

COMPOSITE DRILLING REPORT

-TIGHT HOLE -

Cross Bar Petroleum #1-28 Freed

1980' FSL & 1980' FWL Sec. 28-T17S-R32W

Scott County, Kansas

KB: 2986' GL: 2981' API: 15-171-205080000

Contractor: Mallard JV, Inc.

Wellsite Geologist: Steve Davis

Comparison Well

Amerada #1 Melchert

NE SW SE 33-T17S-R32W

Scott Co., KS

KB 2985'

02-15-97 413'. Waiting on cement. Prepared location, MI&RURT, spud @ 6:15 pm, 2-14-97. Drilled 413' of 12-1/4" surface hole. Ran 10 jts, 402.23', 8-5/8" 23# surface casing set @ 409' KB w/ landing joint. Cemented with 240 sks of 60/40 pozmix, 1/4# Floseal, 2% gel, 3% cc. Plug down @ 6:45 am. Ran chain down outside and had cmt 10' down from top of cellar @ 7 am.

02-16-97 1639'. Drilling. Mud: Wt. 9.0. Mixed 9 sacks of cement with cuttings and filled in around surface casing to surface. No problems. Drilled out from under surface plug @ 3 pm, 2-16-97.

02-17-97 2765'. Drilling. Mud: Wt. 9.1, Vis 33.
Tops: B/Anhydrite 2330' (+656) +16

02-18-97 3360'. Drilling. Mud: Wt. 9.3.

02-19-97 3680'. Drilling. Mud: Wt. 9.2. SHS 4° @ 3487'.

02-20-97 4075'. Running DST #1, 4060-75', Lansing "E" Zone., 1st open - off bottom of bucket in 8 mins. Results by 2 pm. SHS 1°, Strap .74' short to board. Mud: Wt. 8.9, Vis 45, WL 8.0, Chl 3000, Ph 11, LCM 1/2, WC 1/32.

Tops:	Heebner	3923'	(-937)	+8
	Toronto	3943'	(-957)	+11
	Lansing	3965'	(-979)	+14
	Lansing 'B'	3999'	(-1013)	+16
	Lansing 'C'	4017'	(-1031)	+15
	Lansing 'D'	4050'	(-1066)	+15
	Lansing 'E'	4061'	(-1075)	+16

02-21-97 4170'. Drilling ahead. Mud: Wt. 8.9, Vis 48, WL 7.0, Chl 3000, Ph 10, LCM 1/2, WC 1/32. ¹⁰⁷⁴⁻²⁹
Results of DST #1, 4060-75', Lansing "E" Zone, 30-60-30-90, 1st open - off bottom of bucket in 8 mins. 2nd open - off bottom of bucket in 12 mins. Rec. 285' GIP, 608' CGO (5% G, 95% O), 60' MCO (55% O, 45% M), IHP 1966, IFP 71-182, ISIP 923, FFP 233-374, FSIP 882 Building, FHP 1937, BHT 117°F, gravity 34° @ 80°F. Results of DST #2, 4144-66, Lansing "I" Zone, 30-60 no FFP or FSIP. 1st open - weak blow died in 20 mins. 2nd open - no blow, flushed tool, no help. Came out of hole. Recovered 10' of VSOCM, IHP 1973, IFP 37-37, ISIP 1154, FFP N/A, FSIP N/A, FHP 1942, BHT 110°F.

Tops:	Lansing 'F'	4075'	(-1087)	+20
	Lansing 'H'	4153'	(-1167)	+20

02-22-97 4270'. Running DST #4, 4230-70', Lansing 'K'. Mud: Wt. 9.2, Vis 50, WL 7.0, Chl 2000, Ph 10, LCM trace, WL 2/32. ¹²⁰⁴⁻²⁹
Results of DST #3, 4190-4212', Lansing 'I', 30-60-5-0-, 1st op - weak blow throughout. 2nd op - no blow, flushed tool, no help. Came out of hole - recovered 80' DM, IHP 2073, IFP 41-62, ISIP 1070, FFP 93-93, FSIP N/A, FHP 2063, BHT 135°F.

