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U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

API #30-061-20004

Form C-103
 Revised 1-1-69

54. Indicate Type of Lease	
State <input type="checkbox"/>	Prop <input checked="" type="checkbox"/>
55. Indicate if Lease is a	

19. TYPE OF WELL		7. Unit Agreement Name	
E. TYPE OF COMPLETION OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input checked="" type="checkbox"/> OTHER _____ NEW <input type="checkbox"/> WORK OVER <input type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER P&A		8. Farm or Lease Name Santa Fe	
2. Name of Operator Shell Oil Company		9. Well No. Two	
3. Address of Operator 1700 Broadway, Denver, Colorado 80202		10. Field and Pool, or Well Unit Santa Fe South Block Cactus Area (WC)	
4. Location of Well UNIT LETTER L LOCATED 1650 FEET FROM THE South LINE AND 660 FEET FROM THE West LINE OF SEC. 29 TWP. 6N RGE. 1W NMPM		12. County Valencia	
15. Date Spudded 3/29/74	16. Date T.D. Reached 9/19/74	17. Date Compl. (Ready to Prod.) P&A complete 9/29/74	18. Elevations (DF, RKB, RT, GR, etc.) 5216 KB, 5194 GL
19. Elev. Casinghead 5196 prior to P&A			
20. Total Depth 14,305	21. Plug Back T.D. To surface	22. If Multiple Compl., How Many -	23. Intervals Drilled By Total
24. Producing Interval(s), of this completion - Top, Bottom, Name None			25. Was Directional Survey Made Yes
26. Type Electric and Other Logs Run Long Spaced Sonic Gamma Ray w/cal, BHCS, CNL-FDC-GR w/cal, Proximity Microlog, DIL/SP, Dipmeter			27. Was Well Cored Yes
28. CASING RECORD (Report all strings set in well)			
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE
13-3/8"	54.5#	425'	17-1/2"
9-5/8"	40#	3,202'	12-1/4"
7"	26# & 29#	11,231'	8-3/4"
CEMENTING RECORD		AMOUNT PULLED	
515 sx Class "B"		0	
1750 sx Lite		0	
1800 sx 140 Poz & 200 sx "H"		77 jts - cut at 3320'	
29. LINER RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT
30. TUBING RECORD			
SIZE	DEPTH SET	PACKER SET	
31. Perforation Record (Interval, size and number) None			
32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED	
None			
33. PRODUCTION			
Date First Production -	Production Method (Flowing, gas lift, pumping - Size and type pump) -		Well Status (Prod. or Shut-in) P&A
Date of Test -	Hours Tested -	Choke Size -	Prod'n. Per Test Period -
Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
-	-	-	-
Flow Turning Press.	Casing Pressure	Calculated 24-Hour Rate	Oil Gravity - API (Corr.)
-	-	-	-
34. Disposition of Gas (Sold, used for fuel, vented, etc.) -			Test Witnessed By
35. List of Attachments Well History Report and Form C-103 (Logs will follow when final prints are received from logger.)			
36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.			
SIGNED T.S. Mize		TITLE Division Operations Engr. DATE 10/2/74	

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depth shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland _____	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos <u>13,298</u>	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup <u>13,200</u>	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinberry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto <u>13,928</u>	T. Tertiary-Santa Fe @ sfc
T. Drinkard _____	T. Delaware Sand _____	T. Entrada <u>13,954</u>	T. Mesa Verda - 11,030
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. Daltaon SS - 12,992
T. Wolfcamp _____	T. _____	T. Chinle <u>14,058</u>	T. Mulatto Sh - 13,087
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation

NEW WELL PLUGGED & ABANDONED

CACTUS AREA

SHELL OIL COMPANY	LEASE	SANTA FE	WELL NO.	2
	DIVISION	WESTERN	ELEV	5216 KB, 5194 GL
	COUNTY	VALENCIA	STATE	NEW MEXICO
4/1/74 - 10/1/74	LOCATION	NW/4 SW/4 SECTION 29-T6N-R1W		

NEW MEXICOCACTUS AREA

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
13-3/8" csg @ 425'

"FR" Located 1650' FSL and 660' FWL Section 29-T6N-R1W, Valencia County, New Mexico.
Elev: 5216' GL, 5194' GL
Shell's Working Interest: 100%
3/30: 425/83/1/425. Making cond trip. Spudded 17-1/2" hole at 4 PM, 3/29/74. Dev: 3/4 deg at 90 and 271. Repaired air line.
Mud: (.452) 8.7 x 50 x 18.2
3/31: 425/83/2/0. Nippling up and installing #2 motor. Finished circ and tripped out. Ran 11 jts 13-3/8" 54.5#, K-55, 8rd, ST&C csg (434.58") and set at 425'. Cmt'd w/515 sx Class "B" w/2% CaCl2 w/1/4# Flocele. Bumped plug at 1:48 PM, 3/30. Circ cmt. Full returns.
4/1: 425/83/3/0. Drilling cmt. Finished nippling up and installing #2 motor. Tested BOP and chk line. Tested csg to 600 psi. Drld plug and insert valve and started drlg cmt.
Mud: (.452) 8.7 x 31 x 8.2

APR 1 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
13-3/8" csg @ 425'

