15-151-10707-0000

K

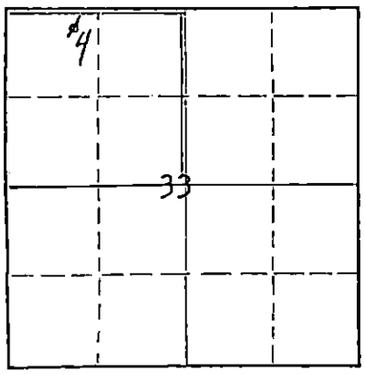
Sec

STATE OF KANSAS
STATE CORPORATION COMMISSION

Give All Information Completely
Make Required Affidavit
Mail or Deliver Report to:
Conservation Division
State Corporation Commission
212 North Market, Insurance Bldg.
Wichita, Kansas

WELL PLUGGING RECORD

NORTH



Locate well correctly on above Section Plat

Pratt County. Sec. 33 Twp. 26S Rge. (E) 12 (W)

Location as "NE/CNW¼SW¼" or footage from lines NE/4 NW/4 NW/4

Lease Owner Skelly Oil Company

Lease Name D. R. Lutes Well No. 4

Office Address Box 1650, Tulsa, Oklahoma

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

Date well completed February 27, 1953

Application for plugging filed October 17, 1960

Application for plugging approved October 19, 1960

Plugging commenced December 15, 1960

Plugging completed December 23, 1960

Reason for abandonment of well or producing formation Depleted

If a producing well is abandoned, date of last production November 1, 1960

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 Mr. Fred Hampel

Producing formation Arbuckle Lime Depth to top 4281' Bottom 4301' Total Depth of Well 4302' Feet
PB 4301'

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

OIL, GAS OR WATER RECORDS

CASING RECORD

FORMATION	CONTENT	FROM	TO	OD SIZE	PUT IN	PULLED OUT
Arbuckle Lime	Oil	4281'	4301'	8-5/8"	451'9"	None
				5-1/2"	4326'6"	1943'

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.

Sand	4301' to 4170'
5 sacks of cement	4170' to 4155'
Rotary mud	4155' to 300'
Crushed rock	300' to 290'
20 sacks of cement	290' to 230'
Rotary mud	230' to 40'
Crushed rock	40' to 30'
10 sacks of cement	30' to 6'
Surface soil	6' to Surface

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STATE CORPORATION COMMISSION
JAN 19 1961
1-19-61
CONSERVATION DIVISION
Wichita, Kansas

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

Name of Plugging Contractor Knight Casing Pulling Company

Address Box 304, Chase, Kansas

STATE OF Kansas, COUNTY OF Reno, ss.

H. E. Wamsley (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) H. E. Wamsley

Box 391, Hutchinson, Kansas
(Address)

Subscribed and Sworn to before me this 18th day of January, 1961

Josephine L. Johnson
Notary Public.

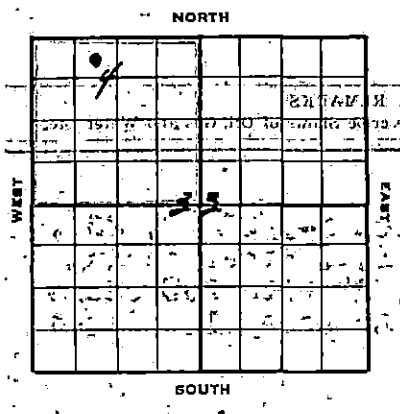
My commission expires April 7, 1963

Form N47A Rev.

15-151-10707-0000

SKELLY OIL COMPANY

Well Record #10374



Elev. 1912'KB 1910'DF 1906½'BH

Lease Name and No. D. R. Lutes Well No. 4

Lease Description NW/4 Section 33-26S-12W, Pratt County, Kansas (160 Acres)

Location made November 29, 19 52 by Pratt County Engineer

330 feet from North line feet from East line NW/4

feet from South line 990 feet from West line of Sec. 33

Work com'd 12/2 19 52 Rig comp'd 12/3 19 52 Drlg. com'd 12/3 19 52 Drlg. comp'd 12/29 19 52

Rig Contractor Chas. Hulme Drilling Company

Drilling Contractor Chas. Hulme Drilling Company, Great Bend, Kansas

Rotary Drilling from 0' to 4284'SLM Cable Tool Drilling from 4284' to 4302'

Commenced Producing February 27, 19 53 Initial Prod. before shot or acid XXXX 4 gals. oil no wtr. Bbls.

Initial Prod. after shot or acid XXXX FOB 24 hrs. 20 BO 18 BW Bbls.

Dry Gas Well Press. Volume Cu. ft.

Casing Head Gas Pressure Volume Cu. ft.

Braden Head (8-5/8"x5½"OD) Gas Pressure Volume Cu. ft.

