15-153-00034-00-01

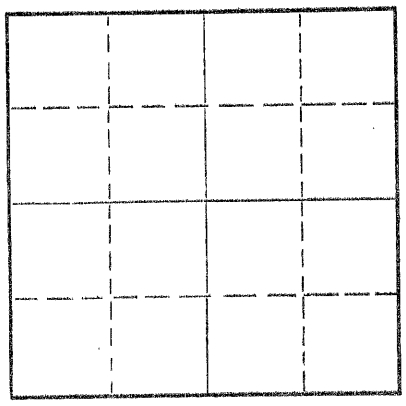
STATE OF KANSAS
STATE CORPORATION COMMISSION

Form CP-4

Give All Information Completely
Make Required Affidavit
Mail or Deliver Report to:
Conservation Division
State Corporation Commission
212 No. Market
Wichita, Kansas

# WELL PLUGGING RECORD

NORTH



Locate well correctly on above Section Plat

Rawlins County. Sec. 21 Twp. 1S Rge. (E) 34 (W)

Location as "NE/CNW¼SW¼" or footage from lines SE NW NW

Lease Owner Skelly Oil Company

Lease Name Frances Horinek Well No. 1

Office Address 1860 Lincoln Street, Denver, Colorado 80203

Character of Well (completed as Oil, Gas or Dry Hole) Oil

Date well completed August 20, 19 59

Application for plugging filed January 13, 19 69

Application for plugging approved January 16, 19 69

Plugging commenced March 16, 19 69

Plugging completed March 17, 19 69

Reason for abandonment of well or producing formation Depleted Oil

Dually Completed Oil/SWD Lic 9378 5-25-04

If a producing well is abandoned, date of last production October 22, 19 62

Was permission obtained from the Conservation Division or its agents before plugging was commenced? Yes

Name of Conservation Agent who supervised plugging of this well W. L. Nichols, Box 157, Morland, Kansas

Producing formation Lansing Lime Depth to top 4146' Bottom 4148' Total Depth of Well 4293 Feet PB 4953

Show depth and thickness of all water, oil and gas formations.

OIL, GAS OR WATER RECORDS — CASING RECORD

| FORMATION | CONTENT | FROM | TO | SIZE | PUT IN | PULLED OUT |
|---|---|---|---|---|---|---|
| Lansing Lime | Oil | 4146' | 4148' | 8-5/8" | 446' | None |
| | | | | 5-1/2" | 4859' | 1507' |

Describe in detail the manner in which the well was plugged, indicating where the mud fluid was placed and the method or methods used in introducing it into the hole. If cement or other plugs were used, state the character of same and depth placed, from feet to feet for each plug set.

3/16/69 Moved in and rigged up Southwest Casing pulling unit. Plugged back with sand from 4293' to 4200', 5 sacks cement from 4200' to 4140', worked 5-1/2"OD casing. Shot 5-1/2" casing as follows: 3000', 2500', 2000', 1750' 1502'. Casing pulled free at 1502'.
Pulled 47 joints 1507' of 5-1/2"OD 14# 8R R-2 Condition "C" casing.
Pumped 9 sacks of gel down 8-5/8"OD casing, followed with 50 sacks of 50/50 Pozmix cement, followed with 22 sacks of gel, and 25 sacks of 50/50 Pozmix cement, followed with 9 sacks of gel and 10 sacks of 50/50 Pozmix cement in top of surface casing 5' below ground level.
Job complete 1:00 PM 3/17/69.

RECEIVED
STATE CORPORATION COMMISSION
MAR 20 1969
CONSERVATION DIVISION
Wichita, Kansas

(If additional description is necessary, use BACK of this sheet)

Name of Plugging Contractor Southwest Casing Pulling Company, Inc.

Address Box 364, Great Bend, Kansas 67530

STATE OF Colorado, COUNTY OF Denver, ss.

K. L. Wyatt (employee of owner) or (~~owner or operator~~) of the above-described well, being first duly sworn on oath, says: That I have knowledge of the facts, statements, and matters herein contained and the log of the above-described well as filed and that the same are true and correct. So help me God.

(Signature) K. L. Wyatt

1860 Lincoln Street, Denver, Colorado 80203
(Address)

SUBSCRIBED AND SWORN TO before me this 19th day of March, 19 69

Mary E. Lutsinger
Notary Public.

My commission expires June 17, 1970

SIDNEY ON PU BARTON C

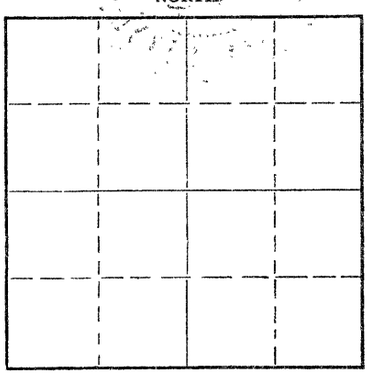
15-153-00034-00-01

STATE OF KANSAS
STATE CORPORATION COMMISSION

Form CP-4

Give All Information Completely
Make Required Affidavit
Mail or Deliver Report to:
Conservation Division
State Corporation Commission
212 No. Market
Wichita, Kansas

# WELL PLUGGING RECORD




Locate well correctly on above Section Plat

Rawlins County. Sec. 21 Twp. 1 Rge. 34 (E) (W) x

Location as "NE/CNW¼SW¼" or footage from lines SE NW NW

Lease Owner Skelly Oil Co.