1576/83/4/1151. Drilling. Tested csg 30' above shoe to 600 psi - OK. Tripped to pick up new BHA. Repaired valve on stand pipe. Dev: 1/2 deg at 450, 3/4 deg at 750, 1/2 deg at 1040, 1490 mis-run.
Mud: (.452) 8.7 x 31 x 10.0

APR 2 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
13-3/8" csg @ 425'

2749/83/5/1173. Drilling. Dev: 1-1/4 deg at 1528 and 1846 and 1 deg at 2420. WL broke while pulling Totco at 2466. DC hard to break. Called spots on shoulder; dressed same. No drag on trip out.
Mud: (.462) 8.9 x 32 x 7.2

APR 3 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
13-3/8" csg @ 425'

3190/83/6/441. Logging. Dev: 1-3/4 deg @ 2953 (by WL Totco) and 1-1/4 deg @ 3150 (by cropped Totco). Circ and cond mud for log 6-1/2 hrs. Short tripped 10 stds - no drag or set down. RU Schl and ran BHCS-GR w/cal. Logger's TD 3190.
Mud: (.473) 9.1 x 55 x 6.0

APR 4 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
13-3/8" csg @ 425'

3205/83/7/15. Running 9-5/8" csg. Finished running logs as follows: Long Spaced Sonic CR w/caliper, EDC-CR w/cal, DIL and Cal Dipmeter Log. Logger's TD No fluid loss while logging and no tight spots. Picked up short 10" BHC and 12-1/4" stabilizer and tripped in slowly. Drld 15' and circ out to check for fillup - none. Laid down BHA and started running csg.
Mud: (.473) 9.1 x 49 x 6.6

APR 5 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

4/6: 3205/83/8/0. Installing 9-5/8" csg hd w/landing base. Ran 79 jts 9-5/8" 40#, K-55 LT&C csg and cmtd w/shoe @ 3202'. Howco cmtd w/1750 sx Howco Lite w/2% CaCl and 1/4#/sk Flocele followed by 425 sx Class "B" w/2% CaCl. Cmt circ. Howco diff fill float shoe at 3202 and FC at 3107. Float eqmt filled and held OK. Plug down at 2 PM, 4/5/74.

Mud: (.473) 9.1 x 49 x 6.6

4/7: 3205/83/9/0. Nippling up BOP's and chk lines. Cut off 13-3/8" and 9-5/8" csg and started nippling up.

4/8: 3205/83/10/0. Laying down 8" DC's. Press tested 9-5/8" landing base head weld to csg to 1500 psi for 10 min, OK. Installed 10-3/4" Cameron test plug. Finished nippling up and press tested BOP stack and chk manifold to 3000 psi for 10 min w/FW, OK. Tested BOPE to 3000 psi for 10 min, OK. Tested Hydril and 9-5/8" csg to 2500 psi for 10 min, OK.

APR 8 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

3205/83/11/0. Picking up 4-1/2" DP. Finished laying down 8" DC's and 4-1/2" DP. Cmtd cellar w/ready mix to 9-5/8" landing base hd. Picked up DC's, 15 jts new HWDP and 4-1/2" DP.

APR 9 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

3402/83/12/197. Drilling. Dev: 1-1/2 deg at 3279. Press tested lower pipe rams, 9-5/8" csg and kelly cock in reverse to 2500 psi, held OK. Circ and cond mud 2-1/2 hrs prior to DO FC and cmt. Circ out and press tested FC prior to DO shoe jt. Drld from 3205 to 3305 and circ out samples.

Mud: (.452) 8.7 x 35 x 9.8

APR 10 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

4047/83/13/645. Tripping for new bit. Dev: 2-1/4 degrees at 3720 and 2 degrees at 3977.

Mud: (.447) 8.6+ x 33 x 9.2

APR 11 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

4/12: 4787/83/14/740. Drilling. Tripped in w/new bit, washing 60' to btm (20' of fill). Dev: 2 deg at 4402'. Logged 7 units background gas at 4228, 10 units at 4350 and presently logging 9-10 units at report time.

Mud: (.452) 8.7 x 30 x 9.0

4/13: 5368/83/15/581. Drilling. Dev: 2-3/4 deg at 4820 and 2-1/4 deg at 5170. Tripped for new bit at 4808, washing 30' to btm (10' of fill).

4/14: 5738/83/16/370. Tripping for new bit. Dev: 2-1/4 deg at 5370 and 1-1/2 deg at 5718. Tripped for new bit at 5381, washing 50' to btm (15' of fill).

Mud: (.457) 8.8 x 33 x 13

4/15: 5934/83/17/196. Washing and reaming to btm. Dev: 1-3/4 deg at 5884. Tripped in w/new bit, washing and reaming 60' to btm (10' of fill). Tripped for new bit at 5934 and changed out stab. Now washing and reaming from 5775 to btm.

