

WILLOW LAKE UNIT No. 1

Record of DST's

DST #1 Strawn, 11,395-11,552. 2000' fresh water blanket. Tool open 2 hrs, 30 mins. Gas to surface 42 mins. Est rate 490 MCFD. FTP 60 psi, 1/2" choke. 30 min IFP 921, 2 hr FFP 995, 1 hr ISIP 7288, 5 hr FSIP 7288, IHP 7288, FHP 7325, BHT 186°. Recovered 2000' GC water blanket, 180' GC mud.

DST #2 Atoka, 11,663-11,719. 6500' water blanket. Preflow water to surface in 4 mins, GTS 14 mins. Shut in at 15 mins. Est gas rate 6.8 MMCFD, 1000 psi. 1/2" choke. Final flow - 4 mins. Est gas rate 4.5 MMCFD, 3000 psi, 1/4" choke. IFP 6206-8209, FFP 5539-7347. 2 hr ISIP 9048, 21 hr FSIP 9119. BHT 194°.

DST #3 Morrow, 12,379-12,580. 3700' water blanket. Tool open 1-3/4 hrs. WB to surface 12 mins. GTS 18 mins. Est rate at end of 30 min preflow 3600 MCFD, 2500 psi, 1/4" choke. Max final flow rate 7500 MCFD, 2200 psi, 3/8" choke. IHP 7525, FHP 7469, IFP 2901, FFP 4150, 2 hr ISIP 6293, 3-3/4 hr FSIP 4401, BHT 192°. Recovered 120' WC mud. Sample chamber continued 0.75 cu. ft. gas at 200 psi.

DST #4 Morrow, 12,608-12,808. 3600' water blanket. Tool open 1 hr, 30 mins. No flow to surface. Recovered 185' GCM. IHP 7608. FHP 7580. IFP 1786, FFP 1953. 2 hr ISIP 5477, 4 hr FSIP 5154, BHT 202°.