Top:	Lansing "I"	4194'	(-1206)	+21
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Lansing "J"	4221'	(-1235)	+17
Stark Shale	4243'	(-1257)	+26
Lansing "K"	4255'	(-1269)	+21

02-23-97 4480'. Drilling. Mud: Wt. 9.6, Vis 48, WL 8.6, Chl 2000, Ph 10.5, LCM trace, WL 2/32. **Results of DST #4, 4230-70', Lansing 'K'**, 30-60-30-90, 1st op - off bottom in 17 mins, 2nd op - slowly built to 10" in 30 mins. Recovered 236' WM (20% W, 80% M), 309' W (chl 50,000), IHP 2123, IFP 52-176, ISIP 1120, FFP 228-270, FSIP 1120, FHP 2103, BHT 131°F.

Tops:

Lansing 'L'	4290'	(-1304)	+18
Pleasanton	4328'	(-1342)	+19
Marmaton	4366'	(-1380)	+13

02-24-97 4650'. Running DST #5, 4602-50', Morrow Sand, 45-90-60-120, 1st op - weak blow built to 2" in 45 mins., 2nd op - off bottom of bucket in 40 mins. Results after lunch. Mud: Wt. 9.2, Vis 49, WL 8.0, Chl 2000, Ph 10.5, LCM 1/2#, WL 2/32.

Tops:

Cherokee Shale	4500'	(-1514)	+18
Morrow Shale	4623'	(-1637)	+16
Morrow Sand	4624'	(-1638)	+15
Mississippian Uncf	4641'	(-1655)	+24

Note: Abundant sandstone in 4650' samples - clear to tan very fine to fine grained, well sorted, subangular-subrounded quartz sandstone. Black shale inclusions. Trace of pyrite. Poor to fair intergranular porosity with excellent show of light free oil, lt. tan saturated stain and good cut. Faint odor no florescence.

02-25-97 4820'. Drilling. Mud: Wt. 9.2, Vis 47, WL 7.4, Chl 2000, Ph 11.0, LCM tr, WL 2/32. **Results of DST #5, 4602-50', Morrow Sand**, 45-90-60-120, 1st op - weak blow built to 2" in 45 mins, 2nd op - off bottom of bucket in 40 mins. Recovered 330' GIP, 140' O&GCM (15% Oil, 45% Gas, 40% Mud), no water, IHP 2239, IFP 21-51, ISIP 1150, FFP 58-87, FSIP 1130 building, FHP 2222, BHT 127°F.

Tops:

St. Louis Porosity	4752'	(-1766)	+11
Spergen	4819'	(-1833)	+23

02-26-97 5143'. Drilling. Mud: Vis 53, Wt. 9.3, WL 6.8, Chl 1400, Ph 11.0, LCM #6, WC 1/32. Conditioning mud in preparation of lost circulation zone in base of Mississippian, top of Viola.

02-27-97 5420'. RTD. Coming out of hole to run open hole logs. Mud: Vis. 67, Wt. 8.9, WL 7.2, Chl 1400, Ph 10.5, LCM 7#, WC 2/32.

Top:

Viola	5242'	(-2256)	+15
Arbuckle	5420'	(-2434)	N/C

02-28-97 5420'. RTD. Moved in Log-Tech. Ran logs. Rigged-up to run production casing. TIH & CCH 8:40 pm - 12 midnight. Plugged Arbuckle w/ 130 sx 60/40 pozmix (2% gel, 1% cc). Displaced w/ mud. Plug down @ 12:40 am (2-28-96). CCH @ 4834'. Set production casing 2-28-97.

As of 4:00 pm - producing casing information is not available. Will mail complete final drilling report Monday.

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03-03-97 RTD 5420'. LTD. 5422'. RU Halliburton. Spotted 130 sx 60/40 pozmix (2% gel, 1% cc) 1/4# sk flocele @ 5420'. TOH to 4830' & CTCH for 1 hr. RU Murray Csg Crews & LDDP. Ran 148 jts used 5-1/2" 14# R-2 & R-3 ST&C 8rd csg. Tallied 4712.13', set @ 4722' KB. Ran triplex shoe @ 4718', latch down baffle @ 4687', turbolozer centralizers @ 4687, 4656, 4625, 4594, 4111, 4080 & 4051', port collar @ 2324', basket @ 2326' & centralizers @ 2323 & 1671'. Cmt w/ 25 bbl 2% clayfix flush, 500 gal Superflush, 5 bbl 2% clayfix spacer, 50 sx HLC w/ 1/4# sk flocele scavenger slurry & 125 sx EA-2 w/ 5% claseal, 18% salt, 7#/sx gilsonite & 0.6% H-322. Displaced plug w/ 2% clayfix wtr in first 15 bbl. Rotated pipe - good circ throughout. Landed plug @ 1600# - float held. Plug down @ 1:00 pm 2-28-97. Set slips & released rig @ 1:45 pm, 2-28-97. Plugged RH w/ 15 sx & MH w/ 10 sx HLC.

