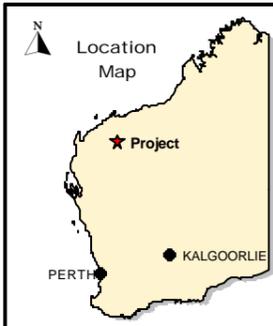
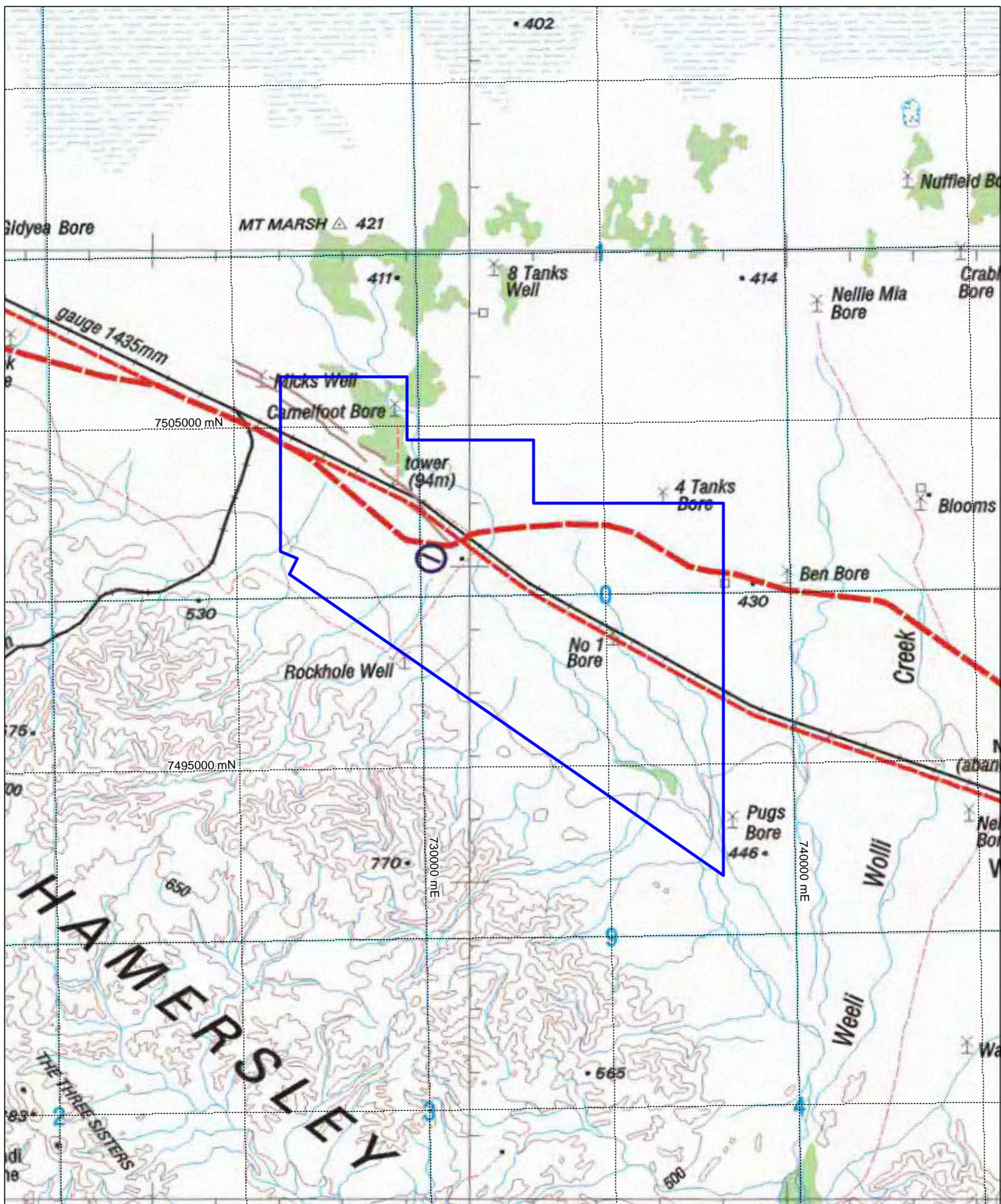


