Consent given:  Yes  No**9.0 Additional information**

Land use activity (within 500m radius): \_\_\_\_\_

Nearest surface water body (m): \_\_\_\_\_

Distance from existing well(s) (m): \_\_\_\_\_

I certify that the information provided is true and correct to the best of my knowledge.

Signature of informer

Date

**FORM 2**

[Subregulations 3(2) and (3)]

**NOTIFICATION OF WELL INFORMATION**

**Jabatan Mineral dan Geosains**

**Malaysia**

20<sup>th</sup> Floor, Tabung Haji Building,  
Jalan Tun Razak,  
50658 KUALA LUMPUR.

Tel. No.: 603-21611033

Fax: 603-21611036

Website: [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>For office use only</i> |  |
|----------------------------|--|
| <i>Notification no.</i>    |  |
| <i>Date received</i>       |  |
| <i>Well ref. no.</i>       |  |

*All sections of this notification should be filled in and legible*

**1.0 Informer's information**

| <i>To be filled if notification is made by an individual</i> |                  |          |                 |
|--|------------------|----------|-----------------|
| Full name:   |                  |          |                 |
| I.C. no./<br>Passport no.:                                   | Contact address: |          |                 |
| Tel. no.:  | Mobile no.:      | Fax no.: | E-mail address: |

| <i>To be filled if notification is made on behalf of a company/organization</i> |                      |
|---|----------------------|
| Name of company/organization:   |                      |
| Company registration no.:   | Trading license no.: |
| Company main activity:  |                      |

| <b>Details of company representative</b> |             |              |                 |
|--|-------------|--------------|-----------------|
| Full name:                               |             |              |                 |
| I.C. no./Passport no.:                   |             | Designation: |                 |
| Contact Address:                         |             |              |                 |
| Tel. no.:                                | Mobile no.: | Fax no.:     | E-mail address: |

## **2.0 Details of well location**

---

Map reference: \_\_\_\_\_ Northing \_\_\_\_\_ Easting

Location: Address: \_\_\_\_\_

Lot No.: \_\_\_\_\_

Mukim : \_\_\_\_\_ District: \_\_\_\_\_ Division: \_\_\_\_\_

(Please attach map showing the location of bore hole/well)

State: \_\_\_\_\_

## **3.0 Well usage**

Domestic

Agriculture

Industry

Aquaculture

Monitoring

Others (please specify)

---

**4.0 Well data**

Date of well completed: \_\_\_\_\_ (dd/mm/yy)

Aquifer type: unconfined/confined/semi-confined

Ground elevation: \_\_\_\_\_ m (mean sea level)

Static water level: \_\_\_\_\_ m (below ground level) or \_\_\_\_\_ m (mean sea level)

Date of measurement: \_\_\_\_\_

Geological log and well design: \_\_\_\_\_

*(Please provide a lithological log using Appendix A, include a copy of the down hole geophysical log, if any)*

**Well and aquifer characteristics:** (to be filled if applicable)Well discharge (m<sup>3</sup>/h): \_\_\_\_\_Specific capacity (m<sup>2</sup>/h): \_\_\_\_\_

Well efficiency (%): \_\_\_\_\_

Storativity/specific yield: \_\_\_\_\_

Transmissivity (m<sup>2</sup>/h): \_\_\_\_\_

*(Please provide information on the pumping test using Appendices B, C and D. Include a copy of the analysis on the pumping tests)*

**Groundwater quality:** (to be filled if applicable)

Date of sampling: \_\_\_\_\_ (dd/mm/yy)

Date of analysis: \_\_\_\_\_ (dd/mm/yy)

Conductivity: \_\_\_\_\_ µS/cm    pH: \_\_\_\_\_    Chloride: \_\_\_\_\_ mg/L

Dissolved oxygen: \_\_\_\_\_ mg/L

Total dissolved solid: \_\_\_\_\_ mg/L

Total iron: \_\_\_\_\_ mg/L

Total alkalinity: \_\_\_\_\_ mg/L    Bacteria (E-coli): \_\_\_\_\_ CPU/100mL

*(Please include a copy of the complete laboratory report)*

I certify that the information provided is true and correct to the best of my knowledge.

