

## ***Geothermal Power - Video captions and answers for Wednesday***

### 1. w01-four-new-wairakei-field-wells

You are with Donald talking with Sam Pook about four new steam wells the Wairakei Steam Field.

- What are the names of these wells?
- How deep are they?
- How far apart sideways are these wells where they connect with the steam underground?

### 2. w02-steam-pipes

New pipes are sitting waiting to be welded together to make up the steam pipes.

- What are the pipes made from?
- How does the magnetite layer deposited on the inside by the steam help the pipes?

### 3. w03-well-head-to-flash-plant

Well 244 is shiny clean and almost ready for action. Sam describes the parts that make up the well head.

- What is the pressure of water and steam coming up through the bore?
- How much water and steam comes up per hour?
- What is the purpose of the valve on top of the well head?
- What percentage of water is there?
- What is the temperature of the water when it comes up through the well head?

### 4. w04-flash-plant-number-twelve

This flash plant is just down from the well head.

- What is the pressure of water and steam when it enters the Flash Plant?
- What is the pressure inside the larger vessel?
- What happens to the steam?
- What happens to the water? (see next video)

### 5. w05-silencer-for-flash-plant-twelve

This silencer is an impressive site and plays an important part in the management of high pressure waste and steam on the steam field.

- What pressure does water have entering the silencer?
- What pressure does the water drop down to?
- Why is the silencer so necessary?

### 6. w06-audioconference-location-wairakei-field

Sam Pook answered questions today at a site overlooking steam, pipes and well heads..

- What is Sam's job with Contact Energy?
- Where is the audioconference being held?

### 7. w07-drill-rig-city

Meet Eddie manager of this drilling project for Contact Energy. This drill rig is part of a temporary small town.

- How many truck loads were required to transport the rig to this site?
- How many people are working on this site?

8. w08-tour-of-wk248

After a 10 minute induction, Eddie takes you on a tour of the drill site.

- What's the name of this site?
- How far down has the drilling gone?
- How far down do they expect to drill?
- What is the name given to the 'pipe' that is drilled down into the ground?
- What travels down the inside of the hollow drill string?
- What's the purpose of the drilling mud?
- How much would a larger PDC (Poly Diamond Crystal) drill bit cost?
- What is the purpose of the drilling mud system?

9. w09-tightening-joints-on-the-drill-string

You are on the drilling platform of the rig. The driller has asked for the joints in the drill string to be checked. Stand back!

- What is the name of the device that holds the drill string firm while the joints are tightened?
- What grips the drill above and below the joint?
- What is used to tighten the joints?