

Sample Core Analysis for API 21055273120000 Well Name: KENNETT 1 located in 32-27N10W Grand Traverse County

| <u>DEPTH</u> | <u>FEET ANA-LYZED</u> | <u>PERM MAX</u> | <u>PER 90 DEG</u> | <u>PERM VERT</u> | <u>PERM FT</u> | <u>PORO-SITY GEX</u> | <u>PORO-SITY FEET</u> | <u>FLUID SAT OIL</u> | <u>FLUID SAT WATER</u> | <u>DENSITY BULK</u> | <u>DENSITY GRAIN</u> | <u>PROB PROD</u> | <u>DESCRIP-TION</u> |
|--------------|-----------------------|-----------------|-------------------|------------------|----------------|----------------------|-----------------------|----------------------|------------------------|---------------------|----------------------|------------------|---------------------|
| 5596 | 0.33 | <0.1 | <0.1 | | <0.1 | 3.0 | 1.0 | 0.0 | 13.3 | 2.77 | 2.86 | NIL | |
| 5597 | 1.00 | <0.1 | Plug* | | <0.1 | 2.1 | 2.1 | 3.2 | 32.0 | 2.78 | 2.84 | NIL | |
| 5598 | 1.00 | <0.1 | Plug* | | <0.1 | 1.8 | 1.8 | 0.0 | 34.0 | 2.81 | 2.85 | NIL | |
| 5599 | 0.50 | 0.3 | 0.2 | | 0.1 | 1.9 | 1.0 | 0.0 | 27.8 | 2.82 | 2.85 | NIL | |
| 5600 | 0.83 | 3.9 | 2.7 | | 3.2 | 1.7 | 1.4 | TR | 19.5 | 2.83 | 2.86 | NIL | |
| 5601 | 0.83 | 0.1 | <0.1 | | <0.1 | 1.7 | 1.4 | 0.0 | 18.0 | 2.84 | 2.88 | NIL | |
| 5602 | 1.00 | <0.1 | <0.1 | | <0.1 | 1.5 | 1.5 | 0.0 | 13.3 | 2.87 | 2.91 | NIL | FRAC |
| 5603 | 0.83 | 5.7 | 5.7 | | 4.7 | 2.7 | 2.2 | TR | 39.6 | 2.76 | 2.85 | NIL | |
| 5604 | 0.50 | 0.1 | <0.1 | | <0.1 | 2.2 | 1.1 | TR | 28.5 | 2.83 | 2.89 | NIL | |
| 5605 | 0.66 | <0.1 | <0.1 | | <0.1 | 1.9 | 1.2 | 0.0 | 0.0 | 2.83 | 2.89 | NIL | |
| 5606 | 0.50 | <0.1 | <0.1 | | <0.1 | 2.3 | 1.1 | 0.0 | 0.0 | 2.80 | 2.88 | NIL | |
| 5607 | 0.83 | <0.1 | <0.1 | | <0.1 | 1.3 | 1.1 | 0.0 | 15.2 | 2.81 | 2.85 | NIL | |
| 5608 | 0.83 | 0.2 | <0.1 | | 0.1 | 2.1 | 1.7 | 0.0 | 26.4 | 2.82 | 2.87 | NIL | |
| 5609 | 0.50 | 0.6 | 0.3 | | 0.3 | 2.8 | 1.4 | TR | 12.2 | 2.82 | 2.90 | NIL | |
| 5610 | 0.50 | 15.5 | 0.2 | | 7.7 | 3.5 | 1.7 | 2.4 | 17.7 | 2.75 | 2.84 | NIL | VERT FRAC |
| 5611 | 0.33 | <0.1 | <0.1 | | <0.1 | 4.4 | 1.5 | TR | 11.6 | 2.70 | 2.82 | NIL | |
| 5612 | 0.33 | <0.1 | <0.1 | | <0.1 | 3.5 | 1.2 | 0.0 | 14.7 | 2.72 | 2.83 | NIL | |
| 5613 | 0.33 | <0.1 | <0.1 | | <0.1 | 2.3 | 0.8 | TR | 65.5 | 2.72 | 2.78 | NIL | |
