

15-053-21122

GRIEVES & COMPANY

Edwin H. Grieves

Geologist

P.O. Box 1597

BETHANY, OKLAHOMA 73008

(405) 789-2059

February 2, 2004

Mr. Tom Larson
Larson Operating Company
562 W. Highway 4
Olmritz, KS 67564-8561

Re: Larson Operating Company
#1-20 Rathbun Trust
990 FSL, 1400 FEL
Sec. 20-T17S-R7W
Ellsworth Co., Kansas

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Geological Report

Sample Tops

Base Hutchinson Salt	1062 + 680
Base Anydrite	1149 + 593
Herrington	1202 + 560
Winfield	1252 + 510
Towanda	1318 + 444
Ft. Riley	1364 + 398
Florence	1412 + 350
Wreford	1513 + 229
Crouse	1566 + 136
Neva	1708 + 34
Red Eagle	1794 - 52
Faraher	1824 - 82
Grand Haven	2006 -264
Base Root Shale	2092 -350
Tarkio	2112 -370
Elmont	2147 -405
Cedarvale	2238 -496
Howard	2305 -563
Severy	2369 -627
Topeka	2399 - 637
LeCompton	2537 -795
Heebner	2672 -930

Douglas	2709	-967
Lansing "X"	2875	-1133
Lansing "Z"	3000	-1258
Stark Sh.	3088	-1346
Base Kansas City	3164	-1422
RTD	3350	--

1230 – 1242 (Herrington)

Dolo lt. gry. to lt. tan; fn. to v. fn. xln., hd., dense sub-chlk, no vis fluor, no vis por
6 Units Increase, Possible Show

1276 – 1288 (Winfield)

Lms. lt. tan; fn. to v. fn. xln.; sucro, sub-sucro & sub-chlk trs. finely disseminated shs
IP's, no vis fluor, v. v. poor micro – pp por IP's to no vis por & no vis cut
13 Units Increase, Possible Show

1336 – 1350 (Towanda)

Lms. gry., lt. gry., crm to blk – mottled, fn. to v. fn. xln.; trs. rexized. IP's, sub-chlk, sub-
sucro to sucro, trs sh. laminations, no fluor, no cut, no vis show
1 Unit Increase

1374 – 1392 (Ft. Riley)

Lms. off wht. to crm., fn. to v. fn. xln. sub-sucro to sucro grdng. to soft wht. chlk; tr. fn.
disseminated sh. IB; no vis fluor, no cut, no vis por

1566 + 136 (Crouse)

Lm, off wht. crm. to lt. gry; v. fn. xln. to crypto. xln. sub-sucro to sucro grdng to soft
chlk. trs. shale blebs and pellets, no vis fluor, no cut, no vis por

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2006 – 264 (Grand Haven)

2008-2016 Sdst lt. tan to lt. gry, v. fn. to fn. gr. qtz. ang. to sub-rnded, v. calc. matrix w/abn. inbedded shale specks; trs. chlorite, trs. feldspar; grdng IP's to very silty & lt. gry; no fluor, no cut, no vis por

2048 – 2056 Siltstn. lt. gry. shly. IP's to trs. grdng to sdst v. fn. gr. qtz., lt. gry, ang. no fluor, no cut, no vis por

2112 – 370 (Tarkio)

2136 – 2140 Siltstn lt. to med. gry., v. fn. to fn. gr., v. calc., shly, trs. micro – micacious, trs. qtz. grs. v. fn. to fn., ang., no fluor, no cut, no vis por

2368 – 626 (Severy)

2368 – 2396 Siltstn. med to drk gry, v. fn. to v. fn. gr. v. calc. IP's v. friable IP's, shly w/trs. sh. laminations trs. finely disseminated micro-micacious, trs. v. v. to v. fn. qtz. grs. – ang., no fluor, no cut, no vis por

2536 – 794 (LeCompton Sdst)

2536 – 2540 Sdst. lt. gry. v. v. fn. to v. fn. gr. ang., pr. to fr. sort, abn. micro-micacious, hvy. trs. carbonaceous – poss. plant foss. IP's, sli. to frly dolomitic, no fluor, no cut, no vis por.

9 Unit Gas Increase

DST #1

2578' – 2610' 15- 60- 10- 60

IF-WK Surface Blow, FF-No Blow

IH-1270 FH-1226

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IF- 13 to 22, FF- 21 to 24

ISI- 977, FSI-967

Sampler Recov. 3000 ml mud, 750 psi

Test recovery: 10' drill mud

2672 – 930 (Base Heebner)

2794 – 1052 (Brown Lime)

2820 – 1078 (Lansing)

3158-3164 Samples all uphole cavings

Gas Increase to 9.5 Units 3158 – 3164

DST #2

3154' – 3179' 20 - 90 - 75 - 150

IF- WK Blow, BLT to 2", FF-BLT to 2"

IH-1561, FH-1514

IF 13-17, FF- 15-23

ISI-476, FSI- 453

Sampler Recov. 1900 ml, 150 psi

Test recovery: 10' oil cut mud

3164 – 1422 (Base Kansas City)

3252 – 1510 (Basal Penn. Sh & Chert Conglomerate)

3275 – 1533 (Sandstone)

Sdst 3275 – 3282 lt. gry. to v. lt. tan, v. fn. to fn. and trs. med. qtz. grs., ang., pr. and trs.

fr. to gd. sort. trs. chlorite IP's, no fluor, no cut, trs good to excel. intergr. por.

2 Units Gas Increase

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DST #3

3238' - 3284' 15 - 90 - 60 - 120

IF- GD Blow, BLT to 10", No blow back

FF-GD Blow, BOB in 27 min, No blow back

IH- 1640, FH- 1587

IF- 20 - 108, FF- 109-263

ISI- 1145, FSI- 1133

Sampler Recov. 1900 ml, 650 psi

Test Recovery: 37' gas in pipe, 521' t.f., 3' oil, 60' mcw, 461' sw

3350 RTD

There appear to be no zones of economic interest in this well. It is therefore recommended this well be plugged and abandoned.

Thank you,

A handwritten signature in cursive script, appearing to read "Edwin H. Grieves".

Edwin H. Grieves

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