

ATTACHMENT: State "X" #4

TOTGO DEVIATION SURVEY

<u>Depth</u>	<u>Degrees off Vertical</u>
800	3/4
2475	1/4
2830	3/4
4105	1/2
4620	3/4

DRILL STEM TESTS

"None"

CORE RECORD

<u>No.</u>	<u>From</u>	<u>To</u>	<u>Sec.</u>	<u>Description</u>
1	4639	4678	39'	4639-4650 - 11' dolomite, no shows. 4650-4653 - 3' dolomite, small vuggy porosity w/trace anhydrite inclusions, poor show. 4653-4653 $\frac{1}{2}$ - $\frac{1}{2}$ ' dolomite, no show. 4653 $\frac{1}{2}$ -4659 - 5 $\frac{1}{2}$ ' dolomite, olistic, 10% porosity, bleeding oil, good show. 4659-4663 - 4' dolomite, tan, no shows. 4663-4664 - 1' dolomite, trace pinpoint porosity, bleeding oil. 4664-4678 - 14' dolomite, no show.
2	4678	4703	22'	Dolomite, No show.

ACIDIZING OR OTHER COMPLETION OPERATIONS

7-2-57 The Western Company acidized open hole 4638-4703 w/3000 gals. regular acid. TP: 3600-3000#. Injection rate 2 BPM. 5 minute S/D pressure 1900#. Swabbed 18 BLO in 2 hours. Swabbed 4 BNO + 45 BAW in 4 hours.

7-4-57 The Western Company Re-acidized open hole 4638-4703 w/6000 gals. regular acid. TP: 3400-4100#. Injection rate 4 BPM. 5 minute S/D pressure 3300#. Swabbed 19 BLO in 2 hours. Swabbed 13 BNO + 108 BAW in 34 hours.

7-7-57 The Western Company re-acidized open hole 4638-4703 w/12,000 gals. regular acid. TP: 4000#. Injection rate 4.7 BPM. Swabbed 19 BLO in 2 hours. Swabbed 3 BNO + 165 BAW in 6 hours.

7-9-57 The Western Company sand-oil frac open hole 4638-4703 w/15,000 gals. oil + 14,500 sand + 5000 gals. regular acid. TP: 5400-6600#; CP: 3400#. Injection rate 13.2 BPM for 37 minutes. 10 minute S/D pressure 3850#. 6 hour S/D pressure 3000#. Flowed 212 BLO in 3 hours on 32/64" choke. On final flowed 37 BLO in 24 hours on 1" choke. TP: 0#.

2014-2015 DEVIATION SUMMARY

Category	Deviation Off Budget
1000	1000
2000	2000
3000	3000
4000	4000
5000	5000

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