| 5614 | 0.83 | 0.3 | 0.3 | | 0.2 | 3.5 | 2.9 | TR | 53.0 | 2.76 | 2.85 | NIL | |
| 5615 | 0.66 | 8.8 | <0.1 | | 5.8 | 3.6 | 2.4 | 0.0 | 66.0 | 2.74 | 2.83 | NIL | FRAC |
| 5616 | 0.66 | 0.3 | <0.1 | | 0.2 | 3.7 | 2.4 | 0.0 | 81.0 | 2.75 | 2.84 | NIL | |
| 5617 | 0.50 | 0.5 | <0.1 | | 0.2 | 1.8 | 0.9 | 0.0 | 54.0 | 2.75 | 2.79 | NIL | |
| 5618 | 0.33 | <0.1 | <0.1 | | <0.1 | 2.1 | 0.7 | 0.0 | 71.8 | 2.74 | 2.79 | NIL | |
| 5619 | 0.33 | 1.4 | <0.1 | | 0.5 | 2.1 | 0.7 | 0.0 | 62.0 | 2.74 | 2.80 | NIL | |
| 5620 | 0.83 | <0.1 | <0.1 | | <0.1 | 3.6 | 3.0 | 0.0 | 53.5 | 2.76 | 2.85 | NIL | |
| 5621 | 0.66 | <0.1 | <0.1 | | <0.1 | 2.2 | 1.4 | 0.0 | 60.3 | 2.75 | 2.81 | NIL | |
| 5622 | 1.00 | 1.4 | 0.1 | | 1.4 | 3.7 | 3.7 | 0.0 | 27.3 | 2.75 | 2.84 | NIL | |
| 5623 | 1.00 | 0.2 | <0.1 | | 0.2 | 2.9 | 2.9 | TR | 31.0 | 2.74 | 2.81 | NIL | |
| 5624 | 0.83 | 1.4 | <0.1 | | 1.2 | 3.0 | 2.5 | TR | 32.5 | 2.73 | 2.81 | NIL | |
| 5625 | 0.50 | <0.1 | <0.1 | | <0.1 | 3.2 | 1.6 | TR | 29.2 | 2.71 | 2.80 | NIL | |
| 5626 | 0.50 | <0.1 | <0.1 | | <0.1 | 3.7 | 1.8 | TR | 33.4 | 2.71 | 2.80 | NIL | |
| 5627 | 1.00 | 0.4 | <0.1 | | 0.4 | 4.2 | 4.2 | 2.9 | 29.0 | 2.73 | 2.84 | GAS** | **SEE NOTE |
| 5628 | 0.66 | 0.4 | <0.1 | | 0.2 | 4.5 | 3.0 | 0.0 | 35.2 | 2.72 | 2.83 | GAS** | |
| 5629 | 0.66 | 0.1 | 0.1 | | <0.1 | 4.6 | 3.0 | 0.0 | 36.7 | 2.72 | 2.83 | GAS** | |

| | | | | | | | | | | | | |
|------|------|-------|------|-------|-----|-----|------|------|------|------|-------------|-----------------|
| 5630 | 0.66 | 0.1 | 0.1 | <0.1 | 4.8 | 3.2 | TR | 29.9 | 2.70 | 2.83 | GAS** | |
| 5631 | 0.50 | 0.2 | 0.2 | 0.1 | 6.3 | 3.1 | 5.0 | 20.4 | 2.69 | 2.85 | GAS** | |
| 5632 | 0.66 | 1.5 | 0.2 | 1.0 | 5.9 | 4.0 | 4.4 | 22.4 | 2.68 | 2.84 | GAS** | |
| 5633 | 0.50 | 0.2 | <0.1 | 0.1 | 4.1 | 2.0 | 3.6 | 18.4 | 2.73 | 2.85 | GAS** | |
| 5634 | 1.00 | <0.1 | <0.1 | <0.1 | 4.1 | 4.1 | TR | 29.7 | 2.74 | 2.84 | NIL | |
| 5635 | 1.00 | <0.1 | <0.1 | <0.1 | 3.6 | 3.6 | TR | 31.8 | 2.75 | 2.84 | NIL | |
| 5636 | 0.83 | 2.7 | 0.5 | 2.2 | 3.0 | 2.5 | 0.0 | 39.1 | 2.77 | 2.84 | NIL | PARTINGS |
| 5637 | 0.83 | <0.1 | <0.1 | <0.1 | 1.1 | 0.9 | TR | 78.8 | 2.78 | 2.81 | NIL | |
| 5638 | 0.66 | <0.1 | <0.1 | <0.1 | 2.8 | 1.9 | 4.5 | 46.5 | 2.76 | 2.83 | NIL | |
