

## Results of Directional Survey

|             |                     |           |                                              |
|-------------|---------------------|-----------|----------------------------------------------|
| API number: | <b>30-025-41802</b> |           |                                              |
| OGRID:      |                     | Operator: | <b>CAZA OPERATING, LLC</b>                   |
|             |                     | Property: | <b>WEST COPPERLINE 29 FED STATE COM # 4H</b> |

|         |        |          |           |            |            |            |            |
|---------|--------|----------|-----------|------------|------------|------------|------------|
| surface | ULSTR: | <b>D</b> | <b>29</b> | <b>T</b>   | <b>23S</b> | <b>R</b>   | <b>34E</b> |
|         |        |          |           | <b>150</b> | <b>FNL</b> | <b>660</b> | <b>FWL</b> |

|              |           |                |            |             |            |            |            |
|--------------|-----------|----------------|------------|-------------|------------|------------|------------|
| BH Loc       | ULSTR:    | <b>M</b>       | <b>29</b>  | <b>T</b>    | <b>23S</b> | <b>R</b>   | <b>34E</b> |
| <b>16015</b> | <b>MD</b> | <b>11448.8</b> | <b>TVD</b> | <b>312</b>  | <b>FSL</b> | <b>714</b> | <b>FWL</b> |
|              |           |                |            | <b>4968</b> | <b>FNL</b> | <b>714</b> | <b>FWL</b> |

|              |           |                |            |            |            |            |            |
|--------------|-----------|----------------|------------|------------|------------|------------|------------|
| Top Perf/OH  | ULSTR:    | <b>D</b>       | <b>P</b>   | <b>T</b>   | <b>23S</b> | <b>R</b>   | <b>34E</b> |
| <b>11562</b> | <b>MD</b> | <b>11383.0</b> | <b>TVD</b> | <b>520</b> | <b>FNL</b> | <b>713</b> | <b>FWL</b> |

|              |           |                |            |             |            |            |            |
|--------------|-----------|----------------|------------|-------------|------------|------------|------------|
| Bot Perf/OH  | ULSTR:    | <b>M</b>       | <b>29</b>  | <b>T</b>    | <b>23S</b> | <b>R</b>   | <b>34E</b> |
| <b>15887</b> | <b>MD</b> | <b>11447.5</b> | <b>TVD</b> | <b>425</b>  | <b>FSL</b> | <b>710</b> | <b>FWL</b> |
|              |           |                |            | <b>4855</b> | <b>FNL</b> | <b>710</b> | <b>FWL</b> |

|              |              |          |       |          |
|--------------|--------------|----------|-------|----------|
|              | MD           | N/S      | E/W   | VD       |
|              | 11537        | -346.30  | 53.60 | 11376    |
| TOP PERFS/OH | <b>11562</b> | -370.26  | 53.24 | 11383.03 |
|              | 11585        | -392.30  | 52.90 | 11389.50 |
|              | 15865        | -4688.00 | 50.10 | 11447.20 |
| BOT PERFS/OH | <b>15887</b> | -4705.37 | 50.15 | 11447.52 |
|              | 15960        | -4763.00 | 50.30 | 11448.60 |

|              |              |          |       |          |
|--------------|--------------|----------|-------|----------|
| NEXT TO LAST | 15960        | -4763.00 | 50.30 | 11448.60 |
| LAST READING | 16015.00     | -4818.00 | 53.50 | 11448.80 |
| TD           | <b>16015</b> | -4818.00 | 53.50 | 11448.80 |

|                  |      |    |     |    |
|------------------|------|----|-----|----|
| Surface Location | 150  | FN | 660 | FW |
| Projected BHL    | 4968 | FN | 714 | FW |
| Location of      |      |    |     |    |
| Top Perfs/OH     | 520  | FN | 713 | FW |
| Bottom Perfs/OH  | 4855 | FN | 710 | FW |

### SUMMARY of Subsurface Locations

|                  |              |      |    |     |    |             |
|------------------|--------------|------|----|-----|----|-------------|
| Surface Location | D-29-23S-34E | 150  | FN | 660 | FW | Vert. Depth |
|                  |              |      |    |     |    |             |
| Top Perfs/OH     | D-29-23S-34E | 520  | FN | 713 | FW | 11383.03    |
| Bottom Perfs/OH  | M-29-23S-34E | 4855 | FN | 710 | FW | 11447.52    |
|                  |              |      |    |     |    |             |
| Projected TD     | M-29-23S-34E | 4968 | FN | 714 | FW | 11448.80    |

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