---

Signature of informer

---

Date

## APPENDIX A

| <b>GEOLOGICAL LOG AND WELL DESIGN</b> |                      |                        |                     |                        |  |         |             |
|---------------------------------------|----------------------|------------------------|---------------------|------------------------|--|---------|-------------|
| PROJECT :                             |                      | DRILLING METHOD :      |                     |                        |  |         |             |
| PROJECT NO. :                         |                      | (1) Depth:             |                     | Method:                | START DATE & TIME  | :       |             |
| WELL NO. :                            |                      | (2) Depth:             |                     | Method:                | COMP. DATE & TIME  | :       |             |
| LOCATION :                            |                      | (3) Depth:             |                     | Method:                | OWNER  | :       |             |
|                                       |                      | TOTAL DEPTH :          |                     | m                      | DRILLING COMPANY   | :       |             |
|                                       |                      | COLLAR HEIGHT:         |                     | m                      | DRILLER  | :       |             |
| COORDINATE : N E                      |                      | STATIC WATER LEVEL:    |                     | m (b.g.l.)             |  |         |             |
| ELEVATION : m (m.s.l.)                |                      | DATE OF MEASUREMENT:   |                     | DRILLER RIG            |  | :       |             |
| DEPTH<br>(m)                          | GRAPHIC<br>LITHOLOGY | WATER SIGN<br>fms/ft/m | PENETRATION<br>RATE | GEOPHYSICAL<br>LOGGING | DESCRIPTION<br>{Colors, texture, structure,<br>rock/soil etc...} | REMARKS | WELL DESIGN |
| 10                                    |                      |                        |                     |                        |  |         |             |
| 20                                    |                      |                        |                     |                        |  |         |             |
| 30                                    |                      |                        |                     |                        |  |         |             |
| 40                                    |                      |                        |                     |                        |  |         |             |
| 50                                    |                      |                        |                     |                        |  |         |             |
| 60                                    |                      |                        |                     |                        |  |         |             |
| <b>WELL COMPLETION :</b>              |                      |                        |                     |                        |  |         |             |
| Well depth :                          | .....                | [m]                    | Logged by:          | .....                  | Certified by :   | .....   |             |
| Screen type :                         | .....                |                        | Designation :       | .....                  | Designation :  | .....   |             |
| Casing type :                         | .....                |                        | Date :              | .....                  | Date :   | .....   |             |
| Estimated yield:                      | .....                | (m <sup>3</sup> /h)    |                     |                        |  |         |             |

Note: m.s.l. - mean sea level

b.g.l. - below ground level

**APPENDIX B****STEP DRAWDOWN PUMPING TEST RECORD**

|                                       |                  |                          |                          |
|---------------------------------------|------------------|--------------------------|--------------------------|
| Well no.:                             | .....            | Commencement of pumping: | .....                    |
| Well depth:                           | ..... m          | Time:                    | .....                    |
| Screen interval:                      | ..... m          | Date:                    | .....                    |
| Well type:                            | .....            | End of pumping:          | .....                    |
| Distance from pumping well:           | ..... m          | Time:                    | .....                    |
| Collar height:                        | ..... m          | Date:                    | .....                    |
| Reduced ground<br>level:              | ..... m (m.s.l.) | Static water level:      | ..... m (b.g.l.)         |
| Recorded by:                          | .....            | Pumping rate:            | ..... m <sup>3</sup> /hr |
| Certified by registered<br>geologist: | .....            | Depth of pump:           | ..... m                  |
| Date:                                 | .....            | Type of pump:            | ..... m                  |

Note: m.s.l. - mean sea level

b.g.l. - below ground level

| Time<br>from<br>start of<br>pumping<br>(min) | Phase 1                 |                       | Phase 2                 |                    | Phase 3         |                         | Phase 4               |                 | Phase 5                 |                       | Remarks         |
|--|-------------------------|-----------------------|-------------------------|--------------------|-----------------|-------------------------|-----------------------|-----------------|-------------------------|-----------------------|-----------------|
|  | Yield (Q) =<br>$m^3/hr$ | Water<br>Level<br>(m) | Yield (Q) =<br>$m^3/hr$ | Water Level<br>(m) | Drawdown<br>(m) | Yield (Q) =<br>$m^3/hr$ | Water<br>Level<br>(m) | Drawdown<br>(m) | Yield (Q) =<br>$m^3/hr$ | Water<br>Level<br>(m) | Drawdown<br>(m) |
| 0.0  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 0.5  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 1.0  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 1.5  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 2.0  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 2.5  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 3.0  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 3.5  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 4.0  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 4.5  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 5.0  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 7.5  |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 10.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 15.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 20.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 25.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 30.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 35.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 40.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 45.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |
| 50.0   |                         |                       |                         |                    |                 |                         |                       |                 |                         |                       |                 |



**APPENDIX C**  
**CONSTANT DISCHARGE PUMPING TEST RECORD**

Well no.: ..... Commencement of pumping:

Well depth: ..... m Time: .....