FINAL DRILLING REPORT

COMPOSITE COMPLETION REPORT

-TIGHT HOLE -

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Scott County, Kansas

Wellsite Engineer: Larson Engineering, Inc.

- 03-06-97 MIRU Poe Well Svc DD. MI 151 jts 2-3/8" tbg. TIH w/ tbg & PC tool to PC @ 2325'. RU Halliburton. Press to 1500# - held. Opened PC & cmt w/ 195 sx Midcon II w/ 2% CC & 1/4# sk flocele. Cmt did circ. Closed PC & tested to 1500# - held. TIH to 2419' & circ hole clean. TOH w/ tbg & PC tool. SDFN. State man on location - Mike Maier.
- 3-07-97 RU Schlumberger. Ran CBL, PBTD 4684', TOC 3534', excellent bond across Morrow, fair to good bond across L-KC "E" zone. Swabbed csg down to 4150'. Perf Morrow Sand 4623-28, 4632-36 & 4639-42', 3-3/8" expendable HSC, Schlumberger 37J charges, 4 jspf, 51 holes total. No show oil on gun. Swabbed csg dry - no show. SI 1/2 hr - dry. SDFWE.
- 03-08-97 SDFWE
- 03-09-97 SDFWE
- 03-10-97 Checked OWEFU, FL @ 4200', OWEFU 480', 460' oil on top (96%). Swabbed down - rec 11.75 bbl, 96% oil. SI 1/2 hr - dry. RU Halliburton. Ac Morrow Sand 4623-28', 4632-36', & 4639-42' w/ 750 gal 15% Fe w/ 8 gal Morflo. Staged to 760# in 2-1/2 hr & started to feed 1/3 bpm @ 760#, pressure slowly decreased to 660#, then increased slowly to 690# at end of job. Max press 760#, avg press 675#, min press 660#,, max rate 1/3 bpm, ave rate 1/3 bpm, min rate 1/3 bpm, ISIP 680#, 5 min SIP 590#, 10 min SIP 550#, 15 min SIP 522. Released press & flowed back 2-1/4 bbl. Total load 130 bbl, 18 bbl acid & 112 bbl flush, first 32 bbl flush w/ 2% clafix & 1 gal Losurf 259.
- | Time | Bbl fluid | Cum Bbl fluid | % oil | Comments |
|---------|-----------|---------------|-------|--------------------------|
| 1:00 pm | | 2.25 | | start swab, FL @ surface |
| 2:30 | 114.84 | 117.09 | trc | swab down |
| 3:30 | 0.87 | 117.09 | trc | 2 pulls, 20' each |
| 4:30 | 0.29 | 118.25 | trc | 1 pull, 10' FU |
- Rec 118.25 bbl of 130 bbl load. SDFN.
- 03-11-97 Checked ONFU, FL @ 4600', ONFU 90', trace water on bottom. Swabbed down - rec 1.30 bbl, 97% oil.
- | Time | Bbl fluid | Cum Bbl fluid | % oil | Comments |
|---------|-----------|---------------|-------|------------------------|
| 7:50 am | | 118.25 | | start swab, FL @ 4600' |
| 8:00 | 1.30 | 119.55 | 97% | swab down |
| 9:00 | 0.87 | 120.42 | 72% | 1 hr test, 30' FU |
| 10:00 | 0.58 | 121.00 | 72% | 1 hr test, 15' FU |
| 11:00 | 0.43 | 121.47 | 85% | 1 hr test, 15' FU |
- Rec 121.43 bbl of 130 bbl load. SDFN.
- 03-12-97 ONFU 85'. 80' oil on top - 95% oil. Swabbed csg down - rec 2.03 bbl, 95% oil. TIH w/ tbg & pkr to 4572'. Loaded annulus w/ 2% clafix wtr w/ 1 gal/1000 Losurf 359. **Frac Morrow Sand 4623-28', 4632-36', 4639-42'**, w/ 8,400 gal 25# Delta frac and 8000# sand. Loaded tbg & established 7 bpm rate @ 2000#. Max press 2045#, avg press 1900#, min press 1720#, max rate 7 bpm, avg rate 7 bpm, min rate 7 bpm, ISIP 916#, 5 min SIP 724#, 10 SIP 698#, 15 min SIP 690#. Total load 305 bbl. SDFN.