Lease Name Francis Hornick Well No. #1

Office Address 1860 Lincoln St. Denver, Colorado

Character of Well (completed as Oil, Gas or Dry Hole)

Date well completed 19

Application for plugging filed 19

Application for plugging approved 19

Plugging commenced 3-14-69 19

Plugging completed 2-17-69 03-17-69 19

Reason for abandonment of well or producing formation

If a producing well is abandoned, date of last production 19

Was permission obtained from the Conservation Division or its agents before plugging was commenced?

Name of Conservation Agent who supervised plugging of this well W. L. Nichols

Producing formation Depth to top Bottom Total Depth of Well 4329' Feet

Show depth and thickness of all water, oil and gas formations.

OIL, GAS OR WATER RECORDS — CASING RECORD

| FORMATION | CONTENT | FROM | TO | SIZE | PUT IN | PULLED OUT |
|---|---|---|---|---|---|---|
| | | | | 5 1/2" | 4328' | 1506.07' |
| | | | | 8 5/8" | 450' | |

Describe in detail the manner in which the well was plugged, indicating where the mud fluid was placed and the method or methods used in introducing it into the hole. If cement or other plugs were used, state the character of same and depth placed, from feet to feet for each plug set.

Made bottom hole plug back with sand to 4100'. Mixed and dumped 5 sacks cement thru dump bailer.
Squeezed hole with 40 sacks gel - 5 sacks hulls and 120 sacks of 6% posmix.

RECEIVED
STATE CORPORATION COMMISSION
MAR 20 1969
CONSERVATION DIVISION
Wichita, Kansas

(If additional description is necessary, use BACK of this sheet)

Name of Plugging Contractor Southwest Casing Pulling Co.

Address Box 364, GreatBend, Kansas 67530

STATE OF Kansas, COUNTY OF Barton, ss.

Southwest Casing Pulling Co. (employee of owner) or (owner or operator) of the above-described well, being first duly sworn on oath, says: That I have knowledge of the facts, statements, and matters herein contained and the log of the above-described well as filed and that the same are true and correct. So help me God.

(Signature) W. C. Spencer Secr.

Box 364, Great Bend, Kansas
(Address)

SUBSCRIBED AND SWORN TO before me this 19 day of March, 19 69

Sidney D. Miller
Notary Public.

My commission expires 1-24 October 1972

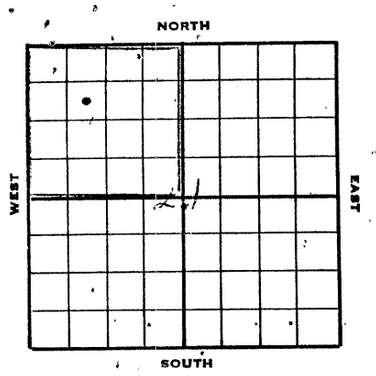
SIDNEY D. MILLER NOTARY PUBLIC BARTON COUNTY, KANSAS

15-153-00034-00-01

Form N47A Rev.

DUALLY COMPLETED FOR OIL AND SALT WATER DISPOSAL

# SKELLY OIL COMPANY




Well Record
#66172

3180'DF
3178'GR
3175'BH

Lease Name and No. Frances Horinek Well No. 1 Elev.

Lease Description NW/4 of Section 21-1S-34W, Rawlins County, Kansas (160 Acres)

Location made June 15, 1959 by P. J. Cussen

990 feet from North line ____ feet from East line } NW/4

____ feet from South line 990 feet from West line } of Sec. 21

Work com'd 6/17 1959 Rig comp'd 6/18 1959 Drlg. com'd 6/18 1959 Drlg. comp'd 7/10 1959

Rig Contractor Claude Wentworth Drilling Company

Drilling Contractor Claude Wentworth Drilling Company, Tulsa, Oklahoma

Rotary Drilling from 0' to 4953' Cable Tool Drilling from To complete to

Completed: 8/20/59

Commenced Producing ____ 19____

Initial Prod. before shot or acid Show Bbls.

Initial Prod. after shot or acid POB 24 hrs., to estab. S.C.C. potential of 35 barrels Bbls.

Dry Gas Well Press. ____ Volume ____ Cu. ft.

Casing Head Gas Pressure ____ Volume ____ Cu. ft.

Braden Head (Size ____) Gas Pressure ____ Volume ____ Cu. ft.

Braden Head (Size ____) Gas Pressure ____ Volume ____ Cu. ft.