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

PRODUCING FORMATION Arbuckle Lime (Name) Top 4261' Bottom 4301' TOTAL DEPTH 4302' PB 4301'

CASING RECORD

OD Size	Wt.	Thds.	Where Set	PULLED OUT Jts.	PULLED OUT Feet	PULLED OUT In.	LEFT IN Jts.	LEFT IN Feet	LEFT IN In.	KIND	Cond'n	CEMENTING Sacks Used	CEMENTING Method Employed
8-5/8"	28/8#		452'				21	451	9	R1 LW	C	250	Halliburton
5-1/2"	17/8R		4261'				182	4326	6	R2 LW	A	200	Halliburton

(8-5/8" casing 1/2' in cellar and 5½" cased to derrick floor)

Used 1 - 5½"OD Baker Cement Guide & Float Shoe

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	12/30/52	1/1/53	1/8/53	
Acid Used Size Shot	500 Gals. Qts.	Gals. Qts.	Gals. Qts.	Gals. Qts.
Shot Between	4281 Ft. and 4302 Ft.	4217 Ft. and 4233 Ft.	4209 Ft. and 4220 Ft.	Ft. and Ft.
Size of Shell				For remaining treatments see remarks
Put in by (Co.)	Halliburton	Halliburton (Hydrafrac)	Halliburton (Hydrafrac)	
Length anchor				
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
Brown Lime	3656'						
Lansing Lime	3669'						
Mississippi Lime	4070'						
Viola Lime	4109'						
Simpson Shale	4187'						
Simpson Sand	4209'						
Arbuckle Lime	4279'	SLM			4279'	4284'	Very slight stain
					4289'	4291'	Slight show oil

CLEANING OUT RECORDS

	DATE COMMENCED	DATE COMPLETED	PROD. BEFORE	PROD. AFTER	REMARKS
1st					See Reverse for other details.
2nd					" " " " "
3rd					" " " " "
4th					" " " " "

PLUGGING BACK AND DEEPENING RECORDS

	Date Commenced	Date Completed	No. Feet Plugged Back or Deepened	Prod. Before	Prod. After	REMARKS
1st						See Reverse for other details.
2nd						" " " " "
3rd						" " " " "
4th						" " " " "

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(See Reverse for Record of Formation)

RECORD OF FORMATIONS

FORMATION	TOP	BOTTOM	REMARKS Indicate Casing Points, Describe Shows of Oil, Gas and Water, etc.
Surface soil and sand	0	260	
Red bed, shale and shells	260	452	Set and cemented 8-5/8" OD, 28#, dV thd., R-1, L.W. steel casing (C cond.) at 452' with 250 sacks of cement and 4% aquagel. Cement circulated.
Shale and shells	452	1250	
Salt	1250	1450	
Shale and shells	1450	1735	
Lime	1735	2510	
Shale	2510	2915	
Lime and shale	2915	2975	
Shale	2975	3165	
Lime and shale	3165	3355	
Lime	3355	3418	
Lime and shale	3418	3712	TOP BROWN LIME 3656' TOP LANSING LIME 3669'
Sand and lime	3712	3715	
White to gray, medium to coarse crystalline oolicastic and oolitic lime	3715	3723	Very good porosity and good stain
Lime	3723	3738	
Gray to tan, fine crystalline oolicastic lime	3738	3744	Good porosity, fair light stain
Lime	3744	3792	
Gray, fine crystalline oolicastic and oolitic lime	3792	3798	Good porosity, fair light stain
Lime	3798	3840	
White sucrosic oolitic and oolicastic lime	3840	3848	Very good porosity, stain and odor
Lime	3848	3875	
Cream, fine to medium crystalline oolicastic lime	3875	3884	Fair to good porosity, stain and odor
Lime	3884	3890	
White to gray dense to oolitic and oolicastic lime	3890	3900	Good porosity, fair to good stain
Lime	3900	4055	
Lime and chert	4055	4085	TOP MISSISSIPPI LIME 4070'
Chert	4085	4095	
Shale and chert	4095	4123	TOP OVIOLA LIME 4109'
Shale	4123	4126	
Chert	4126	4148	
Shale and chert	4148	4169	
Shale, lime and chert	4169	4181	
Chert	4181	4194	TOP SIMPSON SHALE 4187'
Chert and lime	4194	4204	TOP SIMPSON DOLOMITE 4199'
Brown medium crystalline sandy dolomite	4204	4210	Fair porosity, good show live oil, fair odor TOP SIMPSON SAND 4209'

Cored from 4210' to 4244' - Recovered 34'

- Top 2' - Dark gray sandy shaley dolomite, bleeding oil in spots
- Next 5' - Greenish gray shale
- Next 12' - Brown, fine to medium grained hard sand with thin shale breaks, oil saturated
- Next 3' - Gray, very shaley sand with spotty bleeding oil
- Next 3'6" - Brown, medium grained shaley sand with shale streaks, good saturation
- Next 2'6" - Gray sandy shale with streaks of oil saturated sand
- Last 6' - Greenish gray shale, no shows