Mud: (.452) 8.7 x 28 x 8.6

APR 15 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6228/83/18/294. Reaming and washing at 5883. Dev:
1-3/4 deg at 6209. Tripped for new bit at 6228.
Bridge from 5728-5732. Circ reserve pits w/8.5 ppg
mud in and 9.0 ppg mud out. Circ and cond mud.
Mud: (.442) 8.5 x 28 x 9

APR 16 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6380/83/19/152. Washing and reaming to btm at 5650.
Finished washing and reaming from 5883-6228. Drld
to 6380 and pulled 9 stds to 5500' - hole tight.
Down 5-1/4 hrs for rig repair. Tripped in to 5500-
5530', setting down on fill. Circ hole 1-1/2 hrs.
Mudded up and circ and cond at 5530. Washed and
reamed from 5530-5650 w/hole unloading accumulated
cuttings.

APR 17 1974

Mud: (.447) 8.6 x 41 x 11.2

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6671/83/20/291. Drilling. Finished washing and
reaming from 5650 to 6380.

Mud: (.452) 8.7 x 37 x 8.0

APR 18 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7011/83/21/340. Strapping out to log. Circ 30 min
and made 28-std short trip to 4600 w/no drag or set
down on trip, no fill. Circ and cond mud 4-1/2 hrs
for logs.

Mud: (.452) 8.7+ x 42 x 7.6

APR 19 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

4/20: 7011/83/22/0. Logging. Dev: 3 deg at 6963.
Finished strapping out. RU Schl and started logging.
Logger's TD 7012. Tight spots at 6800, 6223, 5734,
and 5470. Max pull 3000#.

Mud: (.452) 8.7 x 42 x 7.6

4/21: 7212/83/23/201. Drilling. Finished logging.
RD Schl. Picked up BHA and tripped in, breaking circ
at 3200', 6000' and 6750' hitting top of bridge.
Washed and reamed to btm (10' fill).

Mud: (.447) 8.6 x 35 x 7.4

4/22: 7505/83/24/293. Tripping for bit.

Mud: (.447) 8.6 x 35 x 7.8

APR 22 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7650/83/25/145. Drilling. Picked up key seat wiper
at 7505 and checked stab OD's w/gauge ring, OK. Washed
and reamed from 7243-7505. Dev: 4 deg at 7465.

Mud: (.452) 8.7 x 40 x 8.0

APR 23 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7937/83/26/287. Drilling.
Mud: (.447) 8.6 x 41 x 10.0

APR 24 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

8070/83/27/133. Drilling. Dev: 5-1/4 degrees at
8025. Tripped for new bit at 8030. Washed and
reamed 80' to btm.
Mud: (.447) 8.6 x 37 x 9.6

APR 25 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

8179/83/28/109. Tripping for new bit. Bit started
torquing at 8094. Lost 500# pump press at same time.
Chained out of hole checking for washout - found none.
Tripped in w/new bit and washed 90' to btm (15' fill).
Background gas: 7 units. Trip gas: 10 units.
Mud: (.447) 8.6 x 41 x 8.0

APR 26 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

4/27: 8315/83/29/136. Drilling. Dev: 5-1/4 deg at
8140. Washed and reamed 90' to btm (15' fill)
Mud: (.452) 8.7 x 50 x 6.4

4/28: 8355/83/30/40. Drilling. Bit torqued. Picked
up and washed and reamed to btm, drlg 1'. Washed and
reamed 30 min from 8314-8344 - hole would not cln up.
Laid down single. Washed and reamed from 8286-8314.
Picked up single and washed and reamed to 8329 - could
not get below 8329. Pulled 3 stds and ran back in hole
w/no drag or bridges. Washed and reamed from 8286-8314
w/hole torquing and dragging. Tripped out and checked
BHA, OK. Washed and reamed from 8286-8314, reaming and
washing 15 times. Reamed and washed from 8314-8344,
reaming and washing 9 times.

Mud: (.457) 8.8+ x 5.8 x 5.0

4/29: 8466/83/31/111. Drilling. Drld 8 hrs. Washed
and reamed from 8378-8410 in attempt to cln hole to
make connection. Laid down 3 jts. Washed and reamed
from 8340-8410.

Mud: (.462) 8.9 x 69 x 4.4

APR 29 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

8617/83/32/151. Drilling. Reamed and washed out tight
spots from 8474-8505 and from 8505-8537.
Mud: (.468) 9.0 x 85 x 3.6

APR 30 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

8654/83/33/37. Reaming and washing. Repaired broken
rotary chain. Short tripped 13 stds to cond hole for
logs. Started washing and reaming from 8310-8470.
Mud: (.488) 9.4 x 80 x 4.4