(Input Formation: Arbuckle and Reagan - 4827'-4953')

PRODUCING FORMATION Lansing Lime (Name) Top 4278' Bottom 4281' TOTAL DEPTH 4953' PB 4300'

## CASING RECORD

| OD Size | Wt. | Thds. | Where Set | PULLED OUT Jts. | PULLED OUT Feet | PULLED OUT In. | LEFT IN LTM Jts. | LEFT IN LTM Feet | LEFT IN LTM In. | KIND | Cond'n | CEMENTING WTM Sacks Used | CEMENTING WTM Method Employed |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8-5/8" | 22.7 | SJ | 451' | | | | 12 | 446 | 0 | Armco SW | A | 300 | Hallib. |
| 5-1/2" | 14# | 8R | 4827' | | | | 150 | 4826 | 0 | J55 R2 SS | A | 300 | Hallib. 4858'10" |

(8-5/8" casing cut off 3' below ground level, and 5½" 1' above ground level)

5½" casing perforations open:
Above PB TD: 4241'-49' with 72 holes, and 4278'-4281' with 30 holes
Below PB TD: None

Liner Set at ____ Length ____ Perforated at ____

Liner Set at ____ Length ____ Perforated at ____

Packer Set at ____ Size and Kind ____

Packer Set at ____ Size and Kind ____

## SHOT OR ACID TREATMENT RECORD

| | FIRST | SECOND | THIRD | FOURTH |
|---|---|---|---|---|
| Date | 8/2/59 | 8/5/59 | 8/5/59 | |
| Acid Used Size Shot | 1500 Gals. ~~Qts.~~ | 200 Gals. ~~Qts.~~ | 350 Gals. ~~Qts.~~ | Gals. Qts. |
| Shot Between | 4319 Ft. and 4328 Ft. | 4278 Ft. and 4281 Ft. | 4278 Ft. and 4281 Ft. | Ft. and Ft. |
| Size of Shell | 15% | 15% | 15% | For remaining |
| Put in by (Co.) | Halliburton | Halliburton | Halliburton | treatments |
| Length anchor | | | | see remarks |
| Distance below Cas'g | | | | |
| Damage to Casing or Casing Shoulder | | | | |

## SIGNIFICANT GEOLOGICAL FORMATIONS

| NAME | Top | Bottom | GAS From | GAS To | OIL From | OIL To | REMARKS |
|---|---|---|---|---|---|---|---|
| Council Grove | 3438' | | | | | | |
| Admire | 3716' | | | | | | |
| Topeka Lime | 3892' | | | | | | |
| Lansing Lime | 4086' | | | | 4241' | 4249' | Prod. thru csg. perf. |
| | | | | | 4278' | 4281' | " |
| Conglomerate | 4784' | | | | | | |
| Arbuckle Lime | 4822' | | | | | | |
| Reagan Sand | 4882' | | | | | | |
| Pre-Cambrian | 4946' | | | | | | |

## CLEANING OUT RECORDS

| | DATE COMMENCED | DATE COMPLETED | PROD. BEFORE | PROD. AFTER | REMARKS |
|---|---|---|---|---|---|
| 1st | | | | | See Reverse for other details. |

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FRANCES HORINEK WELL NO. 1 Sheet No. 2

| | | | |
|---|---|---|---|
| Lime | 4130 | 4143 | |
| Lime, cream, dense | 4143 | 4149 | Fossiliferous porosity, fair spotted dark stain, show of free oil. |
| Lime | 4149 | 4160 | Ran Halliburton drill stem test No. 4, packer set at 4144', used 16' anchor, open 2 hours, weak blow throughout test, recovered 350' muddy salt water, no oil, IBHP-1260# in 30 mins., IFP-70#, FFP-180#, FBHP-895# in 30 mins. |
| Lime | 4160 | 4165 | |
| Lime, dense, finely crystalline | 4165 | 4168 | Poor porosity, poor spotted dark stain |
| Lime | 4168 | 4192 | |
| Lime, dense, finely crystalline | 4192 | 4195 | |
| Lime | 4195 | 4241 | |
| Lime, light gray, finely crystalline, partly fossiliferous | 4241 | 4245 | Poor to fair pinpoint and vuggy porosity, fair spotted dark stain, fair show of free oil. |
| Lime | 4245 | 4252 | |
| Lime, light gray, finely crystalline, partly fossiliferous | 4252 | 4255 | |
| Lime | 4255 | 4260 | Ran Halliburton drill stem test No. 5, packer set at 4241', used 19' anchor, open 2 hours, weak blow throughout, recovered 215' of rotary mud with few specks of oil, IBHP-100# in 30 mins., IFP-15#, FFP-25#, no final BHP, tool plugged. |
| Lime | 4260 | 4279 | |
| Lime, fine crystalline | 4279 | 4287 | Poor vuggy porosity with spotted dark stain, free oil in samples |
| Lime | 4287 | 4300 | Ran Halliburton drill stem test No. 6, packer set at 4278', used 22' anchor, open 3 hours, fair blow throughout, recovered 125' of free oil (30.6 gravity), 60' of slightly oil cut mud, 778' of muddy salt water, 120' salt water, IBHP-1350# in 30 mins., IFP-35#, FFP-365#, FBHP-1205# in 30 mins. |
| Lime | 4300 | 4304 | |
| Lime, cream, finely crystalline | 4304 | 4315 | Fossiliferous to good porosity, light saturation. |
| Lime | 4315 | 4322 | |
| Lime, cream, partly fossiliferous | 4322 | 4336 | Poor porosity, trace of dark stain |
| Lime | 4336 | 4342 | |
| Lime, cream, partly fossiliferous | 4342 | 4347 | |
| Lime | 4347 | 4352 | |
| Lime, gray, sand and fossiliferous | 4352 | 4356 | BASE KANSAS CITY LIME 4351' |
| Lime | 4356 | 4360 | Ran Halliburton drill stem test No. 7, packer set at 4316', used 44' anchor, open 2 hours, fair blow throughout, recovered 740' of muddy salt water, no oil, IBHP-1330# in 30 minutes, IFP-55#, FFP-400#, FBHP-1175# in 30 minutes. |
| Lime | 4360 | 4685 | TOP MARMATON 4381'<br>TOP CHEROKEE LIME 4518'<br>TOP CHEROKEE SAND 4604' |