Drilled:			Reamed core hole from 4210' to 4244'.
Shale	4244	4251	
Shale and sand	4251	4286	TOP ARBUCKLE LIME 4279' SLM
Buff, medium crystalline oolitic, slightly porous dolomite	4286	4291	Very slight stain
" " " " "			Set and cemented 5½" OD, 17#, 8R thd., R-2, South Chester L.W. steel casing (A cond.) at 4281' SLM with 200 sacks of Pozmix cement. Finished cementing at 11:15 p.m. 12/22/52.
" " " " "			Rigged up cable tools and bailed the hole dry on December 27, and 5½" casing tested dry. Drilled cement plug and cleaned out to bottom. Correction: 4291' SLM rotary bushing equals 4284' SLM derrick floor.
SLM	4291	4284	

DRILLED: Ran Lane-Wells Gamma Ray Survey.

Grey crystalline dolomite	4284	4289	No shows
Same	4289	4291	Slight show of oil
Same	4291	4295	No increase in oil
Same	4295	4298	No shows
Brown and gray crystalline dolomite	4298	4300	
Gray, coarsely crystalline dolomite	4300	4302	Bailed and tested 7 hours, 4 gallons of oil and no water per hour.

On December 30, treated through 5½" casing with 500 gallons of Halliburton 15% acid as follows:

ACID TREATMENT NO. 1 - Between 4281' and 4302'

Treatment put in 12/30/52 by Halliburton, using 500 gallons of acid and 116 barrels of oil to fill and flush.

TIME	CP	REMARKS
12:40 pm		Start acid down casing
12:45 pm		500 gallons of acid in casing
12:50 pm		Started oil down casing
1:25 pm	800#	500 gallons of acid on bottom
1:30 pm	600#	150 gallons of acid in formation
1:35 pm	550#	500 gallons of acid in formation

Swabbed out oil and spent acid water used in treating. Then swabbed through 5½" casing 9 hours, 2 barrels of oil and no water per hour. On December 31, set Lane-Wells bridging plug at 4270' and perforated 5½" casing from 4217' to 4233' with 93 holes by Lane-Wells, no shows. Ran 2" tubing, set Halliburton HM packer at 4193', and treated with double Hydrafrac as follows:

HYDRAFRAC TREATMENT NO. 1 - Between 4217' and 4233'

Used 400# of Gel agent
20 gallons of breaker agent
1600# of sand
1500 gallons of kerosene
Maximum TP-3100#, broke to 2300#
Time 22 minutes

Pulled tubing and packer and bailed and cleaned up hole. Swabbed through 5½" casing 13 hours, 101 barrels of oil used to Hydrafrac and no water. On January 3, ran 2" tubing and set Halliburton DM retainer at 4152' and cemented off perforations from 4217' to 4233' with 200 sacks of cement, maximum TP-3000#. Pulled tubing and shut down for cement to set.

On January 6, bailed hole dry and drilled cement plug and cleaned out to 4221' and 5½" casing tested dry. Perforated 5½" casing from 4209' to 4220' with 69 holes by Lane-Wells, no shows. Ran 2" tubing and set Halliburton HM packer at 4152' and ran Hydrafrac treatment as follows:

HYDRAFRAC TREATMENT NO. 2 - Between 4209' and 4220'

Loaded hole with oil
Used 150 gallons of Halliburton 15% acid
400# Gel agent
20 gallons breaker agent
1300# of sand
1500 gallons of kerosene
Maximum TP-3300#, broke to 2600#
Time 20 minutes

Pulled 2" tubing and packer and bailed the hole clean. Swabbed through 5½" casing 10 hours, 127 barrels of oil used in treating and 2 barrels of acid water. On January 10, swabbed through 5½" casing 24 hours, 6½ barrels of oil used in treating and 5 barrels of formation water.

On January 11, ran 2" tubing and set Halliburton DM retainer at 4186' and cemented off perforations from 4209' to 4220' with 200 sacks of cement, maximum TP-3500#. Pulled 2" tubing and bailed the hole dry, and 5½" casing tested dry.

Perforated 5½" casing from 3880' to 3888' with 48 holes by Lane-Wells. Bailed and tested 3 hours, 38 gallons of water and no oil per hour. Treated through 5½" casing with 500 gallons of Halliburton 15% acid as follows:

ACID TREATMENT NO. 2 - Between 3880' and 3888'

Treatment put in 1/13/53 by Halliburton, using 500 gallons of acid and 110 barrels of oil to fill and flush.

