

See

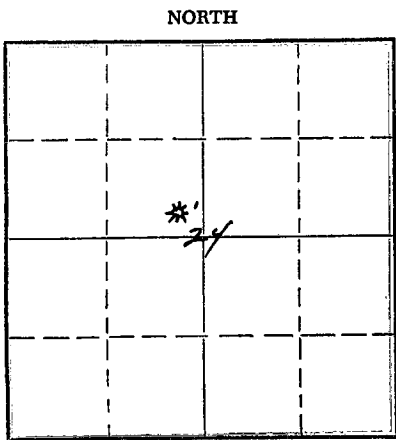
15-119-00156-0000

STATE OF KANSAS  
STATE CORPORATION COMMISSION

WELL PLUGGING RECORD

Give All Information Completely  
Make Required Affidavit  
Mail or Deliver Report to:  
Conservation Division  
State Corporation Commission  
800 Bitting Building  
Wichita, Kansas

Meade County. Sec. 24 Twp. 34 S. Rge. (E) 26 (W)  
Location as "NE/CNW%SW%" or footage from lines SE/4 SE/4 NW/4  
Lease Owner Skelly Oil Company  
Lease Name G. E. Cox Well No. 1  
Office Address Box 1650, Tulsa, Oklahoma  
Character of Well (completed as Oil, Gas or Dry Hole) Gas  
Date well completed June 19, 19 53  
Application for plugging filed February 2, 19 54  
Application for plugging approved February 3, 19 54  
Plugging commenced February 18, 19 54  
Plugging completed February 23, 19 54  
Reason for abandonment of well or producing formation Pressure too low to produce against Kans. Power & Light Co. line  
If a producing well is abandoned, date of last production January 21, 1954  
Was permission obtained from the Conservation Division or its agents before plugging was commenced? Yes



Locate well correctly on above Section Flat

Name of Conservation Agent who supervised plugging of this well Mr. M. A. Rives  
Producing formation Mississippi Lime Depth to top 5864' Bottom 5876' Total Depth of Well 5960 Feet  
Show depth and thickness of all water, oil and gas formations. PB 5931'

OIL, GAS OR WATER RECORDS

CASING RECORD

FORMATION	CONTENT	FROM	TO	SIZE	PUT IN	PULLED OUT
Mississippi Lime	Gas	5864'	5876'	9-5/8"	1091'6"	None
				5-1/2"	5984'6"	4300'11"

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.

Gravel	5931' to 5800'
10 sacks of cement	5800' to 5740'
Mud laden fluid	5740' to 550'
Rock	550' to 545'
25 sacks of cement	545' to 465'
Mud laden fluid	465' to 25'
Rock	25' to 20'
15 sacks of cement	20' to 6'
Surface soil	6' to 0'

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

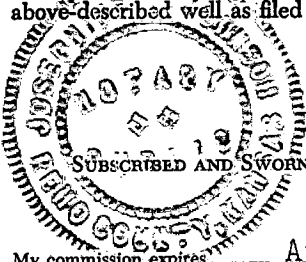
Name of Plugging Contractor Ace Pipe Pulling Company  
Address P.O. Box 304, Great Bend, Kansas

STATE OF Kansas, COUNTY OF Reno, ss.  
H. E. Wamsley (employee of owner) 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) \_\_\_\_\_  
Box 391, Hutchinson, Kansas  
(Address)

SUBSCRIBED AND SWORN to before me this 9th day of March, 1954

My commission expires April 7, 1955



Joseph L. Johnson  
Notary Public.  
STATE CORPORATION COMMISSION

**PLUGGING**  
FILE SEC 24 T 34 R 26W  
BOOK PAGE 11 LINE 32

MAR 10 1954  
03-10-54  
CONSERVATION DIVISION  
Wichita, Kansas

# SKELLY OIL COMPANY

## REPORT OF 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.

**C. E. Cox**  
 LEASE \_\_\_\_\_ WELL NO. **1** DISTRICT **Western Kansas**  
 SEC. **26** T. **34S** R. **26W** COUNTY **Woods** **6378** JOB NO.  
 SURVEY \_\_\_\_\_ BLOCK \_\_\_\_\_ STATE **Kansas**