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Swabbed through 5½" casing 3 hours, 104 barrels of water used in treating and 5 barrels of acid water, and swabbed to bottom. On August 5, swabbed through 5½" casing 8 hours, 16½ barrels of oil and 15 barrels of water. Reacidized through 5½" casing with 350 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 3 - Acidized between 4278' and 4281'

Treatment put in 8/5/59 by Halliburton, using 350 gallons of acid and 104 barrels of water.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 11:57 pm | 100# | | Acid on formation |
| 1:00 am | 150# | | |
| 2:00 am | 200# | | |
| 2:25 am | 200# | | Treatment completed |

Swabbed through 5½" casing 2 hours, 104 barrels of water used to flush and 8 barrels of acid water. Swabbed off bottom 11 hours, 32 barrels of oil and 27 barrels of water (last 2 hrs., 5½ barrels fluid per hour, 55% oil). On August 6, swabbed off bottom 5 hours, 18 barrels of oil and 10 barrels of water.

Set bridging plug at 4260' and swabbed the hole dry.

Casing Perforation No. 4 - Lansing Lime - 4241'-4249'
4241'-4249' 32 A-2 holes

Slight show of oily mud. Treated through 5½" casing with 250 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 4 - Acidized - 4241'-4249'

Treatment put in 8/6/59 by Halliburton, using 250 gallons of acid and 103 barrels of water.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 5:47 pm | 100# | | Acid on formation |
| 6:47 pm | Vac. | | |
| 6:52 pm | Vac. | | Treatment completed |

Swabbed through 5½" casing 3 hours, 103 barrels of water used to flush. Then swabbed 7 hours off bottom, 17½ barrels of oil and 14½ barrels of water (partly acid water). On August 7, swabbed through 5½" casing 4 hours, 13 barrels of oil and 7½ barrels of water.

Drilled and drove bridging plug from 4260' to 4294', then swabbed through 5½" casing 4 hours, 20 barrels of oil and 10 barrels of water, (last 1 hour, 55-60% water).

Set Lane-Wells bridging plug at 4230'. Swabbed and bailed hole dry.

Casing Perforation No. 5 - Lansing Lime - 4104'-4108'
4104'-4108' 16 A-2 holes

Bailed and tested 2 hours, 5 gallons of drilling water with show of oil per hour. Treated through 5½" casing with 250 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 5 - Acidized - 4104'-4108'

Treatment put in 8/7/59 by Halliburton, using 250 gallons of acid and 102½ barrels of water.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 9:00 pm | | | Start acid |
| 9:18 pm | 100# | | |
| 10:00 pm | 100# | | |
| 10:45 pm | 250# | | |
| 11:15 pm | 300# | | |
| 11:30 pm | 350# | | Treatment completed |

Swabbed through 5½" casing 2 hours, 103 barrels of water used in treating. On August 8, swabbed through 5½" casing 24 hours, 11 gallons of oil and 33 gallons of water per hour (23 gravity oil corrected).

On August 9, ran Halliburton Hydrafrac through 5½" casing as follows:

TREATMENT NO. 6 - Hydrafrac - 4104'-4108'

Used 500 gallons of gelled kerosene
500# of sand
25 barrels of regular crude oil ahead of frac
70 barrels of regular crude to flush
58 barrels of water
Maximum CP-1100#, minimum CP-700#
Time 10 minutes
Pressure dropped to 550# in 5 mins., slight vacuum at end of 4 hours

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FRANCES HORINEK WELL NO. 1 Sheet No. 4

On August 21, pulled rods and 2" tubing. Drilled cement plug from 4330' to 4370'. Drilled cement plug and cleaned out to original total depth, 4953'. Swabbed and bailed the hole clean. Ran 2" tubing and set Halliburton HM packer at 4300'. Treated open hole from 4827' to 4953' with 2000 gallons of Halliburton 30% acid as follows:

TREATMENT NO. 10 - Acidized - 4827'-4953'

Treatment put in 8/23/59 by Halliburton, using 2000 gallons of acid and 35 barrels of water.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 7:20 pm | 150# | | Acid on formation |
| 7:32 pm | 250# | | |
| 7:38 pm | 1150# | | Treatment completed |

Swabbed through 2" tubing 4 hours, 147 barrels of water. Tested input through 2" tubing and well took 54 barrels of water first 30 minutes; 2nd 30 minutes, 43 barrels of water; 3rd 30 minutes, 36 barrels of water--total 133 barrels water in 1½ hours.

Pulled 2" tubing and packer. Set Lane-Wells bridging plug at 4300'. Ran 2" tubing and rods and POB 3 hours, 7½ barrels of oil and 41 barrels of water. Shut down to install pumping equipment.