TIME	CP	REMARKS
3:35 pm		Started acid down casing
3:40 pm		500 gallons of acid in casing
3:42 pm		Started oil down casing
4:00 pm	500#	Hole loaded
4:05 pm	1000#	20 gallons of acid in formation
4:10 pm	800#	100 gallons of acid in formation
4:15 pm	800#	250 gallons of acid in formation
4:30 pm	800#	500 gallons of acid in formation

Swabbed out oil and spent acid water used in treating. Then swabbed 7 hours, 40 barrels of water and no oil per hour, unable to lower fluid level below 2500'. On January 13, ran 2" tubing and set Halliburton DH cement retainer at 3861' and cemented off perforations from 3880' to 3888' with 200 sacks of cement, maximum TP-3500#. Pulled tubing and bailed the hole dry and 5½" casing tested dry to 3864'SLM. Perforated 5½" casing from 3833' to 3838' with 30 holes by Lane-Wells, slight show of oil. On January 14, treated through 5½" casing with 500 gallons of Halliburton 15% acid as follows:

ACID TREATMENT NO. 3 - Between 3833' and 3838'

Treatment put in 1/14/53 by Halliburton, using 500 gallons of acid and 94 barrels of oil to fill and flush.

TIME	CP	REMARKS
4:45 pm		Started acid down casing
4:50 pm		500 gallons of acid in casing
5:00 pm		Started oil down casing
5:15 pm		500 gallons of acid on bottom
5:20 pm	500#	Hole loaded
5:25 pm	625#	60 gallons of acid in formation
5:30 pm	625#	170 gallons of acid in formation
5:35 pm	750#	400 gallons of acid in formation
5:37 pm	750#	500 gallons of acid in formation
5:38 pm	750#	Flushed with 14 barrels of oil

Swabbed out oil and spent acid water used in treating, then swabbed 8 hours, 80 barrels of water with very slight scum of oil. Ran 2" tubing and set Halliburton DH retainer at 3825' and cemented off perforations from 3833' to 3838' with 200 sacks of cement, maximum TP-3000#.

Pulled tubing and bailed the hole dry and 5½" casing tested dry. Perforated 5½" casing from 3806' to 3818' with 48 holes by Lane-Wells. Tested 13 hours, 3 barrels of salt water and no oil per hour. On January 16, ran 2" tubing and set Halliburton DH retainer at 3800' and cemented off perforations from 3806' to 3818' with 162 sacks of cement, maximum TP-3500#. Pulled tubing and bailed the hole dry to top of cement plug at 3800' and 5½" casing tested dry.

Perforated 5½" casing from 3793' to 3799' with 36 holes by Lane-Wells, no shows. Treated through 5½" casing with 500 gallons of Halliburton 15% acid as follows:

ACID TREATMENT NO. 4 - Between 3793' and 3799'

Treatment put in 1/18/53 by Halliburton, using 500 gallons of acid and 92 barrels of oil to fill and flush.

TIME	CP	REMARKS
1:10 pm		Started acid down casing
1:40 pm	300#	500 gallons of acid on bottom
1:51 pm	500#	Started oil down casing
2:00 pm	1300#	20 gallons of acid in formation
2:40 pm		Shut down to run bailer
3:30 pm	1200#	100 gallons of acid in formation
3:35 pm	1100#	300 gallons of acid in formation
3:39 pm	1000#	500 gallons of acid in formation

Swabbed out oil and acid water used in treating, then swabbed 6 hours, 1-3/4 barrels of water and no oil per hour. On January 19, ran 2" tubing and set Halliburton DH retainer at 3772' and cemented off perforations from 3793' to 3799' with 150 sacks of cement, maximum TP-3500#. Pulled 2" tubing and bailed the hole dry to top of cement plug at 3772', and 5½" casing tested dry.

Perforated 5½" casing from 3730' to 3744' with 84 holes by Lane-Wells. Bailed and tested 3 hours, 10 gallons of water with slight scum of oil per hour. Treated through 5½" casing with 500 gallons of Halliburton 15% acid as follows:

ACID TREATMENT NO. 5 - Between 3730' and 3744'

Treatment put in 1/20/53 by Halliburton, using 500 gallons of acid and 102 barrels of oil to fill and flush.

TIME	CP	REMARKS
4:08 pm		Started acid down casing
4:13 pm		500 gallons of acid in casing
4:15 pm		Started oil down casing
4:28 pm	500#	Hole loaded
4:35 pm	800#	20 gallons of acid in formation
4:43 pm	800#	100 gallons of acid in formation
4:48 pm	800#	500 gallons of acid in formation

Swabbed out oil and acid water used in treating; then swabbed 7 hours, 112 barrels of water and no oil. On January 21, ran 2" tubing and set Halliburton cement retainer at 3723' and cemented off perforations from 3730' to 3744' with 150 sacks of cement, maximum TP-3500#. Pulled tubing and bailed the hole dry to top of cement plug at 3723'. Bailed the hole dry and 5½" casing tested dry.

