

2. DRILLING

2.1. Drilling Summary

Friday, 11/05/2012:	Started drilling from 0 m to 8.59 m.
Saturday, 12/05/2012:	Continue drilling from 8.59 m to 17.41 m.
Sunday, 13/05/2012:	Continue drilling from 17.41 m to 111.42 m.
Monday, 14/05/2012:	Continue drilling from 111.42 m to 161.56 m.
Tuesday, 15/05/2012:	Continue drilling from 161.56 m to 240 m.
Wednesday, 16/05/2012:	Running surface casing, cementing and installing well head. No meters drilled.
Thursday, 17/05/2012:	Continue to nipple up BOP and running pressure test. No meters drilled.
Friday, 18/05/2012:	Repairs to iron roughneck, jaw problems. No meters drilled.
Saturday, 19/05/2012:	Pressure testing and drilling cement plug. No new meters drilled.
Sunday, 20/05/2012:	Continue drilling from 240 m to 326 m.
Monday, 21/05/2012:	Continue drilling from 326 m to 449 m.
Tuesday, 22/05/2012:	Continue drilling from 449 m to 546.69 m.
Wednesday, 23/05/2012:	Continue drilling from 546.69 m to 584.74 m.
Thursday, 24/05/2012:	Continue drilling from 584.74 m to 586.27 m, cored from 586.27 m to 589 m.
Friday, 25/05/2012:	Continue drilling from 589 m to 661 m.
Saturday, 26/05/2012:	Continue drilling from 661 m to 752 m.
Sunday, 27/05/2012:	Drilled from 752 m to 753.12 m, cored from 753.12 m to 761.50 m, drill ahead from 761.5 m to 763.8 m.
Monday, 28/05/2012:	Continue drilling from 763.8 m to 835 m.
Tuesday, 29/05/2012:	Continue drilling from 835 m to 900 m and pulled out of hole to replace bit at 900 m.
Wednesday, 30/05/2012:	Continue drilling from 900.05 m to 921 m with a bit change at 921 m.
Thursday, 31/05/2012:	Continue drilling from 921 m to 1030 m.
Friday, 1/06/2012:	Continue drilling from 1030 m to 1196 m.

Document Title	Well Completion Report, Cow Lagoon 1, EP176
----------------	---

Saturday, 2/06/2012:	Continue drilling from 1196 m to 1293.27 m - TD. Pull out of hole in preparation for logging.
Sunday 3/06/2012:	Continue logging. Set up for Seismic.
Monday 4/06/2012:	Complete logging and seismic - prepare to run back in to extend to 1800 m max.
Tuesday 5/06/2012:	Pressure test, run back in. Continue drilling from 1293.27 m to 1305.84 m.
Wednesday 6/06/2012:	Continue drilling from 1305.84 m to 1353.34 m. Water flow test, POOH & set up for coring.
Thursday 7/06/2012:	Run into hole, drill 2.66 m to test core bit penetration rate. Pull up for core run – RUN 3: 1356 m to 1357.24 m.
Friday 8/06/2012:	Attempt to drill ahead with drilling insert, very slow ROP. Attempt to core for 45 mins, no improvements. POOH to change out coring assembly and install hammer assembly.
Saturday 9/06/2012:	Drill ahead to 1378.19 m with air hammer, wait for chromatograph installation, POOH to shoe & fix draw-works.
Sunday 10/06/2012:	Run into hole and drill ahead. Hard ground. Set chromatograph into operation. Slow cuttings, clearance from hole reducing therefore ROP reducing.
Monday 11/06/2012:	Continue to drill ahead to 1553.45 m with very slow ROP, POOH to assess bit.
Tuesday 12/06/2012:	Remove stabilizer on surface and run back in hole - flares at 852 m & 947 m (reported) and 1048 m (witnessed - duration ~50 sec, 1-2 m yellow flame), drill ahead to 1569 m, take survey (failed - DTG gas witnessed when unloading well after survey attempt), drill ahead to 1598 m, take survey - 1.0 deg (DTG - 0.94% Pason, no flare). Drill ahead to 1619.40 m.
Wednesday 13/06/2012:	Continue to drill ahead, TD 1804 m. Slow ROP due to slow cuttings clearance.
Thursday 14/06/2012:	Commence logging hole.
Friday 15/06/2012:	Logging hole, pulling out of hole started casing.
Saturday 16/06/2012:	Casing, cementing hole and rig up.
Sunday 17/06/2012:	Well completed.

2.2. Equipment Installed in or on the Well

Conductor Hole

- Drilled 17-1/2" hole
- Set 14" casing at 9 m

Surface Hole

- Drill 12-1/4" hole to 232.0 m
- Survey at 50 m then every 50 m
- Maximum deviation: 2.0 degrees
- Mud drilled

Surface Casing

- Casing size: 9-5/8"
- Grade: J-55
- Tread: BTC set at 231.3 m or 238.56 m
- Cement: 10 bbls good cement return

Main Hole

- Drill 8-1/2" hole to 1805.0 m
- Mud: Drilled with air hammer

Fluid

- Air rate: 1800 cfm
- Mist rate: 20 gpm
- Frequency of rotation: 45 RPM
- Pressure: 380 psi

Production Casing

- Casing size: 7"
- Grade: J-55
- Thread: BTC set at 1805.0 m, run to surface

2.3. Casing and Equipment Installed in or on the Well

Conductor Casing:	14" conductor casing cemented from 9 m to surface
Surface Casing:	238.56 m
Intermediate Casing:	NA
Production Casing:	1804 m