Dually completed for future salt water disposal purposes in open hole from 4827' to 4953'.

PLUGGED BACK TOTAL DEPTH 4300'

Note: Waiting for State Corporation Commission approval before final salt water disposal completion.

SLOPE TEST DATA

| DEPTH | ANGLE OF DEFLECTION |
|---|---|
| 500' | 1/2 Degree |
| 1000' | 1/4 " |
| 1500' | 1/2 " |
| 2000' | 1/4 " |
| 3000' | 1/2 " |
| 4000' | 1/2 " |
| 4160' | 1/2 " |

15-183-00034-00-01

FORM 16-136 (REV. 9/60)

# SKELLY OIL COMPANY

## CHANGE IN WELL RECORD

Give complete description of all cleaning out, deepening, plugging back and fishing jobs, changes in casing, material lost in hole, etc, not recorded in original well record.

LEASE NAME Frances Horinek Lse. No. 66172 WELL NO. 1 DISTRICT Platte
SEC. 21 T. 1S R. 34W COUNTY Rawlins AFE NO. 648
BLOCK ____ SURVEY ____ STATE Kansas

## TYPE OF WORK Recomplete Well No. 1

Date commenced September 20, 1960 Date completed September 28, 1960
Deepened from ____ to ____ Total Depth 4953'
Plugged back from 4300' to 4293' P.B.T.D. 4293'
Cleaned out from ____ to ____
Production before 0 bbls. oil 1 bbls. water - cu. ft. gas.
Production after 15 bbls. oil 5.5 bbls. water - cu. ft. gas.
Tools owned by; Claude Wentworth Kind used; cable tools No. days rig time; 7-4 hrs.
Cost of Job $ 5,607.23 Revised Estimated Payout (Mos.) 5.64

### TREATMENT RECORD

| DATE | TYPE TREATMENT | INTERVAL TREATED | AMOUNT OF TREATMENT |
|---|---|---|---|
| 9-22-60 | Acid | 4278'-4281' | 500 gallons Halliburton 15% |
| 9-27-60 | Acid | 4278'-4281' | 750 gallons Halliburton 15% |
| 9-27-60 | Acid | 4146'-4148' | 250 gallons Halliburton 15% |
| | | | |
| | | | |

### CHANGES IN CASING RECORD

| STRINGS | SIZE | WHERE SET (Depth) | CEMENTING RECORD | | REMARKS |
|---|---|---|---|---|---|
| | | | Sacks Used | Top Cem't. Bh'd. Csg. | |
| Production | | | | | |
| Liner | | | | | Top liner; |

| SIZE | WT. | THDS. | KIND | COND | LEFT IN | | | | | PULLED OUT | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Jts. | LTM Feet | LTM In. | WTM Feet | WTM In. | Jts. | LTM Feet | LTM In. | WTM Feet | WTM In. |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |

PRODUCING FROM

Lansing Lime (FORMATION) thru ~~CONTINUOUS~~ (PERFORATIONS) 4146' (TOP) 4281' (BOTTOM) Total No. Shots 154

REMARKS (Give review of work performed and any other comment of interest)

September 20, 1960 - Moved in and rigged up Claude Wentworth Drilling Company's cable tools. Pulled rods and tubing. Ran Lane-Wells wire line and checked plug back total depth at 4300'.

PERFORATION JOB NO. 8 - 4146' - 4148':

Perforated 5½" OD casing with 4 Lane-Wells Series "E" bullets per foot as follows:

4146' - 4148' - (2') - 8 shots (Lansing "D" Zone)

Ran 2" tubing with Halliburton straddle packers and set packers at 4267'-4292', straddling casing perforations 4278'-4281' in Lansing "J" Zone. Swabbed 2" EUE tubing 1 hour for .23 barrels of oil and .52 barrels of salt water.

TREATMENT NO. 11 - (ACID) - 4278' - 4281':

Treated formation down 2" EUE tubing with 500 gallons Halliburton 15% non-emulsifying acid. Maximum pump pressure 350#. Casing was on vacuum at end of job. Injection rate 31 gallons pe minute.

After recovering load oil, swabbed 2" EUE tubing 2.5 hours for 27.85 barrels oil and 4.92 barrels salt water.

Picked up 2" tubing and reset straddle packers at 4237'-4262', straddling casing perforations 4241'-4249' in Lansing "H" Zone. Swabbed 2" tubing 1.5 hours for 49 barrels of salt water and no oil. Swabbing 1000' off bottom. Pulled 2" tubing with Halliburton H.M. straddle packers.

Ran 2" tubing with Lane-Wells BOC-8A production packer and set packer at 4276'. Tubing perforations set at 4287'-4290' and seating nipple set at 4286'. Ran 2" x 1-3/4" x 7' x 11' tubing type pump and set at 4286'.

Ran 147 - 3/4" x 25' Jones #7 sucker rods with 1-3/4" x 48" chrome plunger. Well did not pump up. Pulled rods and tubing and recovered bottom part of tubing swab. Re-ran the same tubing, packer, rods, and pump, but well still did not pump up.