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Scott County, Kansas

03-13-97 Found 200# on tbg. Plumbed up to flow to tank - flowed 8.41 bbl in 1 hr, still had 1/2" stream to tank. TOH w/ tbg & pkr. Swabbed csg down & swab tested as follows:

12:50 pm		8.41		start swab, FL @ 100'
3:05	143.26	151.67	trc	swabbed down, SD to drain tank
3:45		151.65		start swab, FL @ 4350'
4:45	16.24	167.91	trc	swabbed dry, start 1/2 hr test
5:45	6.67	174.58	trc	2 pulls
6:45	4.06	178.64	trc	2 pulls

Rec 179 bbl of 305 bbl load (58%). SDFN.

03-14-97 FL 3750', ONFU 930', found 150' oil on top (16%). Ran sandpump & CO to 4684; PBTD. TIH w/ tbg as follows:

2-3/8" EUE 8rd top slotted MA	15.10'
2-3/8" x 1-25/32" 8 rd SN	1.10'
148 jts new Mav 2-3/8" 4.6# J-55 EUE 8rd tbg	4629.39'
	4645.59'
zero adj (5' KB)	2.50'
	4684.09'

Spaced tbg 22' off bottom. TIH w/ rods & pump as follows:

1" x 12" perf strainer nipple
2" x 1-1/2" x 12' RWT DV prec pump
2" hard faced rod guide
3/4" x 2' pony rod
175 Norris 78 grade D 3/4" x 25' sucker rods
8 Norris 97 special grade 3/4" x 25' sucker rods
1 Norris 78 grade D 3/4" x 25' sucker rod
3/4" x 2 & 8' pony rods
1-1/4" x 16' PR
1-1/4" x 1-1/2" x 7' PRL

Long stroked - good pump action. Spaced out & clamped off. RDMO DD.

03-15-97 MI Rich's Roustabouts. Built unit grade. Set Sentry CH 114D-173-54 pumping unit. Plumbed well to swab tank. Set Home Oil propane tank. Put on pump @ 11:30 am, 3-15-97, 55" stroke @ 8-1/4 spm.

03-16-97 Gauged 52.20 bbl in swab tank. Pump was off - shook up & started pumping w/ very good show oil. Rec 231 bbl of 305 bbl load.

03-17-97 Gauged 19.14 bbl in swab tank. Pump was off - respaced to tag bottom & started pumping w/ very good show oil. Rec 250 bbl of 305 bbl load. Barrel test was 72 BFPD, 43% oil.

03-18-97 Morning gauge in swab tank was 36.57 barrels of fluid. Pumping 100% oil at wellhead. Looks real good. Preparing to set tank battery.

03-19-97 21.46 bbl fluid, 80% oil. Rec 303 bbl of 306 bbl load.

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03-20-97 17.40 bbl fluid, 80% oil. Rec 320 bbl of 305 bbl load. MI W&L Dirt Const & built TB grade. MI Rich's Roustabouts & set TB - two 12' x 10' 200 bbl WS ST, 10' x 15' 210 bbl FG GB & 12' x 1'- 200 bbl open top FG SW tank. SDFN.

03-21-97 MI Rich's Roustabouts & ditched & laid 2" lead line. Plumbed wellhead & TB. Switched field run C-96 motor w/ overhauled C-96 motor. MI Walker Tank Svc & put 60 bbl SW in GB & 20 bbl SW in SW tank. Moved oil from swab tanks to GB. No oil gauge because fluid was moved.

03-26-97 MIRU Poe Well Svc DD. TOH w/ rods, pump & tbg. SDFN.

