

ORIGIN ENERGY - DUNBAR-1 DW-1 - PPL-1 - OTWAY BASIN VICTORIA

DEPTH	(%)	LITHOLOGICAL DESCRIPTION	GAS
1210	100	CEMENT – Kick-off from 1215m.	
1220 (14.9)	90	SANDSTONE, white to very pale grey, fine to predominantly medium, occasionally coarse, sub-angular, moderate sorted, common pyrite crystals encrusted on some quartz grains, trace to moderate clay matrix, moderate calcite cement, friable, good porosity.	0.0 (-:-:-:-:-)
	10	CEMENT.	
1230 (9.4)	90	SANDSTONE, a.a. – sub-angular to sub-rounded, moderate sorted, rare pyrite, trace dispersive clay matrix, predominantly loose, very good porosity.	0.0 (-:-:-:-:-)
	10	CLAYSTONE, moderate to dark grey, soft, silty in part.	
1240 (3.9)	80	SANDSTONE, translucent white, fine to coarse, sub-angular to sub-rounded, poor to moderate sorted, crystal faces on some grains, common pyrite, trace to moderate clay matrix, minor calcite cement, friable, good porosity.	0.0 (-:-:-:-:-)
	20	CLAYSTONE, a.a.	
1250 (5.8)	50	SANDSTONE, a.a. – very fine to fine, occasionally medium, trace pyrite, moderate to abundant clay matrix, friable to moderately hard, fair to good porosity.	0.0 (-:-:-:-:-)
	50	CLAYSTONE, a.a.	
1260 (5.6)	10	SANDSTONE, white to pale grey, very fine, very argillaceous, occasional carbonaceous laminae, trace pyrite, poor porosity.	0.0 (-:-:-:-:-)
	90	CLAYSTONE, light to moderate grey, grey-brown, soft, silty and carbonaceous in part, trace dolomite, rare greenish lithic grains.	
1270 (4.9)	50	SANDSTONE, a.a. – very fine, trace lithics, moderate clay matrix, weak calcite cement, moderately hard, poor porosity.	0.0 (-:-:-:-:-)
	50	CLAYSTONE, a.a. – silty with minor lithics and carbonaceous specks in part, soft.	
1280 (5.1)	10	SANDSTONE, white to pale greenish white, very fine, very argillaceous, minor greenish black lithics, trace carbonaceous material, calcareous in part, poor porosity.	0.0 (-:-:-:-:-)
	90	CLAYSTONE, moderate brown to grey-brown, soft, silty, carbonaceous in part.	
1290 (5.0)	10	SANDSTONE, a.a.	0.0
	90	CLAYSTONE, a.a.	(-:-:-:-:-)
1300 (5.8)	Tr	SANDSTONE, a.a.	0.0
	100	CLAYSTONE, a.a.	(-:-:-:-:-)
1310 (3.8)	Tr	SANDSTONE, a.a.	0.0
	100	CLAYSTONE, a.a.	(100:0:0:0:0)
1320 (2.4)	60	SANDSTONE, white, very fine to fine, occasionally medium to coarse, sub-angular to sub-rounded, poor to moderate sorted, trace lithics and pyrite, moderate to abundant clay matrix, calcareous in part, poor to fair porosity.	0.6 (100:0:0:0:0)
	40	CLAYSTONE, a.a. – grades to siltstone.	
1330 (2.5)	70	SANDSTONE, a.a. – fine to coarse, poorly sorted, abundant dispersive clay matrix, common pyrite, trace carbonaceous material, calcareous in part, friable, poor to fair porosity.	0.2 (100:0:0:0:0)
	30	CLAYSTONE, a.a.	
1340 (5.1)	Tr	SANDSTONE, white, very fine, very argillaceous, trace carbonaceous material, poor porosity.	0.1 (100:0:0:0:0)