FIGURES



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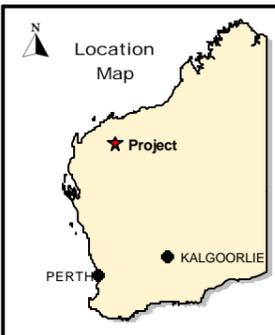
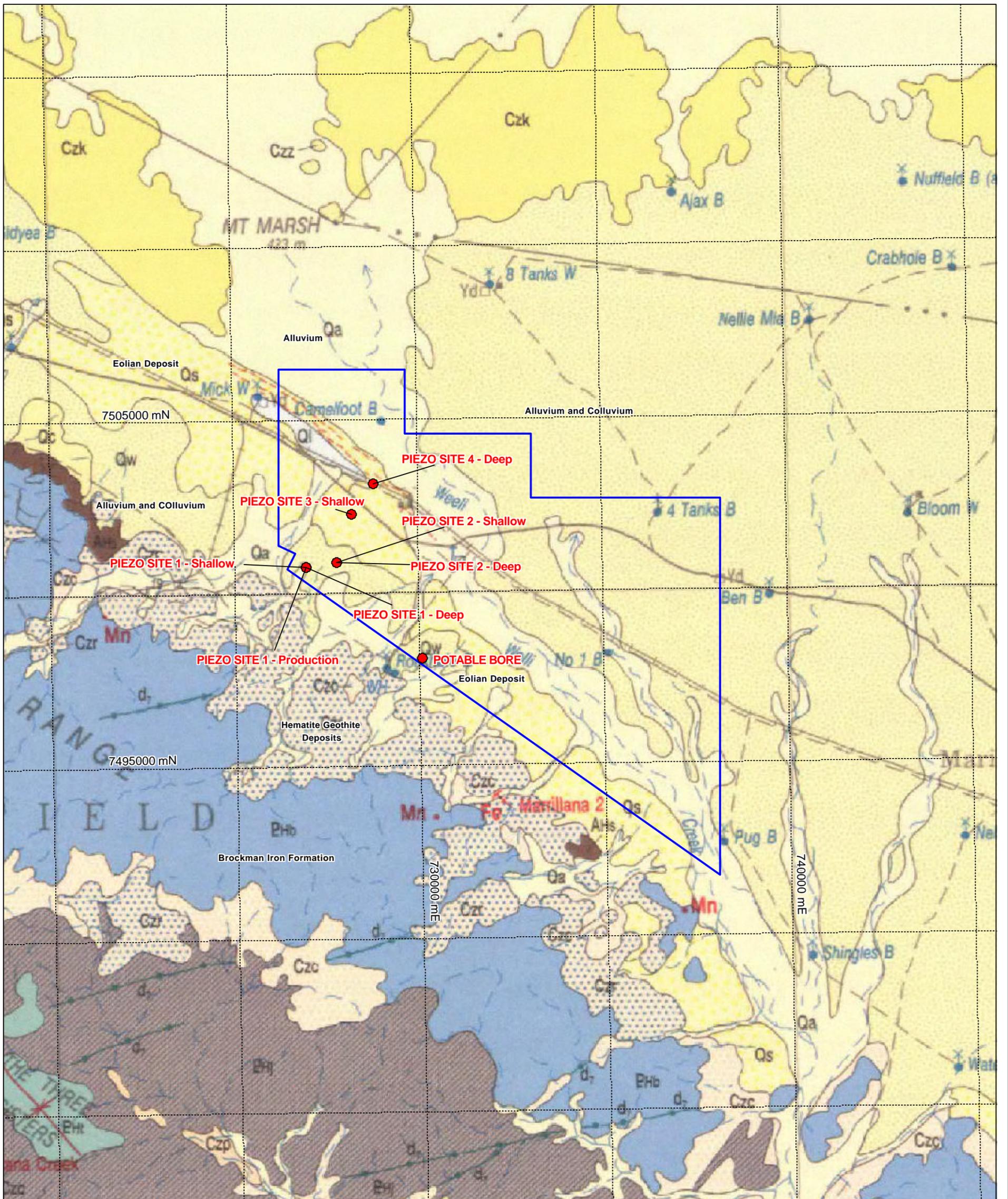
E47_1408 Tenement Area