MAY 1 - 1974

Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	8654/83/34/0. Strapping out for logs. Reamed and washed to btm from 8470-8654. Circ 30 min and made 10-std short trip w/no drag or set down. Circ 2-1/2 hrs for logs. Mud: (.499) 9.65) 92 x 4.0	MAY 2 - 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	8654/83/35/0. Tripping in hole. Dev: 6-1/2 deg at 8606. RU Schl. Bridge at 8413. Ran DIL from 8202-8413, BHCS from 3202-8413, 7'-9' long spaced Sonic from 5800-8413, 5'-7' long spaced sonic from 5800-8413 and FDC from 6500-8413. Changed out square DC, gauged stab, broke all connections and redoped BHA.	MAY 3 - 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	<u>5/4</u> : 8654/83/36/0. Reaming @ 8537. Six hrs trip 18 hrs washing and reaming 8410-8537. Mud: (.514) 9.9 x 80 x 3.4 <u>5/5</u> : 8674/83/37/20. Drilling. 18 hrs washing and reaming 8537-8654. Mud: (.536) 10.3 x 104 x 38 <u>5/6</u> : 8789/83/38/115. Drilling Mud: (.520) 10.2 x 82 x 3.6	MAY 6 - 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	8885/83/39/96. Tripping. Drilled 21-3/4 hrs. Mud: (.520) 10.2 x 70 x 3.4	MAY 7 - 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	8958/83/40/73. Drilling. Dev: 6-3/4 deg at 8864. Finished tripping out, laying down out-of-gauge bit and out-of-gauge DC. Ran in hole and washed and reamed from 8805-8865 and reamed out-of-gauge hole from 8865-8885. Mud: (.525) 10.15 x 59 x 3.6 (1% oil)	MAY 8 - 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	9035/83/41/77. Washing and reaming. Dev: 8-1/4 deg at 9025. Changed out btm stab and cutters in 3-pt reamer. Tripped in hole to 8800 and washed and reamed from 8888-8898. Mud: (.530) 10.2 x 62 x 3.4	MAY 9 - 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 9-5/8" csg @ 3202'	9194/83/42/159. Drilling. Washed and reamed from 8898-9035. Background gas: 8 units. Mud: (.520) 10.0 x 44 x 3.8 (1% oil)	MAY 10 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

5/11: 9314/83/43/120. Drilling.

Mud: (.525) 10.1 x 46 x 4.4 (2% oil)

5/12: 9342/83/44/28. Tripping for bit. Dev: 8-1/4 degrees at 9300. Tripped out and inspected HWDP, DC's and kelly. Laid down dbl pin sub between kelly and upper kelly valve. Refaced one HW and 6 DC's. Background gas: 8 units.

Mud: (.530) 10.2 x 54 x 4.0 (2% oil)

5/13: 9413/83/45/71. Drilling. Tripped in w/new bit. Reamed tight hole from 9764-9342. Background gas: 7 units. Trip gas: 10 units.

Mud: (.525) 10.1 x 53 x 4.2 (2% oil)

MAY 13 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9504/83/46/91. Tripping for bit. Dev: 9-1/2 deg at 9500. Tight spot at 9419. Background gas: 8 units.

Mud: (.530) 10.2+ x 55 x 4.0 (2% oil)

MAY 14 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9504/83/47/0. Tripping in hole. Press tested BOP stack and chk manifold, repairing leaks. Tested Hydril to 2500 psi, OK. Tested lower kelly cock, flanged valves and roadside kill line to 5000 psi, repairing leaks.

Mud: (.530) 10.2+ x 55 x 4.0 (2% oil)

MAY 15 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9570/83/48/66. Drilling. Finished tripping in. Washed and reamed from 9400-9504. Background gas: 7 units.

Mud: (.525) 10.1 x 56 x 5.2 (1% oil)

MAY 16 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9668/83/49/98. Tripping. Background gas: 15 units.

Mud: (.525) 10.1 x 49 x 4.2 (1% oil)

MAY 17 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

5/18: 9669/83/50/1. Drilling. Dev: 10-1/4 deg at 9665. Dressed btm reamer and tripped to 6000'. Mud lines burst - repaired same. Broke circ at 3100 and 6400. Washed and reamed from 9558-9668. Background gas: 15 units.

Mud: (.530) 10.2 x 57 x 5.0 (1% oil)

5/19: 9768/83/51/99. Drilling. Background gas: 7 units.

Mud: (.520) 10.0 x 53 x 4.8 (1% oil)

5/20: 9868/83/52/100. Drilling. Reamed tight spot at 9805.

Mud: (.520) 10.0 x 60 x 4.0 (1% oil)

MAY 20 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/53/89. Tripping for bit. Sptd pill, circ and attempted to cln up hole at 9907 (torquing). Started out of hole, dragging first four stds off btm.
Mud: (.525) 10.1+ x 53 x 4 (2% oil)

MAY 21 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/54/0. Picking up DP and running in hole to locate top of fish. Dev: 11-3/4 deg at 9935. Finished tripping out and checked reamer. Tripped in hole to 9830, breaking circ at 5000'. Reamed and washed from 9830-9894 w/excessive torque. DP backed off while releasing torque 1 jt below kelly and also down hole. Picked up new S-135 DP and ran in hole to 2142.

Mud: (.520) 10.1+ x 64 x 4.0 (2% oil)

MAY 22 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/55/0. Picking up bent jt of DP and overshot. Picked up total of 74 jts S-135 DP. Circ on top of fish and screwed into fish at 2336. Pmpd 3 jts out hole. Max pull 210,000# 32' above 2336'. Rec'd 3462' of damaged DP - pin twisted off. RU Schl and ran 1-11/16" OD collar locator. Could not positively locate top of fish. Ran 3-5/8" OD IES tool and located top of fish at 3537. DP measurement shows top of fish at 3511 (26' above log measurement). Ran crooked DP in hole and started pulling out and laying down damaged DP - tight.

