

# LARSON ENGINEERING, INC.

CONSULTING PETROLEUM ENGINEERS

562 WEST HIGHWAY 4

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SAMUEL GARY JR. & ASSOCIATES, INC.

Cary #36-16

1100' FSL & 1150' FEL Sec. 36-32S-19W

Comanche Co., Kansas

2063' GL

2076' KB

## Completion Report - Pawnee & Ft Scott

08-24-98 MI Log-Tech & ran CBL off portable mast, PBDT 5896', TOC 4524', good bond throughout. MIRU Clarke Corp DD. Set dead men. MI Clarke Corp swab tank. NU wellhead (3000# flange). MI 188 jts used 2-3/8" tbg. TIH w/ 4-3/4" bit, csg scraper & tbg to 5889'. MI Clarke Corp & circ hole w/ 2% KCl wtr. Swabbed tbg down to 1250'. TOH w/ tbg, scraper & bit. NU BOP. Perf Ft Scott 5132-35' (3') & Pawnee 5102-14' (12'), 4" expendable HSC, 36g SCS charges, 4 jspf. No change in FL. SI csg & SDFN. DC \$ 18,645 CC \$ 18,645.

08-25-98 SICIP 0#. TIH w/ tbg & Baker Retrievamatic pkr & set pkr @ 5070'. Swabbed tbg dry - no show. SI 30 min - dry. RU Haliburton. Ac Ft Scott 5132-35' & Pawnee 5102-14' w/ 1500 gal 15% MCA & 100 ball sealers. Tbg loaded 1 bbl early. Staged to 1900# over 1 hr. Started treating 1/4 bpm @ 850#, increased rate to 1 bpm @ 850#, increased to 3 bpm @ 1500#, had excellent ball action, finished 3.5 bpm @ 1750#. Max press 1900#, avg press 1300#, max rate 3.5 bpm, avg rate 2 bpm, ISIP 850#, 5 min SIP 625#, 10 min SIP 450#, 15 min SIP 325#, 20 min SIP 230#. Released press & flowed back 2 bbl. Total load 56 bbl, 36 bbl acid & 20 bbl 2% KCl flush w/ 2 gal AQF-2 surfactant. Pulled swab twice & KOF. Flowed as follows:

time	fluid bbl	cum fluid bbl	gas rate mcf/d	comments
2:15 pm				start swab, FL @ surface
2:45	27.26	27.26		KOF, v foamy
3:45	17.40	44.66		flowing heavy mist
4:45	3.48	48.14		flowing heavy mist
5:45	3.48	51.62	522	heavy mist, 30# diff on 3/4"
6:45	2.32	53.94		heavy mist
7:45	2.32	56.26	353	heavy mist, 6# diff on 1"

Last gauge stable. Rec 56.26 bbl of 56 bbl load. SI tbg & SDFN.  
DC \$6,225 CC \$24,870.

08-26-98 SITP 1400#. Opened to tank & flowed 1 hr - rec 1.74 bbl. Tested as follows:

9:00 am	773	22# diff on 1", mist
9:10	725	20# diff on 1", mist
9:20	687	18# diff on 1", mist
9:30	627	16# diff on 1", mist
9:40	603	15# diff on 1", mist
9:50	577	14# diff on 1", mist
10:00	552	13# diff on 1", mist
10:10	526	12# diff on 1", mist
10:20	472	10# diff on 1", v heavy mist
10:30	442	9# diff on 1", v heavy mist

Flowed to tank until stable. Flow tested stable 360 mcfd - 6.25# diff on 1" orifice w/ heavy mist SW. MI Clarke Corp pressure truck. Pumped 20 bbl 2% KCl wtr down tbg to kill. TOH w/ tbg & pkr. Pumped 20 bbl 2% down csg to kill. Total load ~115 bbl. TIH w/ tbg as follows:

		set @
2-3/8"x 1-25/32 8rd SN	1.10'	5130.23'
164 jts used 2-3/8" EUE 8rd tbg	5118.13'	5129.13'
	-----	
	5119.23'	
zero adj (13' KB)	11.00'	
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	5130.23' KB	

ND BOP & flanged up tbg head. Ran swab, FL @ 1800'. Swabbed 78 bbl & tbg KOF. Left tbg flowing to swab tank w/ 700# SICP & building. Rec 80 bbl of 115 bbl load. SDFN. DC \$2,590 CC \$27,460.

08-27-98 Found tbg dead, SICP 1200#. Ran swab, FL @ 1400'. Made 3 pulls & KOF. RDMO DD. Swabbed & flowed to tank as follows:

8:15 am	80.00		start swab FL @ 1400 SICP 1200
10:15	31.32	111.32	KOF, SICP 1100#
11:15	8.12	119.44	flowing, 50# FTP, 375# SICP
12:15	0.58	120.02	flowing, 50# FTP, 300# SICP
1:15			385 flowing, 7# diff on 1"
3:15	5.22	125.24	flowing, 50# FTP, 250# SICP
5:15	2.03	127.17	363 flowing, 50# FTP, 200# SICP

Rec 127 bbl of 115 bbl load. SI tbg & SDFN. DC \$1,270 CC \$28,730.

08-28-98 SITP 1290#, SICP 1290#. SI - WO pipeline connection. DC \$0 CC \$28,730.

- 09-17-98 MI L&L Backhoe. Built tank grade. Set tanks & gas production unit from Cimmaron #15-3. Took Cimmaron PU to Selzer yard. SD - WO pipeline connection. DC \$1,500 CC \$30,230.
- 09-18-98 Ditched, laid, wrapped & coated 2" steel lead line. Laid 1" poly supply line. Plumbed wellhead & production unit. SDFWE - WO pipeline connection. DC \$1,500 CC \$31,730.
- 09-21-98 Diked & fenced TB - ready for pipeline. KGS moved in pipe. DC \$800 CC \$32,530.
- 09-22-98 KGS started welding pipe. DC \$0 CC \$32,530.
- 09-23-98 Working on gas line.  
thru  
09-28-98
- 09-29-98 SITP 1440#, SICP 1445#. MI Trilobite Testing. Ran electronic pressure gauge on slick line to 5120'. Ran 4 point test. POP @ 3:30 pm 9-29-98, ~300 mcf/d rate.