Perforated 5½" casing from 3700' to 3716' with 65 holes by Lane-Wells. Bailed and tested 2 hours, 6 gallons of water and no oil per hour. Treated through 5½" casing with 500 gallons of Halliburton 15% acid water as follows:

ACID TREATMENT NO. 6 - Between 3700' and 3716'

Treatment put in 1/22/53 by Halliburton, using 500 gallons of acid and 102 barrels of oil to fill and flush.

TIME	CP	REMARKS
3:05 pm		Started acid down casing
3:10 pm		500 gallons of acid in casing, start oil
3:35 pm	750#	Hole loaded
3:55 pm	1000#	20 gallons of acid in formation
4:05 pm	1100#	50 gallons of acid in formation
4:15 pm	800#	150 gallons of acid in formation
4:20 pm	750#	250 gallons of acid in formation
4:23 pm	750#	500 gallons of acid in formation

Swabbed out oil and acid water used in treating, then swabbed 9 hours, 164 barrels of water and no oil. On January 23, ran 2" tubing and set Halliburton DM retainer at 3682' and cemented off perforations from 3700' to 3716' with 200 sacks of cement, maximum TP-3500#. Pulled tubing and shut down for cement to set. On January 25, bailed hole dry and 5½" casing tested dry.

Drilled cement retainer and drilled cement plug and cleaned out to 4270', 5½" casing tested dry. On January 30, loaded hole with 50 barrels of oil and drove Lane-Wells bridging plug from 4270' to 4301'. Swabbed out load oil, then swabbed 8 hours, 12 barrels of oil and 10 barrels of water.

On January 31, ran 2" tubing and rods and moved out cable tools. Installed regular pumping equipment and on February 26, POB 24 hours, 18 barrels of oil and 22 barrels of water.

On February 27, POB 24 hours, 20 barrels of oil and 18 barrels of water to establish 24 hour State Corporation Commission potential of 20 barrels.

TOTAL DEPTH 4302' PB 4301'

SLOPE TEST DATA

DEPTH	ANGLE OF DEFLECTION
250'	1/2 Degree
500'	1/2 "
750'	1/2 "
1000'	1/2 "
1250'	1/2 "
1500'	1/2 "
1750'	1/2 "
2000'	1/2 "
2250'	1/2 "
2500'	1/2 "
2750'	1/2 "
3000'	1/2 "
3250'	1/2 "
3500'	1/2 "
4054'	1/2 "

WATER ANALYSIS

Pawhuska Research Laboratory
Sample No. 6491
Taken from Depth: 3880'-3888'
Date Secured: 1/13/53
Date Received: 1/16/53
Analysis Completed: 1/16/53

	PPM
Chlorides as Cl.	126,060
Sulfates as SO_4.	280
Chlorides as NaCl.	207,790
Sulfates as $CaSO_4$.	400

Sample Serial No.: 6514
Taken from Depth: 3730'-3744'
Date Secured: 1/21/53
Date Received: 1/26/53
Analysis Completed: 1/29/53

	PPM
Chlorides as Cl.	130,310
Sulfates as SO_4.	330
Chlorides as NaCl.	214,800
Sulfates as $CaSO_4$.	470

- - -

Sample Serial No.: 6535
Taken from Depth: 3700'-3716'
Date Secured: 1/25/53
Date Received: 1/29/53
Analysis Completed: 1/30/53

	PPM
Chlorides as Cl.	129,070
Sulfates as SO_4.	136
Chlorides as NaCl.	212,760
Sulfates as $CaSO_4$.	190

- - -

D. R. LUTES WELL NO. 4 (Pratt Co., Kans.) Sheet No. 4

TEST SIMPSON, VIOLA, MISSISSIPPI, AND LANSING LIME

Date Commenced: May 20, 1959
Date Completed: June 24, 1959

PLUGGED BACK TOTAL DEPTH 4301'

Production Before: 3 barrels of oil and 27 barrels water per day
Production After: FOR 24 hours, 1½ barrels oil and 144 barrels water

Producing Formation: Arbuckle Lime (4281'-4301', open hole)

- - - - -

On May 20, 1959, moved in tools of Copeland Drilling Company, pulled 2" tubing and rods. Swabbed 5½" casing down to 3700', 30 barrels of oil and 45 barrels of water. Swabbed through casing 5 hours, 11½ barrels of water per hour with trace of oil. Unable to get tools below 3700'.

Swedged out 5½" casing from 3700' to 3716', 3806' to 3816', 3880' to 3890', and from 4209' to 4233'. Set Lane-Wells cast iron bridging plug at 4240'. Swabbed and bailed hole dry, tested dry.