0 2 4 Km



Figure 1. Marillana Exploration Tenement

| | |
|-----------------------|--------------------|
| Author: SS | Date: 5th May 2008 |
| Drawn: GB | Revised: |
| Job No: 832 | Report No: |
| Projection: GDA94 Z50 | Scale: 1:100,000 |



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- Marillana Drilling Details
- E47_1408 Tenement Area

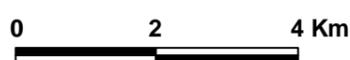
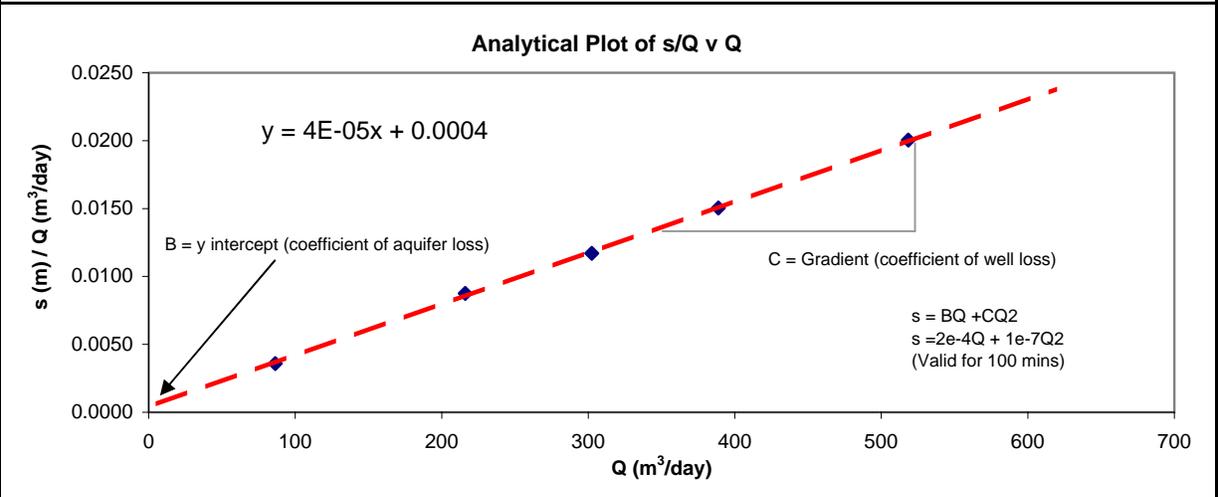
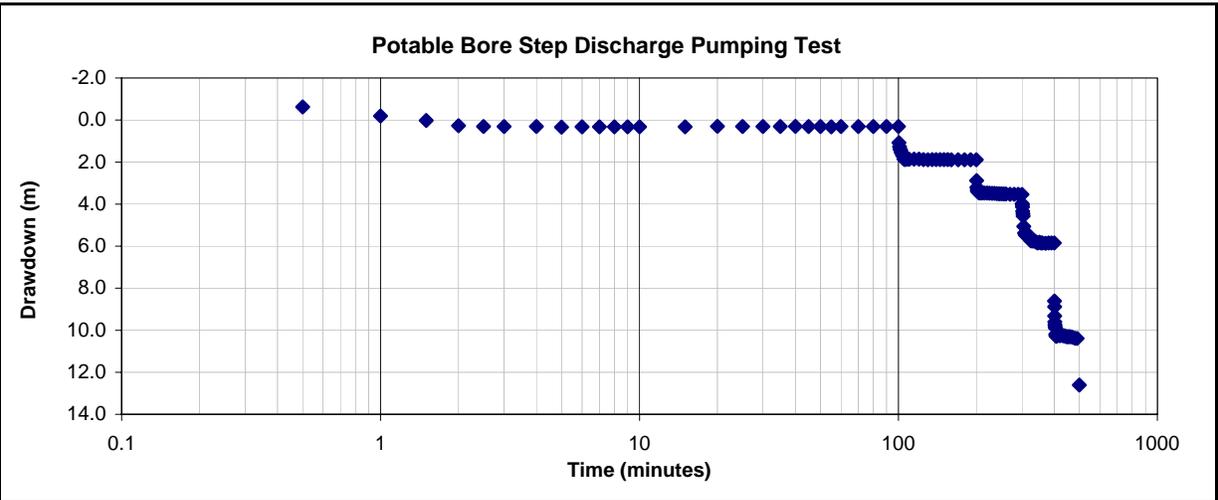