03-27-97 RU Schlumberger. ⁻¹⁰⁷⁴⁻⁷⁹ Perforate Lansing/Kansas City "E" 4060-65' (5'), 3-3/8" expendable HSC, Schlumberger 37J charges, 4 jspf, 21 holes total. TIH w/ tbg, pkr & RBP. Set RBP @ 4091' & pkr @ 4045' to straddle L-KC "E". Swabbed tbg dry. SI 1/2 hr - had 250' FU, rec 1.16 bbl, 99% oil. RU Halliburton. Ac L-KC "E" 4060-65' w/ 500 gal 15% DSFe w/2 gal Losurf 259. Spotted acid @ 4070', tbg loaded 1 bbl late - good spot. Took acid on vac. Max press vac, avg press vac, max rate 0.2 bpm, avg rate 0.2 bpm, ISIP vac. Total load 28 bbl, 12 bbl acid & 16 bbl 2% clafix flush w/ 1 gal Losurf 259. Swabbed tbg down - rec 15.66 bbl, 6% oil. 1/2 hr test 26.68 bbl, 2% oil. Rec 42.34 bbl of 28 bbl load. Obviously cement bond was not good and treatment communicated into water bearing zone above/below. Will squeeze in AM and reperforate on Monday. This is not an uncommon occurrence in this closely spaced Lansing/Kansas City zone. SDFN.

* COMMUNICATE TO WATER ZONES

03-28-97 Checked ONFU, FL @ 1600'. ONFU 2450', 100' oil on top (4%). Swabbed 1/2 hr. - rec 20.30 bbl, 2% oil. Moved RBP to 4459'. Set pkr @ 4420' & tested tools to 1500# - held. Spotted 2 sx sand on RBP. Set pkr @ 3982' & took injection rate - 2 bpm @ 400#. Sqz. L-KC "E" perfs 4060-65' w/ 100 sx 60-40 poz w/ 3/4" H-322 in first 25 sx. Sqz to 1500# w/ 60 sx in perfs. Reversed out tbg & washed down to 4075'. TIH to 4168' & circ clean. Set pkr @ 3982' & press to 300# - held. SI w/ 300# & SDFWE.

SQUEEZE

03-29-97 SDFWE.

03-30-97 SDFWE.

03-31-97 Found tbg on vac. RU Halliburton. TIH to RBP & circ sand off RBP. TOH w/ tbg & pkr. Swabbed csg dwn to 3730'. RU Schlumberger. Perf L-KC "E" 4060-65' (5'), 3 3/8" expendable HSC, Schlumberger 37J charges, 4 jspf, 21 holes total. TIH w/ tbg & pkr to 4045'. Swabbed tbg dry. SI 30 mins -dry. SDFN.

-1074-79

04-01-97 Checked ONFU, FL 2900', ONFU 1150', 200' oil. Rec 4.21 bbl on swab down. SI 1 hr - had 30' FU but only had 10' on swab. RU Halliburton. Ac L-KC "E" 4060-65' w/ 250 gal 15% DSFe w/ 1 gal Losurf 259. Spotted acid @ 4070', tbg loaded 1/2 bbl late - good spot. Loaded tbg @ 50# & took acid on vac. Max press 50#, avg press vac, max rate 0.12 bpm, avg rate 0.12 bpm, ISIP vac. Total load 21.5 bbl, 6 bbl acid & 15.5 bbl SW flush. Swabbed tbg down & swab tested as follows:

GOOD CMT JOB
DEEP INTO RESERVOIR

ACID JOB TREATED ONLY IMMEDIATE AREA AROUND WELLBORE.

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Time	Bbl fluid	Cum Bbl fluid	% oil	Comments
10:45 am				start swab, FL @ 100'
11:30	21.75	21.75	36	swab down
12:30	5.07	26.82	50	2 pulls
1:30	4.93	31.75	73	2 pulls
2:30	4.64	36.39	74	2 pulls
3:30	3.92	40.31	77	2 pulls, changed cups
4:40	4.06	44.37	80	2 pulls
5:30	3.48	47.85	79	2 pulls
Rec 47.85 bbl of 21.5 bbl load. SDFN.				

04-02-97 ONFU 1800' fluid, 100% oil. Swabbed tbg down - rec 8.26 bbl oil, no water. TOW w/ tbg, pkr & retrievable bridge plug. TIH w/ tbg as follows:

2-3/8" EUE 8rd top slotted MA	15.10'
2-3/8" x 1-25/32" 8rd SN	1.10'
148 jts 2-3/8" EUE 8rd tbg	4629.39'
2-3/8" x 6' tbg sub	6.03'
	4651.62'
zero adj (5' KB)	2.50'
	4654.12'

Tagged bottom - had 8' sand FU. Spaced tbg 8' off bottom. TIH w/ rods & pump as follows:

1" x 12" perf strainer
 2" x 1-1/2" x 12' RWT DV prec pump
 2" hard faced rod guide
 3/4" x 2' pony rod
 184 - 3/4" x 25' sucker rods
 3/4" x 2', 6, & 8' pony rods
 1-1/4" x 16' PR
 1-1/4" x 1-1/2" x 7' PRL

4-03-97 Produced 58.78 BO.