Casing Perforation No. 9 - Simpson Sand - 4209'-4220'

4209'-4212'	18 A-2 holes
4212'-4216'	16 Kone shots
4216'-4220'	24 A-2 holes
	58

Bailed and tested 1 hour, no recovery. Ran 2" tubing and set Halliburton HM packer at 4187'. Treated through 2" tubing with 250 gallons of Halliburton MCA and Sand-Oil-Frac as follows:

TREATMENT NO. 9 - Acid, Sand-Oil-Frac - Between 4209' and 4220'
Used 250 gallons of MCA acid
4000# of sand
2500 gallons of heavy oil
114 barrels of oil to fill and flush
Maximum TP-5000#, minimum TP-4500#
Time 12 minutes
Injection rate: 6 barrels per minute

Swabbed through 2" tubing 3 hours, 82 barrels ofoil used in treating, and 6 barrels of spent acid water. Swabbed through 2" tubing 16 hours, 10 barrels of oil used in treating and 6 barrels of formation water.

Pulled 2" tubing and packer and swabbed through 5½" casing 3 hours, 1/3 barrels of oil and 2/3 barrels of water per hour.

Set Lane-Wells cast iron bridging plug at 4206'. Bailed hole dry, tested dry. Plugged back from 4206' to 4204' with 1 sack of Cal-Seal.

Casing Perforation No. 10 - Simpson Shale - Between 4193' and 4201'
4193'-4201' 47 holes

Bailed 3 hours, no recovery. Ran 2" tubing and set Halliburton HM packer at 4175'. Treated through 2" tubing with 250 gallons of Halliburton MCA acid followed by Halliburton Sand-Oil-Frac as follows:

TREATMENT NO. 10 - Acid - Sand-Oil-Frac - Between 4193' and 4201'
Used 250 gallons of Halliburton MCA acid
3000# of sand
2000 gallons heavy oil
137 barrels oil to fill and flush
Maximum TP-4600#, minimum TP-3850#
Time 10 minutes
Injection rate: 5.2 barrels per minute

Pulled tubing and packer, bailed and cleaned out hole. Swabbed through 5½" casing 23 hours, 129 barrels of oil used in treating and 6 barrels of spent acid water.

Drilled and drove Lane-Wells cast iron bridging plug from 4206' to 4226'. Ran 2" tubing and set Halliburton DM cement retainer at 4177'. Cemented off perforations from 4193' to 4201' and from 4209' to 4220' with 100 sacks of common cement, maximum TP-2500#. Pulled 2" tubing. Swabbed and bailed hole dry.

Casing Perforation No. 11 - Viola Lime - 4110'-4117'
4110'-4117' 42 holes

Bailed 3 hours, no shows. Ran 2" tubing and set Halliburton EM packer at 4096'. Treated through 2" tubing with 250 gallons of Halliburton MCA acid as follows:

TREATMENT NO. 11 - Acidized between 4110' and 4117'

Treatment put in 5/28/59 by Halliburton, using 250 gallons of acid and 23 barrels of oil.

TIME	CP	TP	REMARKS
6:20 pm			Start acid
6:22 pm			Start flush
6:25 pm		200#	Acid on bottom
6:30 pm		1500#	
6:38 pm		1250#	Treatment completed

Swabbed through 2" tubing 10 hours, 18 barrels of oil used in treating with trace of water. Swabbed through 2" tubing 2 hours, 1/2 barrels of oil used in treating, no water. Retreated through 2" tubing as follows:

TREATMENT NO. 12 - Sand-Oil-Frac - 4110' and 4117'

Used 3000# of sand
2000 gallons of heavy oil
126 barrels of oil to fill and flush
Maximum TP-4600#, minimum TP-3900#
Time 10 minutes
Injection rate: 7 barrels per minute

Pulled 2" tubing and packer, bailed and cleaned out hole. Swabbed through 5½" casing 10 hours, 140 barrels of oil used in treating, no water. Swabbed through 5½" casing 24 hours, 18 barrels of oil used in treating, no water. Swabbed through 5½" casing 2 hours, 0.21 barrels of treating oil per hour.

Casing Perforation No. 12 - Viola Lime - 4117'-4128'

4117'-4128' 66 holes

Swabbed through 5½" casing 2 hours, no increase in fluid. Ran 2" tubing and set Halliburton EM packer at 4095'. Treated through 2" tubing with 45 balls and 500 gallons of Halliburton MCA acid as follows: *100 gallons of gelled acid

TREATMENT NO. 13 - Acidized between 4117' and 4128'

Treatment put in 5/31/59 by Halliburton, using 600 gallons of acid and 20 barrels of oil.

TIME	CP	TP	REMARKS
1:48 pm			Start acid
1:52 pm		500#	
1:56 pm		1500#	
1:59 pm		1500#	Treatment completed

Swabbed through 2" tubing 11 hours, 22 barrels of oil used in treating, 14½ barrels of acid water and 3 barrels of formation water.

Pulled 2" tubing and packer. Set Lane-Wells cast iron bridging plug at 4095'. Bailed hole dry and 5½" casing tested dry. Plugged back from 4095' to 4090' with 1/2 sack of Cal-Seal.

