

. H. LOCKHART NCT-1 WELL #9

Spudded 17-1/2" hole 7:30 P.M. September 17, 1960. Ran 390' of 13-3/8" O.D. casing and cemented at 390' with 500 sx Regular cement. Plug at 370'. Cement circulated. Tested before and after drilling out plug for 30 minutes with 600 PSI. Tested O.K. Job complete 5:30 P.M. September 19, 1960.

Ran 2913' of 9-5/8" O.D. casing and cemented at 2925' with 1800sx 4% Gel Incor and 200 sx Regular. Plug at 2878'. Cement circulated. Tested before and after drilling out plug for 30 minutes with 1000 PSI. Tested O.K. Job complete 4:00 A.M. September 26, 1960.

Core #1 from 5237' to 5252' (15'), rec 9' bleeding oil, October 5, 1960.

DST #1 from 5228' to 5252'. Tool open 1 hour with fair blow decreased to weak blow. Rec 90' gas cut drilling mud. No show. 30 MISI 245, 30 MFSI 285, IF & FF - 75, HI & HO 2465, October 5, 1960.

Core #2 from 5252' to 5309' (57'), rec 57' dense dolomite with slight bleeding oil 5300'-5301' & 5303' to 5304', October 6, 1960. 100% recovery.

Core #3 from 5310' to 5370' (60'), rec 60' dense dolomite, no shows, October 7, 1960. 100% recovery.

DST #2 from 5735' to 5862'. Tool open 1 hr. Open with weak blow and died in 30 mins. Rec 60' slightly gas cut drilling mud, no shows. 30 MISI - 130, 30 MFSI 155, IF 85, FF 100, HI & HO 2935, October 11, 1960.

DST #3 from 6275' to 6375'. Tool open 2 hrs, open with slight blow, died in 30 mins. Rec 2340' slightly gas cut drilling mud, slight trace oil, no wtr. 30 MISI - 1080, 30 MFSI - 1110, IF - 500, FF - 940, HI & HO - 2900, temp 100°, October 15, 1960.

Ran 4066' of 7" O.D. liner and hung in 9-5/8" O.D. casing at 2800' with Brown Type "C" hanger, cemented at 6875', btm of liner with 300 sx 4% Gel and 100 sx regular. Plug at 6825', Squeeze top of liner with 200 sx regular with retainer set at 2700'. Tested before and after drilling out plug for 30 mins 1500 PSI. Tested O.K. Job complete October 23, 1960.

Ran electric logs on October 27, 1960.

Acidize open hole 6875'-7210' with 3000 gals LST NEA at 2.4 BPM. Acid frac open hole 6875'-7210' with 10,000 gals Gelled acid with 8400lbs sand at 8 BPM. Treat open hole with 1000 gals LST NEA with 55 gals K-25 Tretolite mixed with 7 bbls crude ahead of treatment at 3.2 BPM. Treated open hole with 110 gals Control Flo in 24 bbls lease oil followed by 15,000 gals 15% LST NEA at 7.5 BPM.

Perforate 7" O.D. casing 6240' to 6254', 6260' to 6266', 6275' to 6286' with 2 jet shots per ft. Acidize perfs with 1000 gals 15% LST NEA. Frac perfs with 20,000 gals refined oil and 34,100 lbs sand at 10.2 BPM. Squeeze perfs with 50 sx. Squeeze #2 perfs with 100 sx regular neat. Squeeze #3 with 100 sx Incor. Squeeze #4 perfs with 200 sx Incor. Drill out cement 6160' to 6286'. Perf 7" O.D. casing 6220' to 6228', 6240' to 6250' with 4 jet shots per ft. Acid perfs with 1000 gals 15% LST NEA at 3/4 BPM. Re-acidize perfs with 5000 gals 15% LST NEA at 6 BPM. Squeeze perfs with 100 sx Incor. Perf 7" casing 6240' to 6254', 6260' to 6266' with 2 jets per ft. Acidize perfs with 1000 gals 15% LST NEA at 2.9 BPM. Frac perfs with 15,000 gals refined oil with 15,000 lbs sand. Squeeze perfs with 250 sx Incor. Re-squeeze with 150 sx Incor. Perforate 7" casing 5652' to 5668', 5682' to 5696', 5718' to 5721', 5734' to 5737', 5749' to 5780' with 2 jets per ft. Acidize perfs with 2000 gals 15% LST NEA at 4.2 BPM. Squeeze perfs 5734' to 5737', 5749' to 5780', with 100 sx regular neat. Re-squeeze with 100 sx regular neat. Re-squeeze with 175 sx regular neat. Frac perfs 5652' to 5668', 5682' to 5696', 5718' to 5721' with 500 gals 15% LST NEA and 20,000 gals refined oil and 20,000 lbs sand. Squeeze perfs 5652' to 5668', 5682' to 5696', 5718' to 5721' with 150 sx Incor.

Perforate 7" O.D. casing from 5652' to 5668' and 5682' to 5696' with 2 jet shots per ft. Acidize in 2 stages with 500 gals LST NEA with 250 lbs crushed moth balls between stages. Acidize perfs 5652' to 5696' with 1500 gals 15% LST NEA, 500 gals Gel acid containing 500 lbs crushed naphthalene, 1500 gals 15% LST NEA.

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Well Record cont'd

Re-acidize perfs with 10,000 gals 15% LST NEA. Squeeze perfs 5652' to 5668' and 5682' to 5696' with 250 sx regular neat. Reverse out 15 sx.

Perforate 7" O.D. casing at 5749' to 5768' with 2 jet shots per ft. Acidize perfs with 1000 gals 15% LST NEA at 1.14 BPM. Re-acidize perfs with 5000 gals 15% LST NEA. Squeeze perfs with 150 sx regular neat. Cleared perfs and squeezed with 150 sx regular neat.

Install pumping equipment, recover load oil, and test.

On 24 Hr PT ending 11:00 A.M. March 22, 1961, well pumped 31 BO and 5.5 BW.

GOR - 443

Gravity - 39

Top of Pay - 6875'

Btm of Pay - 7210

TEXACO Inc. date - March 22, 1961

NMOCC date - October 20, 1960

FORMATION TOPS

Top of Anhydrite	1303'
Top of Salt	1483'
Base of Salt	2358'
Top of Yates	2638'
Top of San Andres	4044'
Top of Glorieta	5234'
Top of Tubb	6200'
Top of Drinkard	6528'

Deviation Record

<u>Depth</u>	<u>Degrees Off</u>
355'	1/4
716'	1/2
1019'	1/2
1322'	1/4
1594'	1/4
1865'	1/2
2138'	1-1/2
2530'	1-1/2
2925'	1-1/4
3300'	1-1/4
3833'	1-1/4
4204'	3/4
4737'	1
5021'	1
5339'	1-1/4
5500'	1-1/4
5960'	1-1/4
6120'	1-1/2
6351'	1
6800'	3/4
7108'	3/4
7210'	3/4