4-04-97 Produced 50.53 BO. Barrel tested well at wellhead, 85 bbl fluid per day - 85% O (72.25 BOPD) & 15% W (12.75 BWPD).

04-05-97 45 BO, 15 BW, TF 60.

04-06-97 18 BO, 22 BW, TF 40.

04-07-97 19.21 BO, 20.04, BW, TF 39.25.

04-09-97 13.36 BO, 18.37 BW. The total fluid as well as the oil cut decreased while water increased.

Water is probably from zones above or below. Apparently the acid treatment did not get back into the reservoir beyond the area influenced by the squeeze job and/or an emulsion block set up in the reservoir.

PRODUCED OIL FROM AREA IMMEDIATELY AROUND WELLBORE THEN DRIED UP. - BIG RESERVOIR BEYOND CEMENT?

04-21-97 MIRU poe Well Svc DD. TOH w/ rods, pump & tbg. TIH w/tbg, Halliburton RTTS, & RBP. Set RBP @ 4091 & RTTS @ 4045' to straddle L-KS 'E' 4060-65'. RU Halliburton. Ac L-KS 'E' w/ 1000 gal 15% NEFe. Pumped acid w/ centrifugal 4 bpm, finished 2 bpm @ 60#. Max press 60#, avg press 60#, max rate 4 bpm, avg rate 3 bpm, ISIP vac. Total load 40 bbl, 24 bbl acid & 16 bbl produced wtr flush w/2 gal clayfix. Swabbed tbg down & swab tested as follows:

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Time	Bbl fluid	Cum Bbl fluid	% oil	Comments
3:30 pm				start swab, FL @ surface
4:30 pm	16.24	16.24	3	swab down
5:00	1.89	18.13	9	1/2 hr test
5:30	1.74	19.87	8	1/2 hr test
6:00	1.30	21.17	7	1/2 hr test
6:30	1.02	22.19	9	1/2 hr test, changed cups
7:00	0.87	23.06	8	1/2 hr test

Rec 23 bbl of 40 bbl load. SDFN.

- 4-22-97 Checked ONFU, FL @ 3600', ONFU 450', 100' oil on top (22%). Swabbed tbg down & swab tested as follows:

Time	Bbl fluid	Cum Bbl fluid	% oil	Comments
8:15 am		23.06		start swab
8:30	1.74	24.80	22	swabbed down
9:30	2.32	27.12	5	2 pulls, acid water
10:30	2.32	29.44	4	2 pulls, acid water
11:30	1.60	31.04	3	2 pulls, oil tied up
12:30	1.16	32.20	3	2 pulls, oil tied up

Rec 32 bbl of 40 bbl load. Ground out oil - had 0.8% solids, 3% acid wtr & 96.2% oil. Washed solids in solvent & checked w/magnet - ~50% solids were iron. Send oil/sludge sample to Halliburton - xylene & Hiflow dissolved sludge & MCA/Fe acid broke test with oil. RU Log-Tech. Ran tracer survey - 100% tracer went in L-KC 'E' perms 4060-65'. Added 22.5 bbl SW to load. Swabbed tbg steady for 2-1/2 hrs - rec 21.25 bbl. RU Halliburton. Dumped 500 gal xylene w/5 gal Hiflow & followed w/1 bbl 2% clafix wtr. SDFN.

- 04-23-97 Checked ONFU, FL @ 3100', ONFU 950', no oil on top. Swabbed tbg down & swab tested as follows:

Time	Bbl fluid	Cum Bbl fluid	% oil	Comments
8:10 am				start swab, FL @ 3100'
8:30	4.78	4.78	0	swab down 2 pulls lot of solids
9:30	8.27	13.05	35	swab steady
10:30	5.37	18.42	30	swab steady
11:30	3.19	21.61	14	4 pulls, 0.6% solids
12:30	3.33	24.94	17	4 pulls
1:30	2.61	27.55	20	4 pulls
2:30	2.75	30.30	18	4 pulls
3:30	2.75	33.05	18	4 pulls, 0.5% solids
4:30	2.47	35.51	21	4 pulls
5:30	1.60	37.11	17	4 pulls

Checked solids w/ magnet - iron sulfide or iron oxide. RU Halliburton. Dumped 1000 gal xylene w/ 600 gal isopropyl alcohol & 10 gal Hiflow. Flushed w/ 8 bbl produced SW. Total load 44 bbl. SDFN.