	100	CLAYSTONE, moderate grey-brown to brown, soft, silty and carbonaceous in part.	
1350 (5.5)	Tr	SANDSTONE, a.a.	1.6
	100	CLAYSTONE, a.a. – grades to siltstone.	(100:0:0:0:0)
1360 (5.7)	100	CLAYSTONE, a.a. – silty.	4.5 (99:1:0:0:0)
1370 (6.6)	100	CLAYSTONE, a.a.	5.9 (99:1:0:0:0)
1380 (5.2)	100	CLAYSTONE, a.a.	7.2 (99:1:0:0:0)
1390 (4.0)	100	CLAYSTONE, a.a. – minor greenish grey to greenish blue.	11.8
	Tr	LIMESTONE, white to cream, silty and argillaceous, minor green lithic / glauconite? grains.	(99:1:0:0:0)
1400 (4.6)	100	CLAYSTONE, a.a.	19.2 (98:2:0:0:0)
1410 (3.6)	100	CLAYSTONE, a.a.	32.6 (97:3:0:0:0)
1420 (4.9)	100	CLAYSTONE, a.a. – light to moderate brown.	28.5 (95:5:0:0:0)

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1430 (5.1)	100	CLAYSTONE, a.a.	32.2 (95:5:0:0:0)
1434 (4.9)	100	CLAYSTONE, light to moderate grey-brown to brown, soft, silty in part, trace carbonaceous specks.	41.2 (96:4:0:0:0)
1437 (4.7)	100	CLAYSTONE, a.a.	40.5 (96:4:0:0:0)
1440 (4.7)	100	CLAYSTONE, a.a.	42.2 (96:4:0:0:0)
1443 (6.1)	100	CLAYSTONE, a.a.	41.0 (96:4:0:0:0)
1446 (5.7)	100	CLAYSTONE, a.a. – minor bluish green to grey.	39.3 (96:4:0:0:0)
1449 (5.7)	10	SANDSTONE, white to pale brown, very fine to occasional medium, silty bluish green to grey., very argillaceous, common green lithic (glauconite?) grains, trace carbonaceous material, calcareous in part, grades to arenaceous claystone in part, poor porosity.	32.2 (96:4:0:0:0)
1452 (6.9)	90	CLAYSTONE, a.a. – light to moderate brown to grey-brown, bluish grey.	
	10	SANDSTONE, clear, loose, fine to medium, sub-rounded quartz grains; also minor white to pale brown, very fine to medium, lithic, trace carbonaceous material, very argillaceous / silty, very poor porosity.	33.8 (96:4:0:0:0)
1455 (7.0)	20	SANDSTONE, a.a. – clear loose quartz grains; also white to pale brown, green, very fine to medium glauconite grains, lithic, silty, very argillaceous, calcareous in part, very poor porosity.	26.5 (95:5:0:0:0)
	80	CLAYSTONE, a.a.	
1458 (5.0)	Tr	SANDSTONE / GLAUCONITE, very fine to medium, loose, clear quartz and greenish black glauconite grains.	30.0 (95:5:0:0:0)
	100	CLAYSTONE, a.a.	
1461 (4.9)	10	SANDSTONE, a.a.	35.2 (95:5:0:0:0)
	90	CLAYSTONE, a.a.	
1464 (5.6)	Tr	SANDSTONE, a.a.	36.3 (95:5:0:0:0)
	100	CLAYSTONE, a.a.	
1467 (5.2)	100	CLAYSTONE, light to moderate brown, soft, common glauconitic grains.	32.8 (95:5:0:0:0)
1470 (5.4)	100	CLAYSTONE, a.a.	35.8 (95:5:0:0:0)
1473 (5.9)	100	CLAYSTONE, a.a.	40.3 (95:5:0:0:0)
1476 (5.7)	100	CLAYSTONE, a.a.	42.5 (95:5:0:0:0)
1479 (7.4)	100	CLAYSTONE, a.a. – glauconitic.	43.0 (95:5:0:0:0)
1482 (7.3)	100	CLAYSTONE, a.a.	42.7 (95:5:0:0:0)
1485 (7.0)	100	CLAYSTONE, a.a.	40.2 (94:5:1:0:0)
1488 (6.7)	100	CLAYSTONE, a.a. – greenish blue, light brown.	44.7 (94:5:1:0:0)
1491 (8.5)	100	CLAYSTONE, a.a. – trace white, calcareous, glauconitic siltstone.	43.0 (94:5:1:0:0)
1494 (8.4)	100	CLAYSTONE, a.a.	35.3 (93:6:1:0:0)
1497 (7.8)	100	CLAYSTONE, greenish blue to grey, light brown, soft, glauconitic, occasional silty and sandy lenses.	28.2 (94:5:1:0:0)
1500 (9.2)	100	CLAYSTONE, a.a. – silty, sandy, glauconitic lenses, calcareous in part.	96.8 (94:5:1:0:0)
1503 (2.8)	70	SANDSTONE, clear to translucent, medium to coarse, loose, angular to sub-angular, poor to moderate sorted quartz grains, good inferred porosity.	560.7 (95:4:1:0:0)