Casing Perforation No. 13 - Mississippi Lime - 4071'-4079'

4071'-4079' 48 holes

Bailed 2 hours, no recovery. Ran 2" tubing and set Halliburton EM packer at 4060'. Treated through 2" tubing with 500 gallons of Halliburton MCA acid as follows:

TREATMENT NO. 14 - Acidized between 4071' and 4079'

Treatment put in 6/1/59 by Halliburton, using 500 gallons of acid and 20 barrels of oil.

TIME	CP	TP	REMARKS
5:51 pm			Start acid
5:54 pm			Start flush
5:55 pm		1000#	Acid on bottom
5:56 pm		0#	
5:58 pm		700#	
6:02 pm		1100#	Treatment completed

Swabbed through 2" tubing 12 hours, 20 barrels of oil used in treating, 7 barrels of formation oil and 12 barrels of acid water. Pulled tubing and packer.

Casing Perforation No. 14 - Lansing Lime - Between 4048'-4055'

4048'-4055' 42 holes

Ran 2" tubing and set Halliburton EM packer at 4036'. Treated through 2" tubing with 100 gallons of gelled acid, 45 rubber balls, and 500 gallons of Halliburton MCA acid as follows:

TREATMENT NO. 15 - Acidized between 4048' and 4055'

Treatment put in 6/2/59 by Halliburton, using 600 gallons of acid and 20 barrels of oil.

TIME	CP	TP	REMARKS
3:45 pm		1100#	
3:48 pm		1200#	
3:52 pm		1200#	
4:05 pm		100#	Treatment completed

Swabbed through 2" tubing 12 hours, 14 barrels of oil used in treating, 14½ barrels acid water and 6 barrels formation water. Swabbed through 2" tubing 4 hours, 1/4 barrel treating oil and 1 barrel water per hour. Treated with Halliburton Sand-Oil-Frac through 2" tubing as follows:

TREATMENT NO. 16 - Sand-Oil-Frac - 4048'-4055'

Used 4000# of sand
4000 gallons of heavy crude oil
55 rubber balls
120 barrels oil to fill and flush
Maximum TP-4200#, minimum TP-3600#
Time 15 minutes
Injection rate: 6½ barrels per minute

Pulled tubing and packer and bailed and cleaned out hole. Swabbed through 5½" casing 11 hours, 140 barrels of oil used in treating, no water. Swabbed through 2" tubing 4 hours, 1½ barrels of oil used in treating, 2½ barrels of water, gas gauged 465 MCF.

Set Lane-Wells cast iron bridging plug at 3895'. Bailed hole dry, tested dry. Plugged back from 3895' to 3891' with 1/2 sack of Cal-Seal.

Casing Perforation No. 15 - Lansing Lime - 3868' and 3875'
3868'-3875' - 40 holes

Bailed 3 hours, no recovery. Ran 2" tubing and set Halliburton EM packer at 3855'. Treated through 2" tubing with 250 gallons of Halliburton MCA acid as follows:

TREATMENT NO. 17 - Acidized between 3868' and 3875'

Treatment put in 6/4/59 by Halliburton, using 250 gallons of acid and 18 barrels of oil.

TIME	CP	TP	REMARKS
8:38 pm			Start acid
8:42 pm		400#	
8:50 pm		1800#	
8:52 pm		1700#	Treatment completed

Swabbed through 2" tubing 8 hours, 14 barrels of oil used in treating, 6 barrels of acid water and 32 barrels of formation water.

Pulled tubing and packer. Ran 2" tubing and set Halliburton DM cement retainer at 3854'. Cemented off perforations from 3868' to 3875' with 50 sacks of common cement, maximum TP-3500#. Finished 1:15 pm 6/5/59. Pulled tubing.

Swabbed and bailed hole dry, 5½" casing tested dry. Drilled cement retainer at 3854', drilled cement and cleaned out to top of bridging plug at 3895'. Loaded hole with 60 barrels of water, drilled up bridging plug at 3895', drilled and drove bridging plug at 4095' to 4161'SLM. Ran 2" tubing and set Halliburton DM retainer at 4038'. Cemented off perforations from 4048' to 4055', 4071'-4079', and 4110' to 4128' with 200 sacks of common cement, maximum TP-2500#. Finished 9:45 pm 6/8/59. Pulled tubing.

Swabbed and bailed hole dry, 5½" casing tested dry. Drilled up retainer at 4038', drilled cement to 4132'. Drilled up bridging plug at 4161', drilled cement to 4222', drilled up bridging plug at 4224', drilled and drove bridging plug at 4240' to 4301'. Bailed and cleaned up hole. Swabbed through 5½" casing 8 hours, 7 barrels of water with sign of oil per hour.

Ran 2" tubing and rods and on June 14, POB 16 hours, 58 barrels of water, no oil.

