2. DRILLING

2.1. Drilling Summary

Sunday, 24/06/2012: Start drilling 12-1/4" conductor hole with Hammer from 0 m to 12.5 m.

Monday, 25/06/2012: Continue drilling 12-1/4" hole from 12.5 m to 214.03 m.

Tuesday, 26/06/2012: Continue drilling 12-1/4" hole from 214.03 m to section TD 323 m. Run 9-5/8" casing to 135 m.

Wednesday, 27/06/2012: Drill 12-1/4" hole to section TD at 323 m. Run and cement casing.

Thursday, 28/06/2012: Nipple up and test BOP, run in hole and drill shoe track. No meters drilled.

Friday, 29/06/2012: Continue drilling from 323 m to 407.97 m.

Saturday, 30/06/2012: Continue drilling from 407.97 m to 763.99 m.

Sunday, 01/07/2012: Continue drilling 6-1/8" hole from 763.99 m to 801.84 m. Ream 6-1/8" hole from 326 m to 398 m.

Monday, 02/07/2012: Continue open 6-1/8" hole to 8-1/2" from 398 m to 453 m.

Tuesday, 03/07/2012: Continue open 6-1/8" hole to 8-1/2" 453 m to 665.51 m.

Wednesday, 04/07/2012: Open 6-1/8" hole to 8-1/2" from 665.52 m to 801.84 m, drill 8-1/2" hole from 801.84 m.

Thursday, 05/07/2012: Drill 8-1/2" hole from 805.48 m to 1006.74 m.

Friday, 06/07/2012: Continue air hammer 8-1/2" hole from 1006.74 m to 1046.35 m. Logging Run # 1 CMI.

Saturday, 07/07/2012: Continue logging Run # 1 CMI and logging run # 2 Supercombo and SGS. Run 7" casing.

Sunday, 08/07/2012: No meters drilled due to collapse of cement bulker.

Monday, 09/07/2012: Cement 7" casing.

Tuesday, 10/07/2012: No meters drilled due to dropped pin from dog collar down hole. Pin was recovered successfully.

Wednesday, 11/07/2012: Drill shoe track from 1018.77 m to 1046.35 m, drill new formation from 1046.35 m to 1090.46 m.

Thursday, 12/07/2012: Drill 6-1/8" hole from 1090.46 m to 1142.77 m. Run wireline survey at 1137 m 14 deg. Logging Run # 1 Quad combo.

Wednesday, 13/07/2012: Continue logging Run # 1 Quad combo, Rig down loggers, Rig down non-essential equipment and prepare for rig move.
Thursday, 14/07/2012: Cementing hole.
Friday, 15/07/2012: Rig down and prepare for rig move.

2.2. Equipment Installed in or on the Well

Conductor Hole
- Drill 17-1/2" hole to 12.0 m

Surface Hole
- Drill 12-1/4" hole to 323.0 m
- Survey at 70 m then every 70.0 m with a maximum deviation of 2 degrees
- Fluid: Air/mist
- Bit: Air Hammer

Surface Casing
- Casing size: 9-5/8"
- Grade: J-55
- Thread: BTC
- Burst: 2400.0 psi
- Set at 319.6 m

Intermediate Hole
- Drill 8-1/2" hole to 1046.0 m
- Ream 8-1/2" hole to 1046.0 m
- Survey 200 m intervals with a maximum deviation of 8.0 degrees
- Mud: Air mist drilled
- Bit: Air Hammer

Production Hole
- Drill 6-1/8" hole to 1142.8 m

Intermediate Casing
- Casing Size 7"
- Grade: K-55
- Tread: BTC set at about 830 m
2.3. Wellbore schematics

![Wellbore Schematic](image)

**Figure 1: Wellbore schematic for Kilgour North 1.**
2.4. Casing and Equipment Installed in or on the Well

Conductor Casing: 11.5 m  
Surface Casing: 319.60 m  
Intermediate Casing: 1045.30 m  
Production Casing: N/A

2.5. Deviation Survey

Table 1: Deviation Survey for Kilgour North 1, EP171.

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<tr>
<th>Depth [m]</th>
<th>Deviation [degree]</th>
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2.6. Cementing Operation

Cellar
- 6' by 3.2' cellar ring installed and cemented in place.

Conductor Pipe
- 14" Conductor casing cemented from 12 m to surface.

Surface Casing
- 9-5/8" casing ran from 319 m back to surface.
- 9-5/8" casing cemented from 323 m back to surface.
- Ran 19 MT class "A" cement, 15 bbls good cement returns back to surface.
- 9-5/8" casing pressure tested to 2000 psi, test good.

Intermediate Casing Cement
- 7" casing ran from 1043 m to surface.
- Tail cement ran from 1046 m to 696 m.
- Lead cement ran from 696 m to 49 m.
- Tag and confirm top of lead cement at 49 m.
- 7 bbl top up cement job done, cement 49 m to 0 m.

OH Cementing/Abandonment
- Cement Plug #1 from TD 1142.8 m to 1116 m, 14 ppg.
- Cement Plug #2 from TD 1116 m to 908 m, 14 ppg.
- Cement Plug #3 (surface plug) from 36 m to 0 m (surface).
2.7. Bit Record

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<th>Bit Number</th>
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<th>Type</th>
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<th>Out [m]</th>
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2.8. Drilling Fluids

Hole was drilled on air/mist and during coring and wireline logging operations the hole was loaded with KCl water. Average loaded-hole fluid properties were:

- Density \( \rho \): 1.02 g/c3
- Viscosity: 31 sec/qt

Air drilling properties:

- 1800 cfm air
- 20-30 gpm misting
- 0.05 % foam