| 5639 | 0.83 | 0.2 | <0.1 | 0.1 | 3.6 | 3.0 | 0.0 | 68.0 | 2.75 | 2.84 | GAS & WTR | **SEE NOTE |
| 5640 | 1.00 | 6.8 | 2.0 | 6.8 | 4.0 | 4.0 | TR | 47.5 | 2.75 | 2.84 | GAS & WTR** | |
| 5641 | 0.83 | 7.2 | 0.4 | 6.0 | 3.9 | 3.2 | TR | 36.7 | 2.75 | 2.84 | GAS & WTR** | |
| 5642 | 0.83 | 6.1 | 4.5 | 5.1 | 6.8 | 5.6 | TR | 46.0 | 2.67 | 2.84 | GAS & WTR** | |
| 5643 | 0.66 | 1.4 | 1.2 | 1.0 | 4.5 | 3.0 | 0.0 | 44.4 | 2.71 | 2.82 | GAS & WTR** | |
| 5644 | 0.50 | 6.2 | 1.6 | 3.1 | 4.9 | 2.5 | 12.0 | 48.5 | 2.71 | 2.83 | GAS & WTR** | VERT FRAC |
| 5645 | 1.00 | 32.7 | 1.3 | 32.7 | 4.7 | 4.7 | 6.5 | 45.5 | 2.73 | 2.84 | GAS & WTR** | VERT FRAC |
| 5646 | 0.66 | 0.5 | 0.2 | 0.3 | 7.4 | 5.0 | 4.7 | 47.2 | 2.65 | 2.83 | GAS & WTR** | |
| 5647 | 1.00 | 2.4 | 1.2 | 2.4 | 5.5 | 5.5 | TR | 51.6 | 2.69 | 2.82 | GAS & WTR** | SALT FILLING |
| 5648 | 0.83 | 2.2 | 0.2 | 1.8 | 4.8 | 4.0 | TR | 55.0 | 2.73 | 2.85 | GAS & WTR** | |
| 5649 | 1.00 | 2.6 | 1.5 | 2.6 | 2.9 | 2.9 | 0.0 | 77.0 | 2.76 | 2.82 | GAS & WTR** | |
| 5650 | 1.00 | 1.1 | 0.6 | 1.1 | 3.3 | 3.3 | 0.0 | 66.2 | 2.77 | 2.85 | GAS & WTR** | |
| 5651 | 0.83 | 0.4 | 0.4 | 0.3 | 4.4 | 3.7 | TR | 46.8 | 2.73 | 2.86 | GAS & WTR** | |
| 5652 | 1.00 | 1.1 | 0.4 | 1.1 | 4.6 | 4.6 | 0.0 | 50.2 | 2.73 | 2.84 | GAS & WTR** | |
| 5653 | 0.83 | 140.0 | 0.5 | 116.0 | 5.6 | 4.6 | TR | 42.8 | 2.70 | 2.84 | GAS & WTR** | FRAC |
| 5654 | 1.00 | 3.2 | 2.4 | 3.2 | 4.7 | 4.7 | 0.0 | 60.3 | 2.72 | 2.83 | GAS & WTR** | |
| 5655 | 0.83 | 2.7 | 1.6 | 2.2 | 5.8 | 4.8 | TR | 40.0 | 2.69 | 2.83 | GAS & WTR** | |
| 5656 | 1.00 | 0.4 | 0.2 | 0.4 | 5.6 | 5.6 | 0.0 | 59.0 | 2.71 | 2.83 | GAS & WTR** | |
| 5657 | 0.66 | 0.1 | <0.1 | <0.1 | 5.2 | 3.4 | 5.4 | 54.2 | 2.71 | 2.84 | NIL | |
| 5658 | 0.83 | <0.1 | <0.1 | <0.1 | 4.9 | 4.1 | TR | 46.3 | 2.70 | 2.82 | NIL | |
| 5659 | 0.83 | 0.2 | 0.2 | 0.1 | 5.2 | 4.3 | 0.0 | 41.0 | 2.70 | 2.84 | GAS & WTR** | SEE NOTE |
| 5660 | 0.50 | 0.6 | 0.3 | 0.3 | 5.2 | 2.6 | 5.0 | 54.8 | 2.71 | 2.82 | GAS & WTR** | |
| 5661 | 0.83 | 0.4 | 0.3 | 0.3 | 5.3 | 4.4 | 0.0 | 49.3 | 2.71 | 2.84 | GAS & WTR** | |
| 5662 | 0.83 | 0.7 | 0.2 | 0.6 | 6.1 | 5.1 | 0.0 | 51.8 | 2.70 | 2.84 | GAS & WTR** | |
| 5663 | 0.83 | 0.9 | 0.3 | 0.7 | 5.3 | 4.4 | 5.0 | 58.2 | 2.72 | 2.85 | GAS & WTR** | |