Pulled rods, replaced plunger and standing valve, reran rods and well pumped up. Liners evidently worn reason well did not pump up. Pumped 24 hours through 2" tubing, 14-48" SPM, for 3 barrels oil and 160 barrels salt water.

Pumped 3 hours through 2" tubing, 14-48" SPM, for 27 barrels salt water with a trace of oil.

Picked up 2" tubing and reset production packer at 4272'.

Pumped 3 hours through 2" tubing, 18-48" SPM, for 36 barrels salt water with a trace of oil.

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Loaded annulus with water and swabbed 2" tubing 3 hours for 70 barrels salt water with a trace of oil. Annulus remained full of fluid.

Pulled 2" tubing and checked PBTD with Lane-Wells wire line at 4301'. Ran 2" tubing with Halliburton H.M. straddle packers and set packers at 4267'-4292', straddling casing perforations 4278'-4281' in Lansing "J" Zone.

Swabbed 2" tubing 10 hours as follows:

| | | |
|---|---|---|
| 1st hour | - | 18.64 barrels fluid, 99% salt water. |
| 2nd hour | - | 9.28 barrels fluid, 99% salt water. |
| 3rd hour | - | 7.57 barrels fluid, 99% salt water. |
| 4th hour | - | 6.38 barrels fluid, 98% salt water. |
| 5th hour | - | 4.64 barrels fluid, 98% salt water. |
| 6th hour | - | 5.60 barrels fluid, 90% salt water. |
| 7th hour | - | 4.76 barrels fluid, 85% salt water. |
| 8th hour | - | 3.10 barrels fluid, 85% salt water. |
| 9th hour | - | 1.32 barrels fluid, 85% salt water. |
| 10th hour | - | 1.00 barrels fluid, 75% salt water. |

Swabbed 2" tubing 5 hours for 1.25 barrels oil and 2.5 barrels salt water.

TREATMENT NO. 12 - (ACID) - 4278'-4281':

Treated formation down 2" tubing with 750 gallons 15% non-emulsifying acid. Maximum pump pressure 500#. Tubing was on vacuum at end of job. Injection rate 4.5 barrels per minute.

After recovering load oil, swabbed 2" tubing 4 hours for 1 barrel oil and 10.5 barrels salt water. Picked up 2" tubing and reset straddle packers at 4135'-4160', straddling casing perforations 4146'-4148' in Lansing "D" Zone.

Swabbed 2" tubing 2 hours for 7 gallons oil and 15 gallons salt water.

TREATMENT NO. 13 - (ACID) - 4146'-4148':

Treated formation down 2" tubing with 250 gallons Halliburton 15% non-emulsifying acid. Maximum pump pressure 350#. Tubing was on vacuum at end of job. Injection rate 1 barrel per minute.

Swabbed 2" tubing 3 hours for 4.5 gallons oil and 1 barrel salt water. Still lack 14 barrels recovering all load water back. Swabbed 2" tubing 3 hours for 1 barrel salt water with trace of oil. Lacked 13 barrels recovering all load water.

Pulled 2" tubing with Halliburton H.M. straddle packers.

Ran Lane-Wells cast iron bridge plug on wire line and set at 4299'. Dumped 6' cement plug on top of bridge plug making PBTD 4293'.

PLUGGED BACK TOTAL DEPTH 4293'

Ran 147 joints 2"- tubing with Lane-Wells BOC-8A production packer and set tubing bull plugged on bottom at 4267'. Tubing perforations set at 4267'-4270' and seating nipple set at 4266'.

Ran 169 - 3/4" x 25' Jones #7 sucker rods with 2" x 1-3/4" x 16' O'Bannon insert pump with mechanical holddown and set pump at 4266'.

Pumped 6 hours through 2" tubing, 18-48" SPM, for 5 barrels oil and 32 barrels salt water.

Pumped 24 hours, 14-48" SPM, for 15 barrels of oil and 5½ barrels of salt water on September 28, 1960.

June 27, 1962 - Dumped 500 gallons of 15% regular acid down 2" tubing. Packer set @ 4267'. Flushed with 95 barrels of oil. Shut well down for 12 hours. After recovering load oil POB 24 hours for 1.15 barrels oil and 7 barrels of water. No gain in production.