CLEANING OUT RECORD				PLUGGING BACK OR DEEPENING RECORD			
Date commenced.....	19			Date commenced.....	February 16,	19	54
Date completed.....	19			Date completed.....	February 23,	19	54
Cleaned out from.....	to.....	T. D.		Plugged back or deepened from.....	5931'	to.....	0' T.D. P & A
Prod. before.....	bbls. oil.....	bbls. water.....	cu. ft. gas.....	Prod. before.....	bbls. oil.....	bbls. water.....	cu. ft. gas.....
Prod. after.....	bbls. oil.....	bbls. water.....	cu. ft. gas.....	Prod. after.....	bbls. oil.....	bbls. water.....	cu. ft. gas.....
Kind of tools used:.....				Kind of tools used:.....	Pulling Unit		
Tools owned by:.....				Tools owned by:.....	Ace Pipe Pulling Co.		

### SHOT RECORD

Date	Size shot	Qts.	Qts.	Qts.	Qts.
	Shot between	Ft. and	Ft.	Ft. and	Ft.
	Size of shell				
	Put in by (Co.)				
	Length anchor				
	Distance below casing				
	Damage to casing or casing shoulder				

### CHANGES IN CASING RECORD

SIZE	Wt.	Thds.	Where Set	PULLED OUT			LEFT IN			KIND	Cond'n	CEMENTING	
				Jts.	Feet	In.	Jts.	Feet	In.			Sacks Used	Method Employed
5-1/2"	16	SE		60	1906	0				R2 J55	BB	B	
5-1/2"	15	SE	5961'	76	2394	1134	1683	7		R2 J55	SE	B	

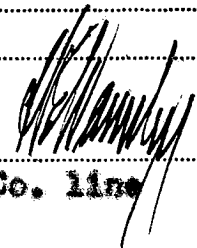
Liner set at..... Length..... Perforated at.....  
 Packer set at..... Size and kind.....

RECEIVED  
 STATE COMMISSION  
 MAR 10 1954

CONSERVATION DIVISION  
 Wichita, Kansas

\*Too low to produce against Kansas Power & Light Co. line

Superintendent.



REMARKS (Give review of work accomplished and any other comment of interest) On February 18, 1954,  
moved in pulling unit of Ace Pipe Pulling Company and plugged the well as follows:

Gravel	5931'	to	5800'
10 sacks of cement	5800'	to	5740'
Mud laden fluid	5740'	to	1740'

Ran McCullough Magnetometer and found 5 1/2" casing free at 4275'. Shot off casing at 4275' and pulled 60 joints (1905') of 5 1/2" OD, 14#, 8R thd., R-2, J-55, R.S.W. casing (B cond.); and 76 joints (2394' 11") of 5 1/2" OD, 15.5#, 8R thd., R-2, J-55, B.S. casing (B cond.).

Mud laden fluid	1740'	to	556'
Rock	550'	to	545'
25 sacks of cement	545'	to	465'
Mud laden fluid	465'	to	25'
Rock	25'	to	20'
15 sacks of cement	20'	to	6'
Surface soil	6'	to	0'

Plugged and abandoned February 23, 1954.

RECORD OF FORMATIONS

FORMATION	TOP	BOTTOM	REMARKS
			Indicate Casing Points, Describe Shows of Oil, Gas and Water, etc.



# SKELLY OIL COMPANY

2178' RB  
2176' DF  
2167' BH

## Well Record

Lease Name and No. **C. E. Cox** Well No. **1** Elev. **2167' BH**  
 Lease Description **All of Section 24-34-25, Meade County, Kansas (640 Acres)**

Location made **February 27, 1953** by **Meade County Engineer**  
 feet from North line **330** feet from East line **82/4**  
 feet from South line **330** feet from West line **of Sec. 24**

Work com'd **2/28 1953** Rig comp'd **3/8 1953** Drlg. com'd **3/8 1953** Drlg. comp'd **4/15 1953**

Rig Contractor **Nichols-Duncan Drilling Company**  
 Drilling Contractor **Nichols-Duncan Drilling Company, Duncan, Oklahoma**  
 Rotary Drilling from **0'** to **5950'** Cable Tool Drilling from **to**

Commenced Producing **June 19, 1953** Initial Prod. before shot or acid **0** Bbls.  
 Initial Prod. after shot or acid **200,000** Bbls.