Figure 2. Regional Geology With Marillana Drilling

| | |
|-----------------------|--------------------|
| Author: SS | Date: 5th May 2008 |
| Drawn: GB | Revised: |
| Job No: 832 | Report No: |
| Projection: GDA94 Z50 | Scale: 1:100,000 |



$$s_{w(n)} = BQ_n + CQ_n^P \text{ (Rorabaugh's equation)}$$

Where, B = Intercept with y axis (coefficient of aquifer loss or laminar flow)

C = Gradient (coefficient of turbulent flow loss or apparent well loss)

s = Drawdown in the borehole

P = Value determined using Rorabaugh's method of superposition

Components of the equation BQ and CQ² are termed the aquifer loss and apparent well loss respectively.

They give an indication of the proportion of total drawdown caused by laminar and turbulent flow.

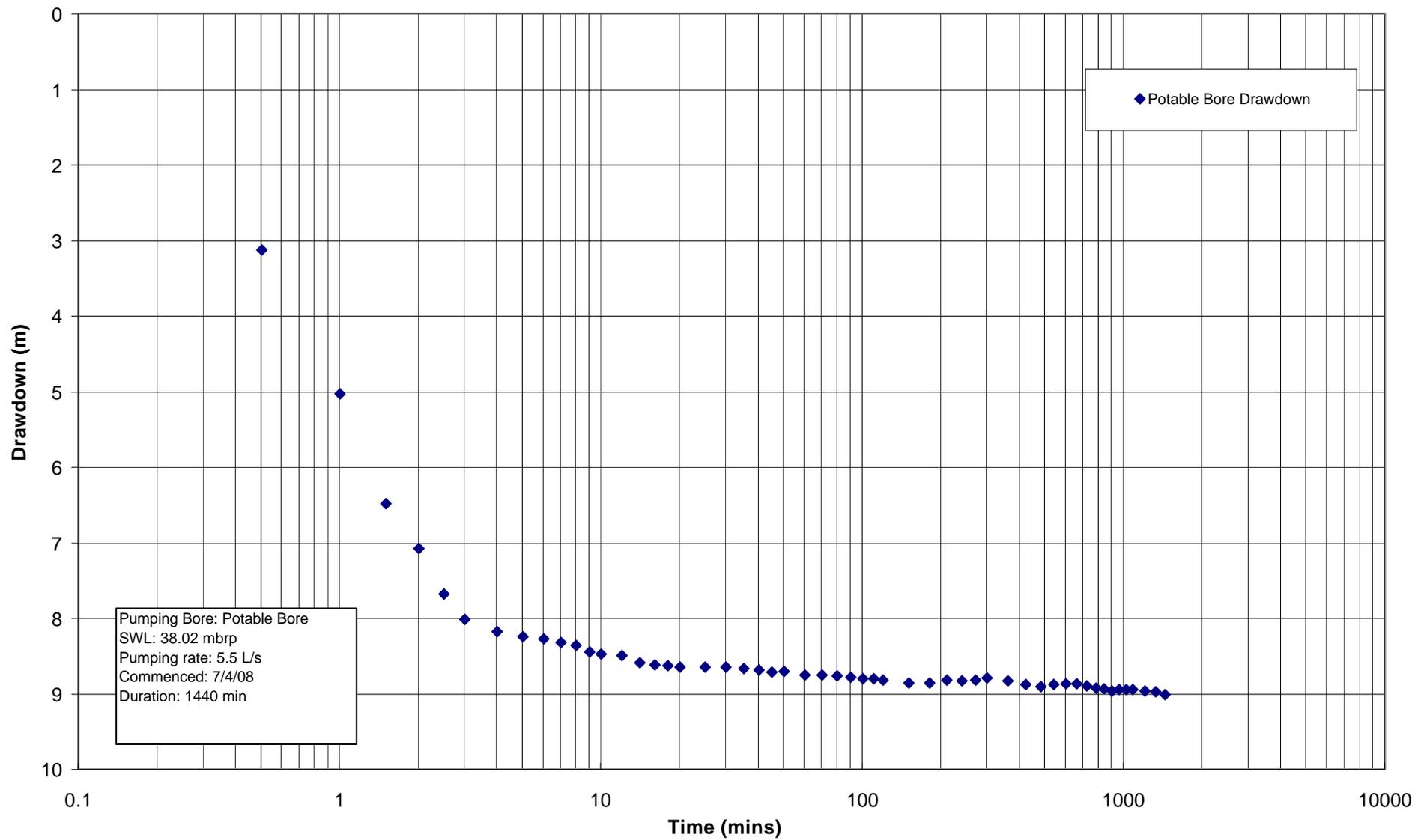
It should be noted: 1. In thin or fissured aquifers large components of well loss are due to high flow velocities in the aquifer rather than inefficient bore design. Therefore, the term "apparent well loss" is better than well loss.