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## RECORD OF FORMATIONS

| FORMATION | TOP | BOTTOM | REMARKS Indicate Casing Points, Describe Shows of Oil, Gas and Water, etc. |
|---|---|---|---|
| Surface soil, sand, and shale | 0 | 190 | |
| Shale and sand | 190 | 460 | Set and cemented 8-5/8"OD, 22.7#, Armco, S.W., S.J. steel casing (A cond.) at 451' with 300 sacks of Pozmix cement and 2% calcium chloride. Cement circulated. Finished cementing at 7:00 a.m. 6/19/59. |
| Shale | 460 | 925 | |
| Shale and shells | 925 | 1575 | |
| Shale and sand | 1575 | 1955 | |
| Shale | 1955 | 2075 | |
| Shale and lime | 2075 | 2250 | Lost circulation at 2250' Continued loosing circulation. Ran drill pipe open end to 1476' and spotted 75 sacks Halliburton HA-5 cement. Raised drill pipe 300' and shut down 2 hrs., then found top of cement at 1645'. Circulated 1 hr. with clear water, circulation OK. Drilled cement from 1645' to 1830' and circulated to bottom 1 hour. |
| Lime and shale | 2250 | 2440 | |
| Shale | 2440 | 2605 | Lost circulation. Ran drill pipe open end to 1476' spotted 75 sacks of Halliburton HA-5 cement with 4 sacks of Gilsonite. Finished cementing at 2:00 pm 6/24/59. Found top of cement at 1576'. Drilled cement plug to 2605' and regained circulation. |
| Shale and shells | 2605 | 2715 | |
| Lime | 2715 | 3070 | TOP STONE CORRAL 3017' |
| Lime and shale | 3070 | 3435 | BASE STONE CORRAL 3055' |
| Lime | 3435 | 3638 | TOP COUNCIL GROVE 3438' |
| Lime and shale | 3638 | 3885 | TOP ADMIRE 3716' |
| Lime, fossiliferous | 3885 | 3888 | Fair vuggy porosity, fair black tarry stain |
| Lime | 3888 | 3920 | TOP TOPEKA LIME 3892' Ran Halliburton drill stem test No. 1, packer set at 3878', used 42' anchor, open 1 hour, no blow (line plugged), recovered 665' of muddy salt water, no oil, IBHP-1240# in 30 minutes, IFP-55#, FFP-325#, FBHP-1150# in 30 mins. |
| Lime and shale | 3920 | 3991 | |
| Lime, white, finely crystalline | 3991 | 3994 | Fair inter-crystalline porosity with fair spotted black stain, mostly dead, small show of free oil in samples. |
| Lime | 3994 | 4000 | Ran Halliburton drill stem test No. 2, packer set at 3983', used 17' anchor, open 1½ hours, weak blow, dead in 1 hr. 20 mins., recovered 65' muddy salt water, no oil, IBHP-1260# in 30 mins., IFP-20#, FFP-55#, FBHP-1095# in 30 minutes. |
| Lime | 4000 | 4104 | TOP HEEBNER SHALE 4032' TOP LEAVENWORTH LIME 4036' TOP LANSING LIME 4086' |
| Sand, light gray, fine grained | 4104 | 4109 | Good porosity, black dead oil stain, no free oil. |
| Sand and lime | 4109 | 4130 | Ran Halliburton drill stem test No. 3, packer set at 4093', used 37' anchor, open 1 hour, weak blow, quit in 5 minutes, recovered 20' of rotary mud, no oil, IBHP-1280# in 30 mins., IFP-0#, FFP-0#, FBHP-1000# in 30 min. |

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| | | | |
|---|---|---|---|
| Shale and sand | 4685 | 4770 | |
| Lime and chert | 4770 | 4860 | TOP CONGLOMERATE 4784' |
| | | | TOP ARBUCKLE LIME 4822' |
| Lime | 4860 | 4873 | |
| Lime, chert and sand | 4873 | 4925 | TOP REAGAN SAND 4882' |
| Sand and shale | 4925 | 4946 | TOP PRE-CAMBRIAN 4946' |
| Pink, fractured quartzite | 4946 | 4953 | No shows |
| | | | Ran Schlumberger Survey |

TOTAL DEPTH 4953'

Total Depth Reached: 7/10/59

Set and cemented 5½"OD, 14#, 8R thd., R-2, J-55, S.S. casing (A cond.) at 4827', mixed and gelled 130 barrels of oil with 130 sacks of Howco Gel pumped ahead of 300 sacks of S.O.W. cement. Oil did not circulate, lost circulation, finished with 1000# pump pressure. Finished 9:30 pm 7/11/59. Halliburton Temperature Survey showed top of cement behind 5½" casing at 3500'.

Rigged up cable tools and swabbed and bailed the hole dry to top of cement at 4727' on July 31, 5½" casing tested dry. Ran Lane-Wells Gamma Ray Collar Log from 4727' to 3700'. Set Baker bridging plug at 4370'.

Casing Perforation No. 1 - Lansing Lime - 4338'-4341'
4338'-4341' 12 A-2 holes

Bailed and tested 5 hours, 53 gallons of water per hour with rainbow show of oil. On August 1, bailed 8 hours, 50 gallons of water per hour, no oil.

Set Lane-Wells bridging plug at 4330', hole tested dry.

Casing Perforation No. 2 - Lansing Lime - 4319'-22' and 4322'-28'
4319'-22' - 12 A-2 holes - Swabbed off bottom 10 hrs., 39 barrels water, no oil. Swabbed thru 5½" casing 6 hrs., 3½ BWPH, no oil

4322'-28' - 24 A-2 holes - Swabbed thru 5½" casing 3 hours, no fluid increase. Treated through 5½" casing with 1500 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 1 - Acidized - 4319'-4328'
Treatment put in 8/2/59 by Halliburton, using 1500 gallons of acid and 111 barrels of water.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 4:00 pm | | | Start acid |
| 4:18 pm | 500# | | |
| 4:24 pm | 350# | | |
| 4:42 pm | 700# | | Treatment completed |

Swabbed through 5½" casing 3 hours, 111 barrels of water used in treating and 36 barrels of acid water. Swabbed off bottom 4 hours, 79 barrels of water; then tested for input, filled hole through 5½" casing with 108 barrels of water in 1½ hours, well took 46.40 barrels of water the first hour; 2nd hour, 26.63 barrels of water; 3rd hour, 10.44 barrels of water.