Dry Gas Well Press **0** Volume **200,000** Cu. ft.

Casing Head Gas Pressure **0** Volume **200,000** Cu. ft.

Braden Head **(9-5/8" Size 52" OD)** Gas Pressure **0** Volume **200,000** Cu. ft.

Braden Head **( )** Gas Pressure **0** Volume **200,000** Cu. ft.

PRODUCING FORMATION **Mississippi Lime** Top **5864'** Bottom **5876'** TOTAL DEPTH **5960'** PB 5931'

### CASING RECORD

OD Size	Wt.	Thds.	Where Set	PULLED OUT			LEFT IN			KIND	Cond'n	Sacks Used	CEMENTING Method Employed
				Jts.	Feet	In.	Jts.	Feet	In.				
9-5/8"	32.38	8R	1094'				34	1091	6	H40 R2 55 A	650	Halliburton	
5-1/2"	14	8R					60	1906	0	R2 R5 A			
5-1/2"	15	8R					42	1289	6	R2 J55 A			
5-1/2"	15	8R	5951'				68	2789	0	R2 J55 B	300	Halliburton	
(9-5/8" casing set 1' in cellar end 52" cased to derrick floor)													
(5-1/2" casing perforated from 5810'-23' with 91 holes, and from 5864'-5876' with 35 holes)													
Used 1 - 52" OD Baker combination 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

Date	FIRST		SECOND		THIRD		FOURTH	
	Date	Acid Used	Date	Acid Used	Date	Acid Used	Date	Acid Used
	4/20/53	1000 Gals. Size Shot	4/21/53	4000 Gals. Size Shot	4/23/53	1000 Gals. Size Shot		
	5864 Ft. and 5876 Ft.		5864 Ft. and 5876 Ft.		5810 Ft. and 5822 Ft.			
	Dowell Inc.		Dowell Inc.		Dowell Inc.			
	Length anchor _____		Distance below Cas'g _____		Damage to Casing or Casing Shoulder _____			

### SIGNIFICANT GEOLOGICAL FORMATIONS

NAME	Top	Bottom	GAS		OIL		REMARKS
			From	To	From	To	
Herington	2480'						
Heebner shale	4405'						
Lansing Lime	4578'						
Morrow sand	5735'						
Mississippi Lime	5829'		5864'	5876'			

### 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						" " " " "

(See Reverse for Record of Formation)

# RECORD OF FORMATIONS

FORMATION	TOP	BOTTOM	REMARKS
Surface soil, sand, and gravel	0	40	
Sand, red bed and shells	40	468	
No samples	468	718	Drilled hole dry from 417' to 718'.
Red bed and shells	718	857	
No samples	857	1094	Drilled hole dry Set 9-5/8" O.D., 32.3#, 48 thd., H-40, H-2, S.S. casing (A cond.) at 1094' with 650 sacks of cement.
Red bed, shells and salt	1094	1270	<u>TOP ANHYDRITE 1128'</u>
Red bed and shells	1270	1800	<u>TOP WELLINGTON 1818'</u>
Shale and shells	1800	2070	<u>TOP HOLLENBERG 2402'</u>
Shale and anhydrite	2070	2636	<u>TOP HERINGTON 2480'</u>
			<u>TOP EXIDER 2529'</u>
			<u>TOP WINFIELD 2566'</u>
			<u>TOP BOYLE 2610'</u>
Shale, anhydrite and lime	2636	2660	<u>TOP TOWANDA 2639'</u>
Shale and lime	2660	3642	<u>TOP FT. HILLY 2705'</u>
			<u>BASE FLORANCE 2802'</u>
			<u>TOP WELFORD 2880'</u>
Shale	3642	3752	
Shale and shells	3752	3815	
Shale and lime	3815	4631	<u>TOP HEBBER SHALE 4406'</u>
			<u>TOP TORONTO 4423'</u>
			<u>TOP LANSING LINE 4578'</u>
Line	4631	4639	
Line and shale	4639	5089	
Line	5089	5106	
Line and shale	5106	5129	
Chert, lime and shale	5129	5139	
Line and shale	5139	5206	
Line	5206	5247	
Line and shale	5247	5272	<u>TOP NARMATON LINE 5269'</u>
Line	5272	5295	
Line and shale	5295	5359	
Line	5359	5400	
Line and shale	5400	5430	
Line	5430	5470	
Line and shale	5470	5781	<u>TOP OHIOKEE LINE 5475'</u>
			<u>TOP MORROW SHALE 5754'</u>
			<u>TOP MORROW LINE 5779'</u>

**Cored from 5781' to 5830' - Recovered 434'**

Top 5' - Brown fine crystalline fossiliferous conglomeratic sandy lime, no porosity, no gas odor.