| 5664 | 0.50 | 6.2 | 1.2 | 3.1 | 5.7 | 2.8 | 5.0 | 51.0 | 2.70 | 2.83 | GAS & WTR** | FRAC |
| 5665 | 1.00 | 0.9 | 0.8 | 0.9 | 5.2 | 5.2 | TR | 59.4 | 2.71 | 2.83 | GAS & WTR** | |
| 5666 | 1.00 | 1.1 | 0.8 | 1.1 | 7.2 | 7.2 | 0.0 | 54.2 | 2.68 | 2.83 | GAS & WTR** | |

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|------|------|------|------|------|-----|-----|-----|------|------|------|-------------|---------------------------|
| 5667 | 0.66 | 0.5 | 0.4 | 0.3 | 5.7 | 3.8 | 0.0 | 46.2 | 2.69 | 2.83 | GAS & WTR** | |
| 5668 | 1.00 | 0.5 | 0.2 | 0.5 | 6.5 | 6.5 | 0.0 | 44.2 | 2.68 | 2.83 | GAS & WTR** | |
| 5669 | 0.50 | 2.2 | 1.9 | 1.1 | 8.5 | 4.2 | 0.0 | 51.2 | 2.63 | 2.83 | GAS & WTR** | |
| 5670 | 1.00 | 0.6 | 0.4 | 0.6 | 6.8 | 6.8 | TR | 51.6 | 2.69 | 2.84 | GAS & WTR** | |
| 5671 | 0.66 | 1.5 | 0.2 | 1.0 | 6.0 | 4.0 | 0.0 | 48.3 | 2.69 | 2.83 | GAS & WTR** | H.L. FRAC |
| 5672 | 0.83 | 0.2 | <0.1 | 0.1 | 5.4 | 4.5 | 0.0 | 46.3 | 2.70 | 2.84 | NIL | |
| 5676 | 0.66 | 6.5 | 0.2 | 4.3 | 2.9 | 2.0 | 0.0 | 46.5 | 2.72 | 2.79 | NIL | FRAC |
| 5682 | 0.83 | 0.2 | 0.1 | 0.1 | 4.3 | 3.6 | 0.0 | 51.5 | 2.74 | 2.85 | NIL | |
| 5687 | 0.50 | 73.0 | 0.4 | 36.5 | 7.9 | 4.0 | 0.0 | 53.5 | 2.65 | 2.83 | NIL | FRAC |
| 5693 | 0.83 | <0.1 | <0.1 | <0.1 | 4.6 | 3.8 | | | 2.73 | 2.83 | | |
| 5698 | 0.50 | 0.2 | 0.2 | 0.1 | 5.8 | 2.9 | | | 2.70 | 2.82 | | |
| 5703 | 0.50 | 0.8 | 0.1 | 0.4 | 4.5 | 2.2 | | | 2.75 | 2.85 | | |
| 5708 | 0.66 | <0.1 | <0.1 | <0.1 | 2.2 | 1.4 | | | 2.75 | 2.79 | | |
| 5713 | 0.50 | 11.4 | 10.4 | 5.7 | 5.9 | 3.0 | | | 2.69 | 2.81 | | FRACS. SALT FILLING |
| 5718 | 0.50 | 0.5 | 0.4 | 0.2 | 3.4 | 1.7 | | | 2.70 | 2.77 | | SALT FILLING |
| 5723 | 0.66 | 4.6 | 1.8 | 3.0 | 6.6 | 4.4 | | | 2.67 | 2.81 | | SALT FILLING |
| 5728 | 0.83 | 8.2 | 7.2 | 6.8 | 7.5 | 6.2 | | | 2.65 | 2.81 | | SALT FILLING |
| 5734 | 0.83 | 0.9 | 0.6 | 0.7 | 4.7 | 3.9 | | | 2.68 | 2.79 | | |
| 5739 | 0.83 | 12.0 | 12.0 | 10.0 | 3.1 | 2.6 | | | 2.72 | 2.79 | | FRAC |
| 5744 | 0.83 | 6.0 | 2.0 | 5.0 | 5.4 | 4.5 | 0.0 | 66.5 | 2.71 | 2.83 | WTR | |

* CORE TOO BROKEN FOR FULL DIAMETER ANALYSIS.

**ECONOMICAL PRODUCTION FROM THIS SECTION APPEARS VERY DOUBTFUL DUE TO ITS VERY LOW PRODUCTIVE CAPACITY AND RESERVOIR PORE SPACE.