Drove bridging plug from 4330' to 4369'. Ran 2" tubing and set Halliburton DM retainer at 4295' and cemented off perforations from 4319' to 4328' and 4338' to 4341' with 100 sacks of special oil well cement, 48 sacks below retainer at 2500#, reversed out 52 sacks of cement. Pulled 2" tubing and swabbed the hole dry to 4295'.

Casing Perforation No. 3 - Lansing Lime - 4278'-4281'
4278'-4281' 12 A-2 holes

Swabbed through 5½" casing 8 hours, 13 gallons of oil and 65 gallons of salt water per hour. Treated through 5½" casing with 200 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 2 - Acidized - 4278'-4281'
Treatment put in 8/5/59 by Halliburton, using 200 gallons of acid and 104 barrels of water.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 3:46 pm | 100# | | Acid on formation |
| 4:33 pm | 100# | | Treatment completed |

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Swabbed through 5½" casing 6 hours, 95 barrels of oil used to flush and 58 barrels of treating water, swabbed to bottom. Swabbed 6 hours off bottom, 2 barrels of oil and 29 barrels of water (last 3 hours, 6½ barrels fluid per hour, 92% water, oil 23 gravity corrected).

On August 10, ran 2" tubing and set DM retainer at 4075'. Cemented off perforations from 4104' to 4108' with 100 sacks of common cement, 85 sacks below retainer at 2500#-TP. Reversed out 15 sacks of cement. Finished cementing 7:00 pm 8/10/59. Pulled 2" tubing and swabbed the hole dry to top of retainer at 4075'.

On August 12, drilled DM retainer at 4075', drilled cement from 4145' to 4230', drilled bridging plug at 4230', and cement to 4285' (squeeze job went below bridging plug), and cleaned out to 4295'.

Casing Perforation No. 6 - Lansing Lime - 4278'-4281'

4278'-4281' 18 A-2 holes
12 Kone shots

No shows. Ran 2" tubing and set HM packer at 4260'. Filled annulus with 81 barrels of oil, then treated through 2"tubing with 250 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 7 - Acidized - 4278'-4281'

Treatment put in 8/15/59 by Halliburton, using 250 gallons of acid and 17 barrels of oil.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 1:00 am | | | Start to load hole |
| 1:17 am | 200# | | Hole loaded |
| 1:23 am | | | Start acid |
| 1:30 am | 200# | 200# | Acid on formation |
| 2:30 am | 250# | 350# | |
| 3:46 am | 250# | 450# | Treatment completed |

Swabbed through 2" tubing 24 hours, 30 barrels of oil and 33 barrels of water (last 4 hours, 2.9 barrels fluid per hour, 53% water). Pulled 2" tubing and HM packer.

Casing Perforation No. 7 - 4241'-4249' - Lansing Lime

4241'-4249' 48 Type "E" holes
24 Kone shots

Ran 2" tubing and set Halliburton straddle packers with bottom packer at 4260' and top packer at 4220'. Treated from 4241' to 4249' with 250 gallons of Halliburton 15% acid as follows:

TREATMENT NO. 8 - Acidized - 4241'-4249'

Treatment put in 8/17/59 by Halliburton, using 250 gallons of acid and 17 barrels of oil.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 11:00 pm | | | Acid on formation |
| 11:30 pm | | 200# | |
| 1:00 am | | 400# | |
| 1:30 am | | 500# | |
| 2:20 am | | 750# | |
| 2:47 am | | 700# | Treatment completed |

Swabbed through 2" tubing 2 hours, 17 barrels of oil used in treating and 2 barrels of acid water. Then swabbed 4 hours, 3½ gallons of oil and 1 gallon of acid water per hour. Reacidized with 500 gallons of Halliburton 15% acid through 2" tubing as follows:

TREATMENT NO. 9 - Acidized - 4241'-4249'

Treatment put in 8/17/59 by Halliburton, using 500 gallons of acid and 18 barrels of oil.

| TIME | CP | TP | REMARKS |
|---|---|---|---|
| 5:00 pm | 250# | 250# | Acid on formation |
| 5:10 pm | 250# | 500# | |
| 5:20 pm | 250# | 600# | |
| 5:27 pm | 250# | 950# | Treatment completed |

Swabbed through 2" tubing 2 hours, 18 barrels of oil used to flush and 1½ barrels of acid water. Swabbed off bottom 7 hours, 4½ barrels of oil and 9 barrels of acid water.

Pulled 2" tubing and packers and swabbed out 95 barrels of load oil. Drilled DM retainer at 4295'. Drilled cement plug to 4330'. Swabbed and bailed the hole clean. Ran 2" tubing and rods and POB 6 hours, 24 barrels of oil and 36 barrels of water (last 1 hour 5.8 barrels of fluid per hour, 50% water).

On August 20, POB 24 hours on State Corporation Commission potential, 35 barrels of oil and 47 barrels of water to establish 24 hour S.C.C. potential of 35 barrels. This potential allows 25 barrels per day.