TOP MORROW SAND 5785'

Next 10' - Green, fine grained glauconitic sand, calcareous with thin black shale laminations, very little porosity, bleeding small show of gas.

Next 1' - Black shale with thin streaks of sand

Next 5' - Black sandy fossiliferous shale with thin stringers of green sand

Next 3' - Tan fine crystalline dense lime

Next 2' - Tan, fine crystalline dense cherty lime and black chert

Next 3' - Tan, fine crystalline dense lime

Next 1' - Buff, medium crystalline fossiliferous lime

Next 6' - Buff, medium crystalline fossiliferous sandy lime, poor porosity, bleeding core, faint odor

Next 1' - Buff, crystalline dense lime

Next 5' - Buff to tan, fine to coarse crystalline fossiliferous dense lime

Last 1'6" - Dark gray shale with streaks of dense lime

TOP MISSISSIPPI LINE 5829'

San Johnston drill stem test, used 75' anchor, packer set at 5755', open 1 hour, light blow for 1 hour, no gas to surface, recovered 360' of gas cut mud, no BHP.

REMARKS	DATE COMPLETED	DATE COMMENCED	REMARKS
<b>Cored from 5830' to 5851' - Recovered 21'</b>			
Top 4' - Dark gray shale with streaks of lime			
Next 1' - Dark gray very fine crystalline dense lime			
Next 2' - Buff, fine crystalline dense fossiliferous lime			
Next 3' - Buff, medium crystalline fossiliferous lime, poor porosity, trace of gas odor			
Next 6' - Tan medium to coarse crystalline fossiliferous dense lime, fractured.			
Next 1' - Dark gray shale and gray fine crystalline dense lime			
Last 4' - Tan, fine crystalline, oolitic, fossiliferous dense lime.			

Cored from 5851' to 5876' - Recovered 25'

- Top 6' - Dark gray to brown, fine to coarse crystalline fossiliferous dense lime
- Next 5' - Buff, fine to coarse crystalline oolitic fossiliferous lime, no porosity, no gas
- Next 2' - Dark gray, fine to medium crystalline fossiliferous dense lime
- Next 2'6" - Dark gray shale with streaks of dark gray lithographic to fine crystalline dense lime
- Next 5'6" - Buff, fine to coarse crystalline fossiliferous lime with vertical fractures
- Last 4' - Buff, fine to coarse crystalline fossiliferous lime, vertical fractures, trace of porosity, no gas

Ran Johnston drill stem test, packer set at 5825', used 51' anchor, open 55 minutes, light blow for 55 minutes; packer started leaking slowly after 55 minutes, no gas to surface, no BHP, recovered 450' drilling mud

Cored from 5876' to 5922' - Recovered 44'

- Top 5' - Buff, fine crystalline fossiliferous lime
- Next 2' - Dark gray, fine crystalline dense lime
- Next 12' - Buff, fine to coarse crystalline fossiliferous dense lime
- Next 5' - Dark gray shale with streaks of dense lime
- Next 3' - Buff, coarse crystalline fossiliferous dense lime
- Next 2' - Gray shale with streaks of buff coarse crystalline dense lime
- Next 7' - Buff, fine to coarse fossiliferous dense lime
- Next 2' - Gray, fine to coarse crystalline fossiliferous shaley dense lime
- Next 2' - Dark gray shale
- Last 4' - Dark gray nodular lithographic to fine crystalline dense lime with streaks of shale

Ran Halliburton drill stem test, packer set at 5876', used 46' anchor, open 1 hour, very light blow for 1 hour, attempted to pull packer, unable to pull; pumped down drilling mud and loosened packer, pulled packer, no recovery.