- 04-24-97 Checked ONFU, FL @ 2650', ONFU 1400', ~ 10' v muddy oil on top. Swabbed tbg down & swab tested as follows:

Time	Comments
9:50 am	start swab, FL @ 2650'

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10:00	5.37	5.37	trc	swabbed down, v muddy oil
11:00	7.83	13.20	70	swabbed steady, oil & xylene
12:00	5.65	18.85	71	swabbed steady, oil & xylene
1:00	3.33	22.18	37	4 pulls, oil & xylene
2:00	2.61	24.79	35	4 pulls, oil & xylene
3:00	2.75	27.54	32	4 pulls, oil & xylene
4:00	2.75	30.29	34	4 pulls, oil & xylene
5:00	2.47	32.76	35	4 pulls, oil & xylene
6:00	2.32	35.08	29	4 pulls, oil & xylene

Rec 35 bbl of 44 bbl load. SDFN.

04-25-97 Checked ONFU, FL @ 3650', ONFU 400', 220' oil on top (55%). Swabbed tbg down & swab tested as follows:

8:10 am		35.08		start swab
8:30	2.46	37.54	55	swab down, 2 pulls
9:30	3.33	40.87	30	4 pulls

Moved RBP to 4635' & RTTS to 4608' to straddle Morrow. Swabbed tbg down. Mixed 55 gal Baker RE-3433 scale converter in 10 bbl lease wtr & dumped down tbg. SI tbg & SDFN.

04-26-97 Ran swab, FL @ 3700', 900' fluid in hole, 300' oil on top. Swabbed tbg down. RU Halliburton - had to cat in - muddy. Ac Morrow 4623-42' w/ 300 gal 15% NEFe. Total load 8 bbl, 7 bbl acid & 1 bbl SW flush. SI 1 hr. Swabbed tbg down & swabbed back load - rec 10.59 bbl. Mixed 55 gal Baker Calnox SI - 4034 scale inhibitor in 10 bbl clafix wtr & dumped down tbg. Flushed w/ 60 bbl clayfix wtr. TOH w/tbg & pkr. SDFWE.

04-28-97 Ran sandpump & CO 16-1/2' sand to 4684' PBTD (FL @ 3300', 1325' FL in hole). TIH w. tbg as follows:

2-3/8" EUE 8rd top slotted MA	15.10'	4670.27'
2-3/8" x 1-25/32" 8rd SN	1.10'	4655.17'
148 jts 2-3/8" EUE 8rd tbg	4629.39'	4654.07'
three 2-3/8" x 6' tbg subs	18.15'	24.68'
2-3/8" x 4' tbg sub	4.03'	6.53'
	4651.62'	
zero adj (5' KB)	2.50'	
	4670.27'	

Spaced tubing 3' off bottom. TIH w/ rods & pump as follows:

1" x 12" perf strainer
 2" x 1-1/2" x 12' RWT DV prec pump
 2" hard faced rod guide
 3/4" x 2' pony rod
 185 - 3/4" x 25' sucker rods
 3/4" x 6' pony rods
 1-1/4" x 16' PR
 1-1/4" x 1-1/2" x 7' PRL

Added on new Norris 78 grade D rod on top. Long stroked - good pump action. Spaced out &

COMPOSITE COMPLETION REPORT

-TIGHT HOLE -

Cross Bar Petroleum #1-28 Freed

1980' FSL & 1980' FWL Sec. 28-T17S-R32W

Scott County, Kansas

hung on. MI Walker Tank Svc - loaded tbg & emptied swab tank - ran swab oil thru GB.
RDMO DD. Put on pump @ 4:30 pm, 54" stroke @ 8 spm.

STATUS! SHUT DOWN WITH ALL EQUIPMENT ON LOCATION.

PRODUCED: ~1030 BO TOTAL

LANSING 'E' ZONE ~ 150-200 BO

MORROW ~ 800-850 BO

CBP #1-28 ERSKIN 'A'

SALTWATER DISPOSAL AGREEMENT IN PLACE.
CASING SET TO DISPOSE IN SHALLOW ZONE.