	10	SILTSTONE, dark grey, soft to firm, sub-fissile, carbonaceous.	
	20	CLAYSTONE, a.a.	
1506 (3.3)	90	SANDSTONE, a.a. – predominantly coarse to very coarse, sub-angular to sub-rounded, moderate sorted, trace clay matrix, friable to loose, very good porosity.	484.0 (95:4:1:0:0)

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		SILTSTONE, a.a.	
	10		
1509 (3.3)	80	SANDSTONE, a.a. – trace to moderate clay matrix, friable to predominantly loose, good porosity. porosity.	395.2 (95:4:1:0:0)
	20	SILTSTONE, a.a.	
1512 (3.2)	80	SANDSTONE, a.a.	437.7
	20	CLAYSTONE, a.a.	(95:4:1:0:0)
1515 (2.5)	70	SANDSTONE, a.a.	340.0
	20	SILTSTONE, a.a.	(95:4:1:0:0)
	10	CLAYSTONE, a.a.	
1518 (2.0)	90	SANDSTONE, a.a. – predominantly coarse to very coarse, sub-rounded to rounded, moderate sorted, trace clay matrix, loose, good porosity.	165.2 (92:6:2:0:0)
1521 (2.4)	40	SANDSTONE, a.a. – mostly fine to medium, sub-rounded, moderate sorted, loose quartz grains, fair porosity.	137.5 (92:6:2:0:0)
	60	SILTSTONE, light grey to light brown, soft, very argillaceous and grades to claystone, trace glauconite and carbonaceous specks.	
1524 (3.4)	30	SANDSTONE, a.a.	140.8
	70	SILTSTONE, a.a.	(95:4:1:0:0)
1527 (6.0)	100	SILTSTONE, a.a. – mostly light to moderate grey-brown, minor greenish glauconitic stain, minor glauconite nodules, very argillaceous.	126.5 (95:5:0:0:0)
1530 (6.4)	100	SILTSTONE, a.a.	122.2 (95:5:0:0:0)
1533 (2.5)	70	SANDSTONE, clear to translucent, fine to coarse, predominantly medium, sub-angular to sub-rounded, moderate sorted, trace clay matrix, loose, good porosity.	222.5 (95:5:0:0:0)
		SILTSTONE, a.a. – trace carbonaceous specks and laminae, very argillaceous and grades to claystone.	
1536 (1.4)	90	SANDSTONE, a.a. – predominantly medium to coarse, angular to sub-angular, moderate sorted, loose, good porosity.	537.3 (96:4:0:0:0)
	10	SILTSTONE, moderate to dark grey, soft to firm, carbonaceous, very argillaceous, grades to claystone in part.	
1539 (2.1)	90	SANDSTONE, a.a.	368.2
	10	SILTSTONE, a.a.	(95:5:0:0:0)
1542 (3.0)	50	SANDSTONE, a.a. – medium to coarse, good porosity.	101.5
	50	SILTSTONE, light to moderate brown, soft, amorphous, very argillaceous and grades to claystone.	(95:5:0:0:0)
1545 (6.0)	100	SILTSTONE, a.a.	99.2 (94:6:0:0:0)
1548 (6.6)	100	SILTSTONE, a.a.	119.3 (93:6:1:0:0)
1551 (5.5)	100	SILTSTONE, a.a. – trace carbonaceous specks, rare pyrite.	147.3 (93:6:1:0:0)
1554 (4.2)	100	SILTSTONE, a.a.	319.5 (92:6:2:0:0)
	Tr	COAL, dull black, grades to carbonaceous shale in part.	
1557 (6.3)	100	SILTSTONE, a.a.	137.8 (91:7:2:0:0)
1560 (2.7)	50	SANDSTONE, clear to translucent white, very fine to fine, sub-angular to sub-rounded, moderate sorted, moderate clay matrix, loose, fair to good porosity.	1257.5 (90:7:3:0:0)
	50	SILTSTONE, light to moderate grey, moderate to dark grey-brown, soft to firm, sub-fissile to blocky, carbonaceous specks, rare pyrite, argillaceous.	