2. In aquifers where the flow horizons are vertically anisotropic, changes in bore performance often relate to changes in the rest water level with respect to the primary aquifer horizons.

$$E_w = (BQ / (BQ + CQ^P)) \times 100$$

E_w or Well Efficiency represents the proportion of drawdown caused by laminar flow

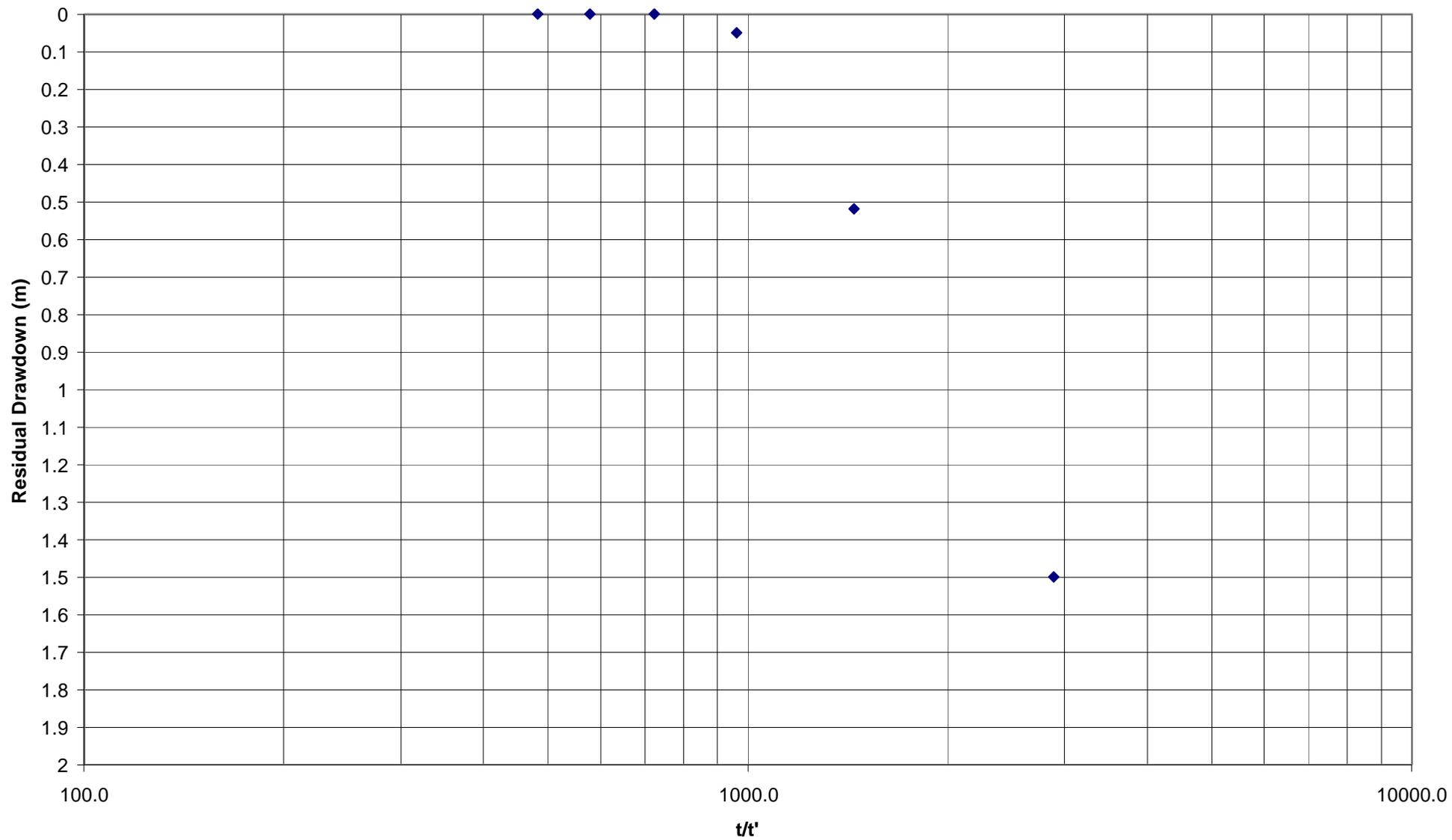
| Comparison of Observed and Predicted Drawdowns | | | | | | |
|--|--------------------|-------------------------|---|-----------------------------------|--------|---|
| Step (100 min steps) | Discharge (L/s) | Discharge (Q) (m3/d) | Observed Corrected Drawdown (s) (metres) | Predicted Drawdown (metres) | s/Q | Apparent Efficiency (E _w) % |
| 1 | 1.0 | 86 | 0.31 | 0.32 | 0.0036 | 10.3 |
| 2 | 2.5 | 216 | 1.89 | 1.85 | 0.0087 | 4.4 |
| 3 | 3.5 | 302 | 3.54 | 3.58 | 0.0117 | 3.2 |
| 4 | 4.5 | 389 | 5.85 | 5.87 | 0.0150 | 2.5 |
| 5 | 6.0 | 518 | 10.39 | 10.37 | 0.0200 | 1.9 |