2.4. Wellbore schematics

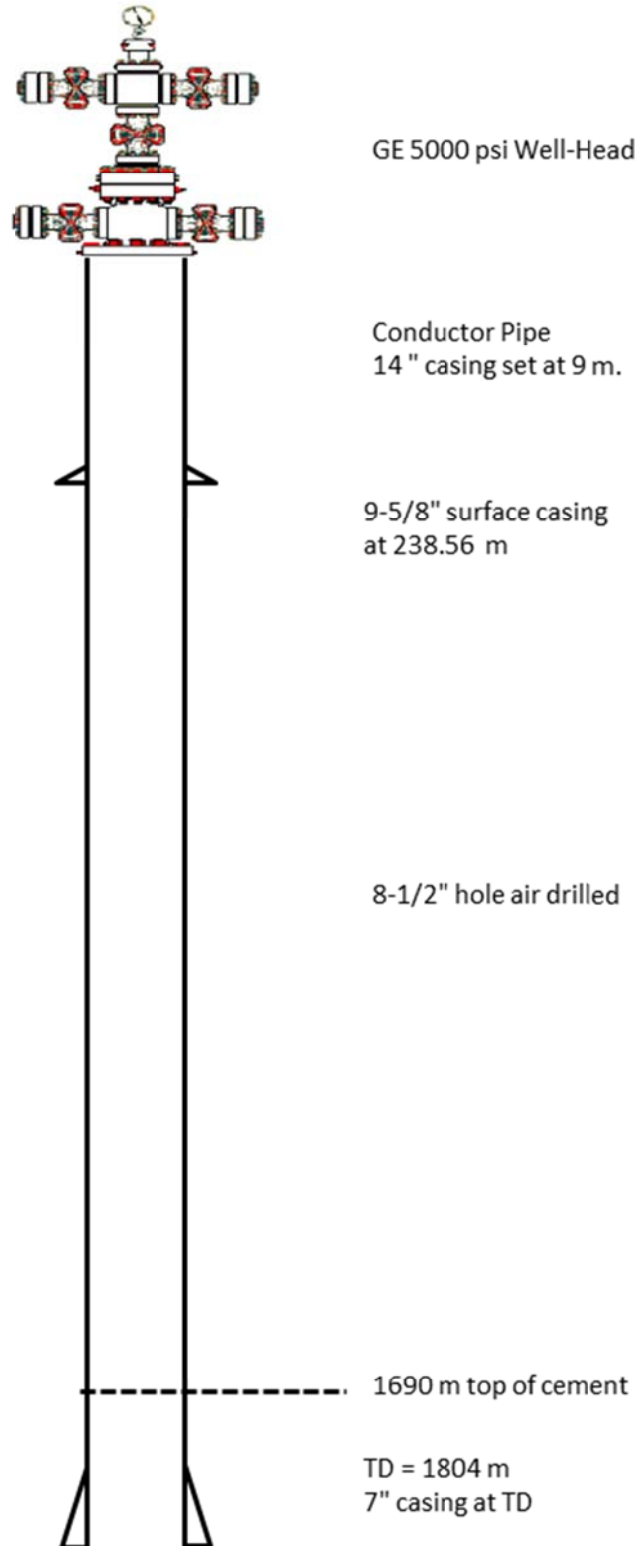


Figure 1: Wellbore schematic for Cow Lagoon 1.

2.5. Deviation Survey

Table 1: Deviation Survey for Cow Lagoon 1, EP176.

Depth [m]:	Deviation [°]
27	0.5
55	0.5
119	0.5
231	1.0
395	2.5
499	2.5
688	5.0
900.05	4.5
1058	0.5
1293.2	0.75
1585	1.0
1804.9	1.0

2.6. Cementing Operation

Cellar

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

Conductor Pipe 14" Casing

- 14" Conductor casing cemented from 9 m to surface.

Surface Casing Cement 9-5/8" Casing

- 9-5/8" casing ran from 231.3 m back to surface.
- 9-5/8" casing cemented from 231.3 m back to surface.

Production Casing Cement 7" Casing

- 7" casing cemented from TD back to surface.
- Cement started to set-up, treating press to 3600 psi.
- 20 bbl annulus top up job done - Cement at surface.
- 3600 psi pressure held on casing for 15 min.
- Tail cement estimated at 1602 m.
- Lead cement came to 2 m from surface.

Document Title	Well Completion Report, Cow Lagoon 1, EP176
----------------	---

2.7. Bit Record

Table 2: Bit Record for Cow Lagoon 1, EP176.

Bit Number	Size [inch]	Type	In [m]	Out [m]	Meters drilled [m]	Hours [h]
1	17.5	Tricone	4.4	8.59	4.19	N/A
2	12.25	Tricone	8.59	136	127.41	34.3
3	12.25	PDC	136	144	8	2.5
2RR-1	12.25	Tricone	144	240	96	59
4	8.5	Tricone	240	584.97	344.97	52.4
5	8.5	PDC	584.97	589	4.03	2.5
6	8.5	Tricone	589	752.92	163.92	21.5
7	8.5	PDC	752.92	763.8	10.88	6
6RR-1	8.5	Tricone	763.8	900	136.2	15.4
4RR-1	8.5	Tricone	900	921.5	21.5	6.5
8	8.5	Hammer	921.5	1293.3	371.8	33.1
8RR-1	8.5	Hammer	1293.3	1353.3	60	60.07
9	8.5	PDC	1353.3	1358.8	5.5	5.24
10	8.5	Hammer	1358.8	1804	445.2	446.24

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 ρ : 1.02 g/c3
- Viscosity: 31 sec/qt

Air drilling properties:

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