1563 (4.3)	90	SANDSTONE, white to pale grey, fine to medium, occasionally coarse, sub-angular to sub-rounded, moderate sorted, common grey to grey-green lithics, trace carbonaceous material, rare pyrite, minor clay matrix, moderate to strong calcite cement, poor to fair porosity.	1521.8 (89:8:3:0:0)
	10	SILTSTONE, a.a.	
1566 (1.8)	90	SANDSTONE, a.a. – fine to coarse, weak calcite cement, friable to loose, fair to good apparent porosity.	1897.2 (88:8:3:1:0)
	10	SILTSTONE, a.a.	
1569 (1.8)	80	SANDSTONE, a.a. – fine to coarse, occasionally very coarse, sub-rounded, minor calcite cement, friable to loose, fair to good apparent porosity.	1930.7 (87:9:3:1:0)
	10	SILTSTONE, a.a.	
	10	CLAYSTONE, cream to light brown, hard, silty and carbonaceous in part.	
1572	20	SANDSTONE, a.a. – mostly very fine to fine, poor to fair porosity.	415.3

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DEPTH	(%)	LITHOLOGICAL DESCRIPTION	GAS
(7.2)	80	SILTSTONE, moderate brown, minor dark brown to black, soft, very argillaceous and grades to claystone, carbonaceous in part.	(90:7:3:0:0)
1575 (3.9)	100	SANDSTONE, white, light to dark green, fine to coarse, sub-angular to sub-rounded, poor to moderate sorted quartz and green to grey-black volcano-lithic grains, abundant dispersive clay matrix, trace pyrite and carbonaceous material, minor calcite and calcite cement, friable, poor inferred porosity.	246.7 (93:5:2:0:0)
1578 (6.8)	70	SANDSTONE, a.a.	218.8 (93:5:2:0:0)
1581 (4.3)	30	CLAYSTONE, light to dark brown, soft to firm, silty and carbonaceous in part.	199.7 (92:6:2:0:0)
1584 (2.3)	70	SANDSTONE, a.a.	183.0 (94:5:1:0:0)
1587 (3.8)	80	SANDSTONE, a.a.	148.3 (94:5:1:0:0)
1590 (4.7)	20	CLAYSTONE, a.a. - very calcareous.	135.7 (93:5:2:0:0)
1593 (1.7)	80	SANDSTONE, a.a. - very calcareous.	186.0 (94:5:1:0:0)
1596 (2.3)	10	CLAYSTONE, a.a.	169.2 (95:4:1:0:0)
1599 (1.6)	80	SANDSTONE, a.a.	193.5 (95:4:1:0:0)
1602 (5.1)	10	CLAYSTONE, a.a.	122.8 (95:4:1:0:0)
1605 (1.5)	Tr	CLAYSTONE, a.a.	148.0 (94:5:1:0:0)
1608 (1.2)	90	SANDSTONE, a.a.	216.3 (96:4:0:0:0)
1611 (2.8)	Tr	CLAYSTONE, a.a.	165.2 (95:4:1:0:0)
1614 (7.3)	100	SANDSTONE, a.a.	95.5 (95:4:1:0:0)
1617 (2.1)	Tr	CLAYSTONE, a.a.	136.8 (95:4:1:0:0)
1620 (3.5)	10	CLAYSTONE, a.a.	109.3 (95:4:1:0:0)
1623 (2.3)	10	CLAYSTONE, a.a.	128.8 (95:4:1:0:0)
1626 (5.6)	Tr	CLAYSTONE, a.a.	96.7 (95:4:1:0:0)
1629 (3.3)	80	SANDSTONE, a.a. - common pyrite.	97.8 (95:4:1:0:0)
1632 (2.5)	20	CLAYSTONE, dark brown, firm to hard, blocky, argillaceous, grades to siltstone.	97.5 (97:3:0:0:0)
1635 (6.5)	90	SANDSTONE, a.a.	94.3 (97:3:0:0:0)
	10	CLAYSTONE, a.a.	

TD of 1636m. @ 23-00 hours 23/03/2001. Rig release 0700hrs 26/03/2001