

DRILL LOG

Operator License# 32834

API # 15-121-31429-00-00

Operator _____ JTC Oil, Inc.

Lease East Waddle

Address 35790 Plum Creek Rd.

Osawatomie, KS 66064

Well # I-1

Contractor JTC Oil, Inc.

Spud Date 12/6/17 Cement 12/21/17

Contractor License 32834

Location _____ of _____

T.D. 560 T.D. of Pipe 507

_____ feet from _____

Surface Pipe: 20' of 7" w/3sx cement _____ feet from _____

Kind of Well Injection

County Miami

Thickness	Strata	From	To	Thickness	Strata	From	To
3	top soil	0	3	5	coal	145	150
12	clay	3	15	12	lime	150	162
2	shale	15	17	140	shale	162	302
6	lime	17	23	26	lime shale	302	328
40	shale	23	63	14	lime	328	342
12	lime	63	75	43	shale	342	385
12	shale	75	87	4	coal	385	389
28	lime	87	115	5	lime	389	394
9	coal	115	124	14	shale	394	408
21	lime	124	145	4	lime	408	412

<u>17</u>	<u>black shale</u>	<u>412</u>	<u>429</u>
<u>9</u>	<u>lime</u>	<u>429</u>	<u>438</u>
<u>18</u>	<u>shale</u>	<u>438</u>	<u>456</u>
<u>8</u>	<u>lime</u>	<u>456</u>	<u>464</u>
<u>4</u>	<u>coal</u>	<u>464</u>	<u>468</u>
<u>3</u>	<u>shale</u>	<u>468</u>	<u>471</u>
<u>2</u>	<u>oil sand</u>	<u>471</u>	<u>473 ok</u>
<u>2</u>	<u>oil sand</u>	<u>473</u>	<u>475 good</u>
<u>2</u>	<u>oil sand</u>	<u>475</u>	<u>477 ok</u>
<u>2</u>	<u>oil sand</u>	<u>477</u>	<u>479 ok good</u>
<u>2</u>	<u>oil sand</u>	<u>479</u>	<u>481 broke</u>
<u>33</u>	<u>shale</u>	<u>481</u>	<u>514</u>
<u>19</u>	<u>black shale</u>	<u>514</u>	<u>533</u>
<u>1</u>	<u>oil sand</u>	<u>533</u>	<u>534 good</u>
<u>2</u>	<u>oil sand</u>	<u>534</u>	<u>536</u>
<u>3</u>	<u>oil sand</u>	<u>536</u>	<u>539</u>
<u>3</u>	<u>oil sand</u>	<u>539</u>	<u>542</u>
<u>18</u>	<u>shale</u>	<u>542</u>	<u>560</u>