Screen interval: ..... m Date: .....

Well type: .....

Distance from pumping well: ..... m End of pumping:

Collar height: ..... m Time: .....

Reduced ground level: ..... m(m.s.l.) Date: .....

Recorded by: ..... Static water level: ..... m (b.g.l.)

Pumping rate: ..... m<sup>3</sup>/day

Certified by registered geologist: .....

Depth of pump ..... m

Date: ..... Type of pump: .....

| Date/<br>Time | Time from<br>start of<br>pumping<br>(min) | Water<br>Level<br>(m) | Drawdown<br>(m) | Remarks | Date/<br>Time | Time from<br>start of<br>pumping<br>(min) | Water<br>level<br>(m) | Drawdown<br>(m) | Remarks |
|---------------|---|-----------------------|-----------------|---------|---------------|---|-----------------------|-----------------|---------|
|               | 0.00                                      |                       |                 |         |               | 160.00                                    |                       |                 |         |
|               | 0.20                                      |                       |                 |         |               | 200.00                                    |                       |                 |         |
|               | 0.50                                      |                       |                 |         |               | 250.00                                    |                       |                 |         |
|               | 1.00                                      |                       |                 |         |               | 300.00                                    |                       |                 |         |
|               | 1.50                                      |                       |                 |         |               | 350.00                                    |                       |                 |         |
|               | 2.00                                      |                       |                 |         |               | 400.00                                    |                       |                 |         |
|               | 2.50                                      |                       |                 |         |               | 450.00                                    |                       |                 |         |

|  |        |  |  |  |         |  |  |  |
|--|--------|--|--|--|---------|--|--|--|
|  | 3.00   |  |  |  | 500.00  |  |  |  |
|  | 3.50   |  |  |  | 550.00  |  |  |  |
|  | 4.00   |  |  |  | 600.00  |  |  |  |
|  | 4.50   |  |  |  | 700.00  |  |  |  |
|  | 5.00   |  |  |  | 800.00  |  |  |  |
|  | 6.00   |  |  |  | 900.00  |  |  |  |
|  | 7.00   |  |  |  | 1000.00 |  |  |  |
|  | 8.00   |  |  |  | 1200.00 |  |  |  |
|  | 9.00   |  |  |  | 1400.00 |  |  |  |
|  | 10.00  |  |  |  | 1600.00 |  |  |  |
|  | 15.00  |  |  |  | 1800.00 |  |  |  |
|  | 20.00  |  |  |  | 2000.00 |  |  |  |
|  | 25.00  |  |  |  | 2250.00 |  |  |  |
|  | 30.00  |  |  |  | 2500.00 |  |  |  |
|  | 35.00  |  |  |  | 3000.00 |  |  |  |
|  | 40.00  |  |  |  | 3400.00 |  |  |  |
|  | 45.00  |  |  |  | 3800.00 |  |  |  |
|  | 50.00  |  |  |  | 4200.00 |  |  |  |
|  | 55.00  |  |  |  | 4600.00 |  |  |  |
|  | 60.00  |  |  |  | 5000.00 |  |  |  |
|  | 70.00  |  |  |  | 5500.00 |  |  |  |
|  | 80.00  |  |  |  | 6000.00 |  |  |  |
|  | 90.00  |  |  |  | 6500.00 |  |  |  |
|  | 100.00 |  |  |  | 7000.00 |  |  |  |
|  | 120.00 |  |  |  | 7500.00 |  |  |  |

Note: m.s.l. - mean sea level  
 b.g.l. - below ground level

**APPENDIX D**  
**RECOVERY TEST RECORD**

Well no.: ..... Commencement of pumping:

Well depth: ..... m Time: .....

Screen interval: ..... m Date: .....

Well type: .....

Distance from pumping well: ..... m End of pumping:

Collar height: ..... m Time: .....

Reduced ground level: ..... m (m.s.l.) Date: .....

Recorded by: ..... Static water level ..... m (b.g.l.)