Drilled:  
Lime and shale 5922 5960

Ran Schlumberger Survey Set and cemented 2789' of 5 1/2" OD, 15.5#, 8R thd., R-2, J-55, S.S. casing (B cond.); 1906' of 5 1/2" OD, 14#, 8R thd., R-2, J-55, R.E.W. casing (A cond.); and 1289'6" of 5 1/2" OD, 15.5#, 8R thd., R-2, J-55, S.S. casing (A cond.) at 5961' with 300 sacks of Pozmix cement and 2 sacks of calcium chloride. Finished 2:30 p.m. 4/17/53. Ran Halliburton Temperature Survey and found top of cement behind 5 1/2" casing at 4455'. On April 16, ran 2" tubing and washed out hole to 5931'. Pulled 2" tubing and shut down for cement to set.

TOTAL DEPTH 5960' PB 5931'

On April 20, perforated 5 1/2" OD, casing by Lane-Wells from 5864' to 5876' with 72 holes. Ran 2" tubing with Lane-Wells hookwall packer set at 5850'. Treated through 2" tubing with 1000 gallons of Dowell 15% acid as follows:

ACID TREATMENT NO. 1 - Between 5864' and 5876'

Treatment put in 4/20/53 by Dowell Inc., using 1000 gallons of acid and 25 barrels of water to flush.

TIME	CP	TP	REMARKS
3:52 pm			Start acid in tubing
4:10 pm	325		950 gallons of acid in, on bottom
4:15 pm	325	500	1000 gallons of acid in, start flush
4:40 pm	325	600	1 barrel of water in to flush
4:45 pm	300	600	2 barrels of water in to flush
5:08 pm	275	600	15 barrels of water in to flush
5:15 pm	275	600	20 barrels of water in to flush
5:21 pm	250	600	25 barrels of water in to flush.

Swabbed through 2" tubing 12 hours, gas gauged 139 M.C.F. Swabbed through 2" tubing 8 hours, gas gauged 193 M.C.F. Reacidized through 2" tubing with 4000 gallons of Dowell 15% acid as follows:

ACID TREATMENT NO. 2 - Between 5864' and 5876'

Treatment put in 4/21/53 by Dowell Inc., using 4000 gallons of acid and 25 barrels of water to flush.

TIME	CP	TP	REMARKS
5:00 pm		500	Start acid down tubing
5:06 pm		500	960 gallons of acid in, on bottom
5:14 pm		650	1500 gallons of acid in
5:17 pm		650	2000 gallons of acid in
5:30 pm		650	3500 gallons of acid in
5:40 pm		650	4000 gallons of acid in, start flush
6:03 pm		650	Flushed with 25 barrels of water

Swabbed through 2" tubing 12 hours to clean up hole, gas too wet to gauge. Flowed through 2" tubing 6 hours to clean up hole, gas gauged 300 M.C.F.

On April 22, loaded hole with water, pulled 2" tubing and set Lane-Wells magnesium bridging plug at 5842', plug would not hold; set second plug at 5832'. Perforated 5 1/2" casing from 5810' to 5822' with 72 holes by Lane-Wells. Plugged back with 1/2 sack of Cal-seal to 5828'. Ran 2" tubing with Lane-Wells hookwall packer set at 5790'. Swabbed through 2" tubing 8 hours to clean up hole, gas gauged 62 M.C.F. Treated through 2" tubing with 1000 gallons of Dowell 15% acid as follows:

ACID TREATMENT NO. 3 - Between 5810' and 5822'

Treatment put in 4/23/53 by Dowell Inc., using 1000 gallons of acid and 25 barrels of water to flush.

TIME	CP	TP	REMARKS
3:50 pm		100	Start acid down tubing
3:56 pm		Vac.	1000 gallons of acid in, start flush
3:59 pm		300	12 barrels of water in to flush
4:00 pm		500	16 barrels of water in to flush
4:02 pm		600	25 barrels of water in to flush

Swabbed through 2" tubing 11 hours, swabbed out water used in treating, gas gauged 100 M.C.F. Reacidized through 2" tubing with 4000 gallons of Dowell "I-100" 15% acid as follows:

ACID TREATMENT NO. 4 - Between 5810' and 5822'

Treatment put in 4/24/53 by Dowell Inc., using 4000 gallons of acid and 25 barrels of water to flush.