Mud: (.525) 10.1+ x 64 x 4.0 (2% oil)

MAY 23 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/56/0. Pulling out w/fish. Ran in w/overshot. Circ and cond mud at 3467 2 hrs. Circ and tagged fish and latched onto same at 3535. Circ slowly through fish and cond mud. Worked 4 stds out of hole and free pipe. Now pulling out w/no drag.
Mud: (.520) 10 x 75 x 4.3 (2% oil)

MAY 24 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

5/25: 9957/83/57/0. Going in hole, checking tool jts. Pulled out slowly w/fish. Laid down 16 jts (513') bent DP from interval 8211-8725. Ran in hole and laid down total of 56 jts.

Mud: (.520) 10.0 x 75 x 4.3 (2% oil)

5/26: 9957/83/58/0. Washing and reaming at 8370. finished running in hole, checking every tool jt. Laid down total of 63 jts bent or damaged DP. Reamed from 8250-8370 - torque high. Reamed through several times to get hole stable.

Mud: (.536) 10.3 x 57 x 3.4 (2% oil)

5/27: 9957/83/59/0. Reaming at 8628. Reamed from 8370-8628, getting large amt of brn-reddish shale over shaker w/some reddish-brn siltstone.

Mud: (.530) 10.2 x 46 x 4.0 (3% oil)

5/28: 9957/83/60/0. Reaming hard at 9493. Reamed hard from 8250± to 8600, washed and reamed from 8600± to 9300±, reamed hard from 9300-9480± and extremely hard from 9480± to 9493.

Mud: (.520) 10.0 x 46 x 4.0 (3% oil)

MAY 28 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/61/0. Reaming at 9490. Reamed at 9493 4-1/2 hrs. Made SLM out of hole: 9500' = 9482.07' - corrected reamed depths -18'. Ran to 8550 and filled DP until returns obtained. Reamed bridges from 8636-8838. Ran to 9482 and reamed very tight spot from 9482-9490.

Mud: (.525) 10.1 x 90 x 3.0

MAY 29 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'

9957/83/62/0. Tripping in w/new bit. Reamed from 9490 to 9609, reaming 5-1/2 hrs from 9555-9560.

Pmpd slug and tripped out w/no tight spots.

Mud: (.525) 10.1+ x 76 x 3.0 (3% oil)

MAY 30 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/63/0. Hung up at 9694 - WO spotting fluid. Tripped in to 8000' and broke circ. Filled DP. Finished running to btm, hitting no bridges. Reamed from 9609 to 9694 - stuck at 9694. Can circ but cannot rotate or work pipe.

Mud: (.530) 10.2 x 68 x 3.6 (3% oil)

MAY 31 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6/1: 9957/83/64/0. Working stuck pipe. Circ and worked stuck pipe at 9694 8-1/2 hrs while WO Hal. Mixed 57-bbl pill of diesel, barite, wtr and SF-100 and sptd 25 bbls. Worked stuck pipe and staged spotting fluid at 1 B/H w/zero to 600 psi.

Mud: (.530) 10.2 x 69 x 3.9 (3% oil)

6/2: 9957/83/65/0. Prep to run Dialog freepoint. Worked stuck pipe and staged spotting fluid SF-100 at 1 B/H at zero to 600 psi, displacing total of 55 bbls. Circ and cond hole and mud.

Mud: (.530) 10.2 x 69 x 3.8 (5% oil)

6/3: 9957/83/66/0. Prep to back off string below key seat wiper. Removed goose neck. RU Dialog and ran freepoint indicator. Pipe or DC's stuck at 9034 (WL measurement) - 1st collar below key seat wiper. Circ and cond mud 5-3/4 hrs and worked DP while WO Dialog stuck pipe logging tool. RU and ran Dialog tool. Tool indicated 9046-9052 interval 70-80% stuck, 9052-9236 interval 20-50% stuck w/remainder of DC string free except 10-15' section above bit. Circ and cond mud. Removed goose neck and rotary hose, prep to back off.

Mud: (.530) 10.2 x 71 x 3.6 (5% oil)

JUN 3 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/67/0. Rerunning freepoint indicator. Backed off at 9004. Rec'd all DP and key seat wiper. Left 22- 7" DC's in hole. Picked up fishing tools and screwed into fish. Broke circ and circ and jarred on fish - jars failed. Circ 2 hrs to cln hole. RU Dialog to rerun freepoint indicator.

Mud: (.530) 10.2 x 74 x 3.4 (5% oil)

JUN 4 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg at 3202'

9957/83/68/0. Prep to spot Black Magic. Dialog reran freepoint. Worked through and knocked out obstruction in HWDP. Circ and cond mud 16 hrs while WO Black Magic.

Mud: (.530) 10.2 x 76 x 3.5 (4% oil)

JUN 5 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/69/0. Tripping in hole w/Dailey jars. Circ and cond mud 2-1/2 hrs. Sptd 100 bbls Black Magic w/ 5.5#/bbl SA-11 additive. Displaced w/112 bbls. Worked stuck pipe and reran freepoint. Worked pipe every 30 min and let Black Magic soak. Worked fish loose at 6:30 PM. Tripped out w/fish, laying down 6 jts HWDP (1 jt badly bent, 2 jts sli bent and 3 jts less bent), 10- 7" DC's and fishing tools.