F:\Jobs\832C\C4 - Reporting\Hydrogeological Report\Figure 4 Constant Rate - Analysed.xls\Pumping Well Plot

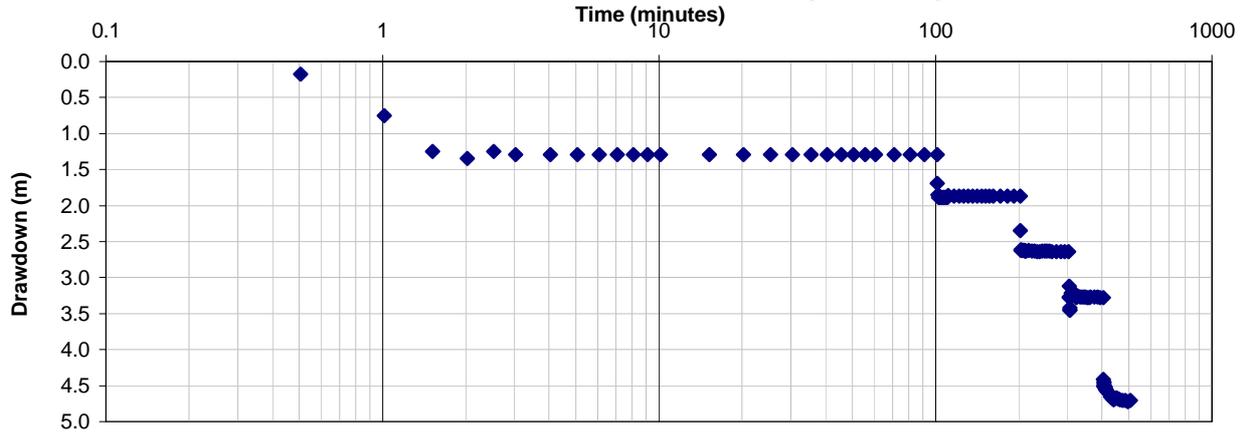


Marillana Potable Bore Constant Rate Test
 Figure 4

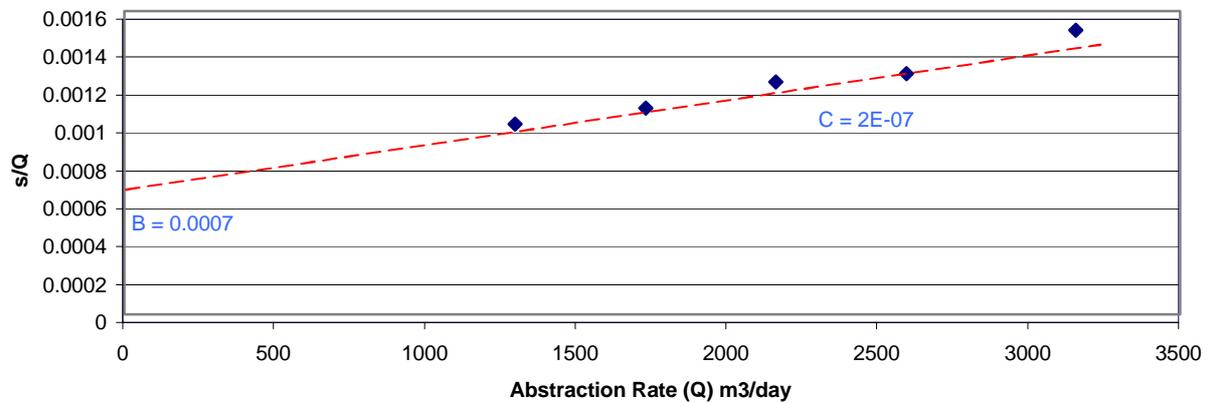


F:\Jobs\832\C4 - Reporting\Hydrogeological Report\Figure 5 Constant Rate - Analysed.xls\Production (2)

Piezo Site 1 In Pit Production Bore Step Discharge Pumping Test



Observed drawdown (s)/Abstraction Rate (Q) versus Discharge (Q) m3/day



$$s_{w(n)} = BQ_n + CQ_n^P \text{ (Rorabaugh's equation)}$$

- Where, B = Intercept with y axis (coefficient of aquifer loss or laminar flow)
- C = Gradient (coefficient of turbulent flow loss or apparent well loss)
- s = Drawdown in the borehole
- P = Value determined using Rorabaugh's method of superposition

Components of the equation BQ and CQ² are termed the aquifer loss and apparent well loss respectively.

They give an indication of the proportion of total drawdown caused by laminar and turbulent flow.

- It should be noted:*