TIME	CP	TP	REMARKS
2:22 pm			Start acid down tubing
2:28 pm		Vac.	1000 gallons of acid in, on bottom
2:34 pm		Vac.	2000 gallons of acid in
2:40 pm		600	3000 gallons of acid in
2:47 pm		600	4000 gallons of acid in
2:57 pm		600	Flushed with 25 barrels of water

Swabbed and flowed 15 hours, swabbed out water and spent acid water used in treating, gas gauged 300 M.C.F.

Pulled 2" tubing and set Lane-Wells bridging plug at 5806', plug did not hold; set second Lane-Wells magnesium plug at 5801'. Perforated 5 1/2" casing from 5782' to 5798' with 96 holes by Lane-Wells. Plugged back with Cal-seal to 5797'. Ran 2" tubing with Lane-Wells hookwall packer set at 5761' and treated with Dowell Strata-Frac as follows:

STRATA-FRAC TREATMENT NO. 1 - Between 5782' to 5797'

Used 2500 gallons Gel "I-500"  
2500 lbs of sand  
Maximum CP-0, maximum TP-1700  
Time 29 minutes  
Used 25 barrels of water

On April 26, swabbed and flowed 24 hours through 2" tubing to clean hole, gas gauged 325 M.C.F. Swabbed through 2" tubing 5 hours, gas gauged 325 M.C.F.

Pulled 2" tubing and packer, reran tubing with bit. Drilled out Lane-Wells magnesium plug set at 5801'. On April 28, ran 2" tubing with Lane-Wells hookwall packer set at 5804'. Pumped water down tubing and circulated out casing. Pulled 2" tubing and packer and ran 2" tubing with Baker bridging plug; plug would not go below 5328'.

On April 29, ran 2" tubing with milling tool and milled off top of bridging plug. Pulled 2" tubing and reran 2" tubing with fishing socket and took hold of bridging plug. Pulled 2" tubing with setting mandril from packer. Drilled out Baker plug and cleaned up hole. Ran 2" tubing with Baker bridging plug and plug would not go below 5330'. Pulled 2" tubing and bridging plug. Ran and pulled 2" tubing with wall scraper, ran and pulled junk basket, then ran and set Baker bridging plug at 5805'. Ran 2" tubing and set Baker cement retainer at 5755'. Cemented off perforations from 5782' to 5798' and 5810' to 5822' with 125 sacks of cement, 110 sacks into formation at 2200'-TP. Pulled 2" tubing and shut down for cement to set.

On May 2, ran 2" tubing and bit and drilled cement retainer and cement plug to 5805'. Pulled 2" tubing and bit and on May 3, perforated 5½" casing from 5787' to 5798' with 33 holes by Lane-wells cone shots. Ran 2" tubing and set Lane-wells hookwall packer at 5775'. Treated with 250 gallons of Dowell "X-15" acid and 2500 gallons of Strata-Frac as follows:

STRATA-FRAC TREATMENT NO. 2 - Between 5787' and 5798'

Used 3750 $\frac{1}{2}$  of sand  
25 barrels of water  
Maximum TP-2500 $\frac{1}{2}$ , minimum TP-2200 $\frac{1}{2}$   
Time 49 minutes

Swabbed through 2" tubing 14 hours, 2 barrels of slightly salty water per hour, no gas. Pulled tubing and reran tubing and set Halliburton cement retainer at 5755' and squeeze cemented off perforations from 5787' to 5798' with 75 sacks of cement, pressured to 2500 $\frac{1}{2}$ -TP. Pulled tubing and retainer and shut down for cement to set.

On May 6, ran 2" tubing and bit and drilled cement and retainer to 5824½'. Perforated 5½" casing from 5810' to 5823' with 39 Lane-wells cone shots. Ran 2" tubing and set Halliburton HM packer at 5804'. Treated with 100 gallons of Dowell "X-15" acid followed by Dowell Strata-frac treatment as follows:

STRATA-FRAC TREATMENT NO. 3 - Between 5810' and 5823'

Used 798 gallons of Gel agent  
Pressured to 2200 $\frac{1}{2}$  and acid communicated out perforations from  
from 5787' to 5798'

Raised packer to 5775' and swabbed through 2" tubing 6 hours, 8 barrels of acid water per hour, no gas. Pulled 2" tubing and packer and reran 2" tubing with Halliburton DM cement retainer, set retainer at 5770'. Squeeze cemented off perforations from 5787' to 5798' and from 5810' to 5823' with 50 sacks of cement, pressured to 3500 $\frac{1}{2}$ -TP. Pulled tubing and shut down for cement to set.