Mud: (.530) 10.2 x 69 x 3.4 (4% oil)

JUN 6 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/70/0. Tripping in w/bit and jk basket.
Ran Dailey jars to 2413, hitting obstruction. Circ
on bridge and tripped out. KU Dialog and ran log in
9-5/8" csg to 2416. Tripped in w/DP openended and
circ down to 2439. Pulled 1 std DP. Dialog ran
1-5/8" OD magnetic collar locator through DP. Detected
9-5/8" collars at 2422, 2384, and 2344 (4' deep by csg
tally). Set on bridge at 2439 and circ. Tripped out
and WO Schl. Ran IES to 2438. Log indicated 9-5/8"
csg below collar at 2422. Picked up jk basket and
started in hole.

Mud: (.530) 10.2 x 69 x 3.4 (4% oil)

JUN 7 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6/8: 9957/83/71/0. Reaming at 9400. Tripped in to
2424 and washed and reamed from 2424-2536. Circ hole
cln. Tripped in to 3426 tagging nothing. Pulled out
w/no drag. Logged 9-5/8" csg from 3410 to 2000'. IES
indicates damaged csg from 2510 to 2412. Tripped to
8560 and broke circ. Circ and cond mud 1-1/4 hrs.
Tripped to 9030 and 9313 and circ at each depth. Reamed
from 9320-9400.

Mud: (.530) 10.2 x 75 x 3.4 (7% oil)

6/9: 9957/83/72/0. Reaming. Reamed from 9400-9498.
Logged 9-5/8" csg w/Dialog csg profile caliper log.

Mud: (.530) 10.2 x 78 x 3.3 (6% oil)

6/10: 9957/83/73/0. Pulling out for new bit. Finished
running in w/new bit. Changed out worn DP rubbers.
Reamed from 9483-9639, reaming 7 hrs from 9609-9639.
Interval 9625-9639 still not clean. Reamed 9550-9560 in
4 hrs.

Mud: (.530) 10.2 x 72 x 3.2 (6% oil)

JUN 10 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/74/0. Reaming at 9800. Finished round tripping.
Filled DP at 8000'. Ran in to 9630± smoothly. Reamed
from 9639 to 9800.

Mud: (.530) 10.2 x 70 x 4.6 (4% oil)

JUN 11 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/75/0. Tripping in w/bit. Reamed from 9800-
9910. Changed out worn DP rubbers.
(.530) 10.2 x 68 x 3.6 (5% oil)

JUN 12 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/76/0. Unloading monel DC. Tripped in w/bit
and circ and cond mud 1-1/2 hrs. Reamed from 9910-9957
and cond mud and circ hole cln.

Mud: (.530) 10.2 x 104 x 3.8 (5% oil)

JUN 13 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

9957/83/77/0. Inspecting DC's. Tripped in w/monel DC. Circ at 8000'. Finished tripping in hole taking 10-15,000# wt at 9100, 1907 and 9110. Circ and cond hole at 9957 - had 6' of fill. Dropped Sperry-Sun magnetic multishot, taking 31 stations from 9938-9874, 62 stations from 9874-8033 and 186 stations from 8033-3230. Laid down monel DC and picked up BHA. Made magnetic particle inspection of BHA, DC and HWDP.
Mud: (.530) 10.2 x 100 x 3.9 (5% oil)

JUN 14 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6/15: 10,001/83/78/44. Drilling. Finished magnetic particle inspection of DC, HWDP and kelly. Tripped in breaking circ at 8000'. Hit bridge at 8657. Hit bridge at 8724. Finished tripping in slowly. Washed and reamed from 9920-9957 (8' of fill). Drld 5-1/2 hrs. Washed and reamed from 9957-9987. Cld hole to make connection. Background gas: 12 units.
Mud: (.530) 10.2 x 72 x 4.2 (6% oil)

6/16: 10,012/83/79/11. Drilling. Turned pins in reamer. Tripped in to 8200' and broke circ. Finished in hole and washed and reamed from 9960-9987 and from 9987-10,004. Tripped for new bit at 10,004. Background gas: 10 units.
Mud: (.535) 10.3 x 58 x 3.3 (4% oil)

6/17: 10,103/83/80/91. Drilling. Background gas: 12 units.
Mud: (.525) 10.1 x 95 x 2.6 (5% oil)

JUN 17 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,160/83/81/57. Drilling. Made 15-std short trip, dragging first five stds, five stds free, four stds spotted and last std free. Washed and reamed from 10,080-10,111. Reamed and washed at 10,113 for connection. Circ samples from 10,133-13,139. Drlg break from 6-8 M/F. Background gas: 12 units.
Mud: (.525) 10.1 x 83 x 2.8 (5+% oil)

JUN 18 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,228/83/82/68. Drilling. Made 16-std short trip. Reamed and washed from 10,160-10,167.
Mud: (.530) 10.2 x 93 x 2.9 (6% oil)

JUN 19 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,254/83/83/26. Drilling. Dev: 12-1/2 deg at 10,240. Slugged pipe and round tripped at 10,250, changing bit. Redressed btm hole reamer, broke circ at 8000' and reamed and washed from 10,212-10,250.
Mud: (.530) 10.2+ x 135 x 2.5 (6% oil)

JUN 20 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,346/83/84/92. Drilling.
Mud: (.530) 10.2 x 91 x 2.7 (6% oil)