1. In thin or fissured aquifers large components of well loss are due to high flow velocities in the aquifer rather than inefficient bore design. Therefore, the term "apparent well loss" is better than well loss.
 2. In aquifers where the flow horizons are vertically anisotropic, changes in bore performance often relate to changes in the rest water level with respect to the primary aquifer horizons.

$$E_w = (BQ / (BQ + CQ^P)) \times 100$$

E_w or Well Efficiency represents the proportion of drawdown caused by laminar flow

| Comparison of Observed and Predicted Drawdowns | | | | | | |
|--|--------------------|-------------------------|---|-----------------------------------|--------|---|
| Step (100 min steps) | Discharge (L/s) | Discharge (Q) (m3/d) | Observed Corrected Drawdown (s) (metres) | Predicted Drawdown (metres) | s/Q | Apparent Efficiency (E _w) % |
| 1 | 15.0 | 1296 | 1.30 | 1.28 | 0.0010 | 66.0 |
| 2 | 20.0 | 1728 | 1.88 | 1.90 | 0.0011 | 59.3 |
| 3 | 25.0 | 2160 | 2.65 | 2.62 | 0.0012 | 53.8 |
| 4 | 30.0 | 2592 | 3.29 | 3.43 | 0.0013 | 49.3 |
| 5 | 36.5 | 3154 | 4.73 | 4.63 | 0.0015 | 44.4 |