On May 8, ran 2" tubing with bit and drilled and washed out to 5827'. On May 9, ran Lane-wells open hole jet gun and attempted to perforate 5½" OD casing from 5810' to 5823'. Dynamite cap on gun went off but failed to discharge shot, leaving gun in hole. Ran 2" tubing with bit and drilled and drove gun to 5827' and stuck bit at 5808'. Unable to loosen bit, ran Dia-Log three-point indicator and found tubing stuck at 5808'. Ran in string shot to loosen tubing, leaving one joint of tubing and bit in hole. Pulled 2" tubing and reran tubing with wash over pipe and washed over tubing in hole. Pulled tubing and wash over pipe. Reran 2" tubing with fishing socket. Fished out one joint of tubing and bit. Ran tubing and globe basket and recovered some pieces of iron. Reran basket and circulated 1½ hours and recovered more iron. Ran Dowell Perfajet gun and tried to perforate 5½" casing from 5810' to 5823' and gun failed to go off. Started pulling gun and gun hung up at 1400'. Pulled on and parted line on top of gun. Ran tubing with bit and drilled gun to 5825'. Ran Dowell Perfajet gun and perforated 5½" casing from 5810' to 5823' with 39 holes.

On May 13, ran 2" tubing and set Halliburton HM packer at 5801'. Attempted to treat with 500 gallons of Dowell Gel-X acid and acid circulated out of casing. Reset packer at 5807' and again attempted to treat with acid and acid circulated out of casing. Pulled tubing and checked packer, packer OK. Found leak in tubing at 4500'. Reran tubing and set Halliburton packer at 5805'. Attempted to treat with acid, and acid circulated out of casing. Pressured tubing to 700 $\frac{1}{2}$  for 25 minutes and tubing started leaking. Pulled tubing and sorted out 120 joints of bad tubing. Ran replacement 2" tubing and set Halliburton packer at 5806'. Swabbed hole dry and tested dry.

Attempted to treat with 500 gallons of Dowell 15% acid and 2500 gallons of Dowell Gel X-500 acid. Held 500 $\frac{1}{2}$ -TP for 20 minutes, no pressure drop. Raised tubing pressure to 1000 $\frac{1}{2}$  for 15 minutes and acid circulated through 5½" casing at perforations from 5810' to 5823' and from 5787' to 5798', no acid into formation. Closed in casing and pressured to 1100 $\frac{1}{2}$  for 1½ hours, formation did not take acid. Pulled tubing and packer and sorted out 70 joints of bad tubing. Replaced tubing, then perforated 5½" casing from 5810' to 5823' with 52 Lane-wells cone shots. Ran 2" tubing and set Halliburton HM packer at 5804'. Swabbed hole dry and on May 16, attempted to treat with 500 gallons of Dowell mud acid and 2500 gallons of Gel X-500 acid. Pressured tubing to 1200 $\frac{1}{2}$  for 7 hours and formation would not take acid. Circulated out acid through tubing. Reset packer at 5804', then reacidized with 500 gallons of Dowell mud acid and 2500 gallons of Dowell Gel X-500 acid as follows:

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ACID TREATMENT NO. 5 - Between 5810' and 5823'

Treatment put in 5/16/53 by Dowell Inc., using 500 gallons of mud acid, 2500 gallons Gel X-500 acid, and 25 barrels of water to flush.