DATE	HOURS POB	BBLS. OIL	BBLS. WTR.
6/15/59	24	0	84
6/16/59	24	0	106
6/17/59	24	0	110
6/18/59	24	0	110
6/19/59	24	0	110
6/20/59	24	0	110
6/21/59	24	0	112
6/22/59	24	1½	144
6/23/59	24	1½	145
6/24/59	24	1½	144

PLUGGED BACK TOTAL DEPTH 4301'

FORM 16-156 (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 D. R. Lutes WELL NO. 4 DISTRICT Western Kansas
SEC. 33 T. 26S R. 12W COUNTY Pratt AFE NO. 6490
BLOCK ____ SURVEY ____ STATE Kansas

TYPE OF WORK PLUG AND ABANDON WELL

Date commenced December 15, 19 60 Date completed December 23, 19 60
Deepened from 4301' to Surface Total Depth ____
Plugged back from ____ to ____ P.B.T.D. ____
Cleaned out from 1 to 99
Production before ____ bbls. oil ____ bbls. water ____ cu. ft. gas.
Production after ____ bbls. oil ____ bbls. water ____ cu. ft. gas.
Tools owned by: Magic Casing Pulling Co. Kind used: ____ No. days rig time: ____
Cost of Job $ ____ Revised Estimated Payout (Mos.) ____

TREATMENT RECORD

DATE	TYPE TREATMENT	INTERVAL TREATED	AMOUNT OF TREATMENT

CHANGES IN CASING RECORD

STRINGS	SIZE	WHERE SET (Depth)	CEMENTING RECORD: Sacks Used	CEMENTING RECORD: Top Cem't. Bh'd. Cas'g.	REMARKS
Production					
Liner					Top liner;

SIZE	WT.	THDS.	KIND	COND	LEFT IN: Ft.	LTM	Ft.	WTM	Ft.	PULLED OUT: Ft.	LTM	Ft.	WTM	Ft.
5-1/2"	17#	8R	8R IW	C	23	1933	6	1960	6	23	1943	6	1966	6

PRODUCING FROM

____ FORMATION thru OPEN HOLE / PERFORATIONS ____ TOP ____ BOTTOM Total No. Shots ____

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

On December 15, 1960, moved in and rigged up machine to Plug and abandon well, installed stripper head in cellar and plugged the well as follows:

Sand	4301' to 4170'
5 sacks of cement	4170' to 4155'

Shot off 5½" casing at 2992', 2925', 2832, and 2732. Pulled 1 joint (22') of 5½" casing (C cond.) and well began to flow. Circulated mud to kill well, tried to pull casing and casing would not come loose, 5½" casing parted. Shot off casing at 2008', unable to pull with over-shot. Shot off casing at 1962' and 1913'. Pulled 82 joints (1921') of 5½" casing(C cond.).

Rotary mud	4155' to 300'
Crushed rock	300' to 290'
20 sacks of cement	290' to 230'
Rotary mud	230' to 40'
Crushed rock	40' to 30'
10 sacks of cement	30' to 6'
Surface soil	6' to Surface

Plugged and abandoned December 23, 1960.

SKELLY OIL COMPANY

CHANGE IN WELL RECORD

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

LEASE NAME _____ WELL NO. _____ DISTRICT _____ API NO. _____

SEC. _____ T. _____ R. _____ COUNTY _____ STATE _____

BLOCK _____ SURVEY _____

TYPE OF WORK

Date commenced _____ Date completed _____ Total Depth _____ P.B.T.D. _____

Deepened from _____ to _____ Plugged back from _____ to _____

Cleaned out from _____ to _____ Pipe in _____ Pipe out _____

Production before _____ Bbls. oil _____ Bbls. water _____ cu. ft. gas _____

Production after _____ Bbls. oil _____ Bbls. water _____ cu. ft. gas _____

Total amount paid _____ Kind used _____ No. days rig time _____

Cost to date $ _____ Revised Estimated Total (Mos.) _____

TREATMENT RECORD

DATE	TYPE TREATMENT	INTERVAL TREATED	AMOUNT OF TREATMENT

CHANGES IN CASING RECORD

STRINGS	SIZE	WHERE SET (Depth)	CEMENTING RECORD: Sacks used	CEMENTING RECORD: Top cement, Bkt. cord	REMARKS
Production					
Liner				Top liner	

SIZE	WT.	THDS.	KIND	COND.	FEET IN: Date	FEET IN: Time	FEET IN: Depth	FEET IN: Mud	FEET IN: Time	FEET IN: Depth	FEET IN: Mud	POULLED OUT: Date	POULLED OUT: Time	POULLED OUT: Depth	POULLED OUT: Mud

PRODUCING FROM

Total No. Shots _____ BOTTOM _____ TOP _____ OPEN HOLE _____ PERFORATIONS _____ FORMATION _____

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

Form H-1-SE (REV. 9/60)