JUN 21 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6/22: 10,420/83/85/74. Drilling. Background gas:
16 units.
Mud: (.535) 10.3 x 105 x 2.8 (6% oil)
6/23: 10,454/83/86/34. Drilling. Dev: 13 deg at
10,430. Tripped for bit at 10,437, sli drag 1st five
stds off btm. Hit bridge at 9857 - set down w/20,000#.
Broke circ at 8000' and washed and reamed from 10,360-
10,432 - 5' of fill to 10,437. Background gas: 18 units.
Trip gas: 22 units.
Mud: (.530) 10.2+ x 106 x 2.5 (6% oil)
6/24: 10,553/83/87/99. Drilling. Background gas: 14
units.
Mud: (.535) 10.3 x 93 x 2.3 (6% oil) JUN 24 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,665/83/88/112. Tripping for bit. Worked pipe out
from 10,165-10,070 and 10,008-9975. Background gas:
14 units.
Mud: (.530) 10.2 x 84 x 2.3 (6% oil) JUN 25 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,665/83/89/0. Reaming. Hit bridge @ 9935.
Reamed and washed to 10,337. Open from 10,337
to 10,529.
Mud: (.530) 10.2 x 118 x 2.5 (6% oil) JUN 26 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,775/83/90/110. Drilling. Finished washing and
reaming to btm. Background gas: 14 units.
Mud: (.530) 10.2 x 115 x 2.9 (6% oil) JUN 27 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

10,854/83/91/79. Drilling. Made 15-std short trip
at 10,785 w/no fill. Background gas: 14 units.
Mud: (.530) 10.2 x 90 x 2.8 (6% oil)

JUN 28 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

6/29: 10,880/83/92/26. Drilling. Dev: 14-1/2 deg at
10,830. Slugged pipe and chained out 25 stds at 10,858.
Cld and calipered reamers and stab and tripped in,
breaking circ at 8000'. Washed and reamed from 10,843-
10,858.
Mud: (.530) 10.2 x 79 x 2.9 (6% oil)
6/30: 10,975/83/93/95. Drilling.
Mud: (.535) 10.3 x 11.5 x 3.3 (5% oil)
7/1: 11,048/83/94/73. Drilling. Washed and reamed from
10,969-10,975. Short tripped 8 stds from 10,985-9275 w/
15,000# drag on 5th std, 10,000# drag on 6th, 7th and 8th
stds, 25,000# drag on 14th std, 5000-8000# drag on 15th
std. Drag points spotted 9th std. Set down w/10,000#
and worked through OK (had 6' of fill on btm).
Mud: (.530) 10.2+ x 100 x 3.2 (5% oil) JUL 1 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,117/83/95/69. Tripping for bit. Made short trip at 11,058 w/sptd drag on 1st stand (10,000#), 2nd stand (25,000#) and 10th stand (15,000#). Had 10' of fill. Pmpd pill at 11,093. Pulled out of hole w/sptd drag on 1st stand (10,000#), 6th stand (25,000#) and 10th stand (10,000#). Drlg breaks as follows: 11,110-11,116 and 11,094-11,102 w/rate from 5 M/F to 12 M/F. Background gas: 20 units.

Mud: (.535) 10.3+ x 109 x 3.4 (6% oil)

JUL 2 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,188/83/96/71. Drilling. Dev: 14 deg @ 11,093. Finished round tripping for bit, hitting 30' of fill at btm. Broke circ at 8200. Washed and reamed from 11,087-11,117.

Mud: (.530) 10.2+ x 127 x 3.1 (7% oil)

JUL 3 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7/4: 11,234/83/97/46. Pulling out for logs. Made 33-std short trip from 11,234-8100' w/some drag. Circ for logs 6 hrs. Background gas: 16 units.

Mud: (.530) 10.2+ x 129 x 2.7 (7% oil)

7/5: 11,234/83/98/0. Logging. Made SLM out of hole: 11,234 = 11,238 (no correction made). RU Schl and ran DIL to 11,236, BHC and CNL-FDC.

Mud: (.530) 10.2+ x 129 x 2.7 (7% oil)

JUL 5 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7/6: 11,234/83/99/0. Reaming at 10,375. Ran Dipmeter - had trouble getting in hole from 8600-10,204. Worked through 10,204 in 1-1/2 hrs. Hole deviation at 10,204 = 12 deg. Logged Dipmeter from 10,100 out of hole. Ran in w/BHA and broke circ at 5000', 6850', and 8000' (30 min each depth). Reamed and washed from 10,200-10,375 in 5-1/2 hrs.

Mud: (.530) 10.2 x 181 x 2.8 (7% oil)

7/7: 11,234/83/100/0. Reaming and washing at 11,060. Down 3 hrs repairing rotary clutch.

Mud: (.530) 10.2 x 123 x 3 (6% oil)

7/8: 11,234/83/101/0. Reaming at 11,090. Down 12 hrs replacing clutch diaphragm. Reamed and washed from 11,060-11,090.

Mud: (.535) 10.3 x 132 x 3 (7% oil)

JUL 8 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/102/0. Short tripping. Reamed from 11,090-11,234. Circ and cond hole 3-1/2 hrs. Short tripped and slow chained out 33 stds hitting tight spots and taking wt on certain stds. Reamed 20' to btm and circ and cond hole 4 hrs. Short tripped and chained out 36 stds hitting tight spots.