TIME	CP	TP	REMARKS
7:30 pm			Start mud acid
7:50 pm			500 gallons of mud acid in, on bottom, raised tubing and set packer at 5806'
9:00 pm	450	1000	630 gallons Jel X-500 acid in
9:06 pm	420	1700	670 gallons Jel X-500 Acid in
9:12 pm	420	1600	750 gallons Jel X-500 acid in
9:18 pm	410	1600	840 gallons Jel X-500 acid in
9:34 pm	400	2000	910 gallons Jel X-500 acid in
10:12 pm	0	2300	1500 gallons Jel X-500 acid in - Casing started to circulate, raised tubing 1 joint, reset packer
10:55 pm			1900 gallons Jel X-500 acid in
11:10 pm	0	2300	2500 gallons Jel X-500 acid in
11:25 pm	0	2000	Flushed with 25 barrels of water

Swabbed through 2" tubing 15 hours, water and acid water used in treating, trace of gas too small to gauge. Pulled tubing and packer and reran tubing with bit. Drilled out Lane-wells bridging plugs set at 5832' and 5842', and cleaned out to 5931'. Circulated and cleaned up hole. Ran 2" tubing and set Halliburton HM packer at 5846'. Swabbed hole dry, then pulled tubing and packer. Perforated 5 1/2" casing from 5864' to 5876' with 36 Lane-wells Kone shots. Ran 2" tubing and set Halliburton HM packer at 5846'. Treated with 1000 gallons of Dowell 15% acid from 5864' to 5876' as follows:

ACID TREATMENT NO. 6 - Between 5864' and 5876'

Treatment put in 5/20/53 by Dowell Inc., using 1000 gallons of acid and 25 barrels of water to flush.

TIME	CP	TP	REMARKS
6:30 am			Start acid
6:50 am			960 gallons of acid in
7:20 am		1200	980 gallons of acid in
7:21 am		500	1000 gallons of acid in, start flush
7:23 am	700	1000	14 barrels of water in to flush
7:25 am	750	1000	Flushed with 25 barrels of water

Swabbed out water and acid water used in treating and gas was estimated 50 M.C.F. Pulled tubing and packer and ran tubing with mud anchor and moved out rotary tools end on May 29, moved in well servicing unit. On this date pumped 150 gallons of kerosene down the casing, then followed with 400 gallons of Dowell Gel 830 and 50 gallons of kerosene behind Gel agent. Loaded casing with 95 barrels of water, then treated with 5000 gallons of Dowell 15% acid as follows:

ACID TREATMENT NO. 7 - Between 5810'-23' and 5864'-76'

Treatment put in 5/29/53 by Dowell Inc., using 5000 gallons of acid and 28 barrels of water to flush.

TIME	CP	TP	REMARKS
8:47 am			150 gallons of kerosene in, start acid
9:01 am			400 gallons Jel X 830 acid in, start kerosene
9:08 am			50 gallons kerosene in, start acid down tubing and water down casing.
9:10 am			27 barrels water in casing, 250 gallons acid in tubing
9:18 am			36 barrels water in csg., 330 gallons acid in tubing
9:20 am			68 barrels water in casing, 670 gallons acid in
9:22 am			76 barrels water in casing, 750 gallons acid in
9:42 am	500	400	96 barrels water in casing, 1100 gallons acid in
9:48 am	500	300	1200 gallons acid in
10:03 am	725	350	3400 gallons acid in
10:08 am	750	875	4000 gallons acid in
10:18 am	800	900	5000 gallons acid in, start flush
10:30 am	825	950	20 barrels water in to flush
10:37 am	825	1000	Flushed with 28 barrels of water

Swabbed out water used in treating and gas gauged 200 M.C.F. On May 31, swabbed through 5 1/2" casing 4 hours and gas gauged 200 M.C.F.. Shut in until June 2, to build up pressure, SI CP-1050. Flowed through 5 1/2" casing 2 hours and gas gauged 62 M.C.F., CP-450 and well quit flowing. Shut in to build up pressure until June 5, SI CP-1220. Flowed through 5 1/2" casing 3 hours to clean up hole, gas too wet to gauge, CP dropped to 500. Shut in to build up pressure and on June 19, well showed SI CP-1180. On this date flowed through 2" tubing 2 hours, gas gauged 200 M.C.F. and casing pressure dropped to 200. Shut in for pipe line connection.

SLOPE TEST DATA

DEPTH	ANGLE OF DEFLECTION
260'	1/4 Degree
950'	1/2 "
1500'	1/4 "
2000'	1/2 "
2550'	1/2 "
3366'	3/4 "
4348'	1/2 "
5363'	1/2 "

PLUGGING  
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