Pumping rate: ..... m<sup>3</sup>/day

Certified by registered geologist: ..... Depth of pump ..... m

Date: ..... Type of pump: .....

| Date/<br>Time | Time from<br>start of<br>pumping<br>(min) | Time from<br>stop of<br>pumping<br>(min) | t/t' | Water<br>level<br>(m) | Residual<br>Drawdown<br>(m) | Date/<br>Time | Time<br>from<br>start of<br>pumping<br>(min) | Time<br>from<br>stop of<br>pumping<br>(min) | t/t' | Water<br>level<br>(m) | Residual<br>Drawdown<br>(m) |
|---------------|---|--|------|-----------------------|-----------------------------|---------------|--|---|------|-----------------------|-----------------------------|
|               | 0.00                                      |  |      |                       |                             |               |  | 70.00                                       |      |                       |                             |
|               | 0.50                                      |  |      |                       |                             |               |  | 80.00                                       |      |                       |                             |
|               | 1.00                                      |  |      |                       |                             |               |  | 90.00                                       |      |                       |                             |
|               | 1.50                                      |  |      |                       |                             |               |  | 100.00                                      |      |                       |                             |
|               | 2.00                                      |  |      |                       |                             |               |  | 120.00                                      |      |                       |                             |
|               | 2.50                                      |  |      |                       |                             |               |  | 140.00                                      |      |                       |                             |
|               | 3.00                                      |  |      |                       |                             |               |  | 160.00                                      |      |                       |                             |
|               | 3.50                                      |  |      |                       |                             |               |  | 180.00                                      |      |                       |                             |
|               | 4.00                                      |  |      |                       |                             |               |  | 210.00                                      |      |                       |                             |

Note: m.s.l. - mean sea level  
b.g.l. - below ground level

## FORM 3

[Subregulation 4(1)]

## NOTIFICATION FOR EXCAVATION

**Jabatan Mineral dan Geosains****Malaysia**

20<sup>th</sup> Floor, Tabung Haji Building,  
Jalan Tun Razak,  
50658 KUALA LUMPUR.

Tel. No.: 603-21611033

Fax: 603-21611036

Website: [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>For office use only</i> |  |
|----------------------------|--|
| <i>Notification no.</i>    |  |
| <i>Date received</i>       |  |
| <i>Well ref. no.</i>       |  |

---

*All sections of this notification should be filled in and legible*

**1.0 Informer's information**

| <i>To be filled if notification is made by an individual</i> |                  |          |                 |
|--|------------------|----------|-----------------|
| Full name:   |                  |          |                 |
| I.C. no. /Passport no.:                                      | Contact address: |          |                 |
| Tel. no.:  | Mobile no.:      | Fax no.: | E-mail address: |

| <i>To be filled if notification is made on behalf of a company/organization</i> |                      |
|---|----------------------|
| Name of company/organization:   |                      |
| Company registration no.:   | Trading license no.: |
| Company main activity:  |                      |

| <b>Details of company representative</b> |             |              |                 |
|--|-------------|--------------|-----------------|
| Full name:                               |             |              |                 |
| I.C. no./Passport no.:                   |             | Designation: |                 |
| Contact address:                         |             |              |                 |
| Tel. no.:                                | Mobile no.: | Fax no.:     | E-mail address: |

## **2.0 Proposed excavation method(s)**

---



Bore

Drill

Dig

Pit

Shaft

Tunnel

Cutting

Others (*please specify*)  
\_\_\_\_\_

## **3.0 Purpose of excavation**

---

(please specify)  
\_\_\_\_\_

## **4.0 Details of location**

---

Map reference: \_\_\_\_\_ Northing \_\_\_\_\_ Easting

Location: Address: \_\_\_\_\_

Lot No.: \_\_\_\_\_

Mukim : \_\_\_\_\_ District: \_\_\_\_\_ Division: \_\_\_\_\_

State: \_\_\_\_\_

(Please attach key map showing the exact location)

Land use activity (within 500m radius): \_\_\_\_\_

Nearest surface water body (m): \_\_\_\_\_

Distance from existing excavation(s) (m): \_\_\_\_\_

Proposed depth of excavation (m): \_\_\_\_\_

Proposed dimension of excavation (length x width x depth) (m): \_\_\_\_\_

#### **5.0 Details of contractor**

Name of the contractor: \_\_\_\_\_ Company registration no.: \_\_\_\_\_

(Please attach a copy of the registration certificate)

#### **6.0 Particulars of land owner**

Name: \_\_\_\_\_

I.C no./Pasport no.: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone no.: \_\_\_\_\_ Fax no.: \_\_\_\_\_

Status of land: \_\_\_\_\_

Consent given:  Yes  No

(Please attach consent letter from owner of property and layout plan to show the proposed well location)

I certify that the information provided is true and correct to the best of my knowledge.

\_\_\_\_\_  
Signature of informer

\_\_\_\_\_  
Date

## FORM 4

[Subregulations 4(2) and (3)]

## NOTIFICATION OF EXCAVATION INFORMATION

**Jabatan Mineral dan Geosains****Malaysia**

20<sup>th</sup> Floor, Tabung Haji Building,  
Jalan Tun Razak,  
50658 KUALA LUMPUR.

Tel. No.: 603-21611033

Fax: 603-21611036

Website: [www.jmg.gov.my](http://www.jmg.gov.my)

| <i>For office use only</i> |  |
|----------------------------|--|
| <i>Notification no.</i>    |  |
| <i>Date received</i>       |  |
| <i>Well ref. no.:</i>      |  |

---

*All sections of this notification should be filled in and legible*

**1.0 Informer's information**

| <i>To be filled if notification is made by an individual</i> |                  |          |                 |
|--|------------------|----------|-----------------|
| Full name:   |                  |          |                 |
| I.C. no./Passport no.:                                       | Contact address: |          |                 |
| Tel. no.:  | Mobile no.:      | Fax no.: | E-mail address: |

| <i>To be filled if notification is made on behalf of a company/organization</i> |                      |
|---|----------------------|
| Name of company/organization:   |                      |
| Company registration no.:   | Trading license no.: |
| Company main activity:  |                      |

| <b>Details of company representative</b> |             |              |                 |  |
|--|-------------|--------------|-----------------|--|
| Full name:                               |             |              |                 |  |
| I.C. no./Passport no.:                   |             | Designation: |                 |  |
| Contact address:                         |             |              |                 |  |
| Tel. no.:                                | Mobile no.: | Fax no.:     | E-mail address: |  |

## **2.0 Excavation method(s)**



Bore



Drill



Dig



Pit



Shaft



Tunnel



Cutting

Others (*please specify*)  
\_\_\_\_\_

## **3.0 Purpose of excavation**

(please specify)  
\_\_\_\_\_

## **4.0 Overburden**

Overburden thickness (m): \_\_\_\_\_

Detail of overburden materials: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**5.0 Bedrock type**Sedimentary  
rockMetamorphic  
rockIgneous  
rockOthers (*please  
specify*)  
\_\_\_\_\_Please specify type of the rock in detail  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_**6.0 Details of location**

Map reference: \_\_\_\_\_ Northing \_\_\_\_\_ Easting

Location: Address: \_\_\_\_\_

Lot No.: \_\_\_\_\_

Mukim: \_\_\_\_\_ District: \_\_\_\_\_ Division: \_\_\_\_\_

State: \_\_\_\_\_

*(Please attach map showing the exact location)*Describe all surface drainage patterns including wetlands and standing water (within 500 m radius): \_\_\_\_\_  
\_\_\_\_\_

Topography of the area: \_\_\_\_\_

Land use activity (within 500m radius) \_\_\_\_\_

Nearest surface water body (m): \_\_\_\_\_

Distance from existing excavation(s) (m): \_\_\_\_\_

Dimension of excavated area (length x width x depth) (m): \_\_\_\_\_

(Please attach site plan and/or layout plan)

#### **7.0 Details of company**

Name of company: \_\_\_\_\_ Company registration no.: \_\_\_\_\_

(Please attach a copy of the registration certificate)

#### **8.0 Particulars of land owner**

Name: \_\_\_\_\_

I.C. no.: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone no.: \_\_\_\_\_ Fax no.: \_\_\_\_\_

Status of land: \_\_\_\_\_

Consent given:  Yes  No

I certify that the information provided is true and correct to the best of my knowledge.

\_\_\_\_\_  
Signature of informer

\_\_\_\_\_  
Date

Made 24 July 2013  
[NRE (S) 604-5/5; PN(PU2)681]

DATUK SERI PALANIVEL A/L GOVINDASAMY  
*Minister of Natural Resources and Environment*