Mud: (.535) 10.3 x 121 x 2.5 (7% oil)

JUL 9 - 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/103/0. Tripping in w/new bit. Finished short tripping. Washed and reamed 15' of fill. Circ and cond hole 4-1/2 hrs.. RU Schl and ran Dipmeter hitting bridge at 8630. Worked tool to 8648 and tool started dragging. Pulled out and RD Schl. Checked and calipered BHA and tripped in hole, breaking circ at 8000'. Worked through bridge at 8630. JUL 10 1974
Mud: (.530) 10.2 x 120 x 3 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/104/0. Laying down DP. Finished tripping in w/new bit, hitting 15' of fill. Circ and cond hole 4-1/2 hrs. Short tripped 34 stds - no fill. Circ and cond hole 4-1/4 hrs. Slugged pipe, dropped survey and pulled 36 stds, laying down same, prep to run 7" csg. JUL 11 1974
Mud: (.530) 10.2 x 131 x 2.8 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/105/0. Running csg. Dev: 14 deg at 11,230. Finished laying down DP and DC's. Pulled rubber off DP and pulled wear sleeve. Circ at 8000' 1-1/4 hrs. RU to run csg. JUL 12 1974
Mud: (.530) 10.2 x 131 x 2.8 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7/13: 11,234/83/105/0. WOC. Ran and cemented 272 jts 7" csg w/1800 sx 140 POZ followed w/200 sx Class "H" w/35% silica flour, .3% HR-7. FC @ 11,116, shoe @ 11,231.
7/14: 11,234/83/107/0. WOC.
7/15: 11,234/83/108/0. Picking up DC's. Checked lines. Repaired line on choke manifold. JUL 15 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/109/0. Circ and cond mud. Finished picking up DC's and DP and ran in hole, circ and cond mud 3-1/2 hrs. Top of cmt at 9609. JUL 16 1974
Mud: (.488) 9.4 x 34 x 8.0 (2% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/110/0. Tripping out to run Gyro survey and csg scraper. Drld cmt from 10,631 (corrected top) to 11,217 and circ out 2 hrs. Strapped out DP. Tripped in w/csg scraper and circ out. JUL 17 1974
Mud: (.488) 9.4 x 36 x 3.8 (2% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,234/83/111/0. Running Gyro Survey. Finished tripping out w/csg scraper. Ran Gyro Survey w/50' stations to 11,217. Ran Dialog csg caliper to 11,217. RU Schl and ran CBL - log indicated top of cmt at 8336 w/good bonding from 9940-TD. RU Dialog to rerun Gyro survey. JUL 18 1974
Mud: (.478) 9.2 x 40 x 2.7 (7% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

11,245/83/112/11. Drilling. Finished running Gyro Survey - made two runs (film jammed on 1st run). Tripped in w/BHA; breaking circ at 11,215. Press tested 7" csg, lower pipe, rams and flanges below pipe rams to 3000 psi, OK. Drld cmt and float guide shoe. Background gas: 24 units.
Mud: (.780) 9.2 x 40 x 3.3 (6% oil)

JUL 19 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
9-5/8" csg @ 3202'

7/20: 11,319/83/113/74. Tripping for dia bit.
Mud: (.478) 9.2 x 36 x 3.3 (4% oil)
7/21: 11,356/83/114/37. Tripping to locate hole in DP. Dev: 14 deg at 11,307. Washed and reamed from 11,234-11,319, hitting bridge at 11,234. Circ 30 min.
Mud: (.478) 9.2 x 34 x 3.3 (5% oil)
7/22: 11,411/83/115/55. Drilling. Tripped out w/bit, checking DP. Found washed out hole in shank of dia bit (in bit breaker slot). Tripped in and washed and reamed from 11,234-11,356. Circ off btm and resumed drlg.
Mud: (.478) 9.2 x 35 x 3.2 (4% oil)

JUL 22 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

11,500/83/116/89. Drilling. Circ 15 min for short trip at 11,436. Circ tight hole at 11,386 for 45 min. Circ and cond mud 5-1/4 hrs. Background gas: 25 units.
Mud: (.499) 9.6 x 40 x 3.3 (5% oil)

JUL 23 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

11,600/83/117/100. Tripping out for core bbl. Circ for short trip at 11,527. Raised mud wt from 9.6 to 10.0 ppg. Circ for short trip at 11,587. Short tripped into csg, dragging to 15,000# several spots - did not take any wt on trip in. Had 8' of fill. Circ and slugged pipe and tripped out w/no drag.
Mud: (.525) 10.1 x 38 x 3.3 (5% oil)

JUL 24 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

11,630/83/118/30. Reaming at 11,592. Tripped in w/core bbl - reamed 45' to btm, 5' of fill. Circ and dropped ball. Tripped out w/core bbl. Core #1: 11,600-11,630, cut and rec 30'. Ran in w/dia bit. Washed and reamed from 11,555-11,592.
Mud: (.525) 10.1 x 37 x 3.1 (6% oil)

JUL 25 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

11,754/83/119/124. Drilling. Washed and reamed from 11,592-11,630. Background gas: 22 units. Trip gas: 26 units.
Mud: (.540) 10.4 x 39 x 3.2 (6% oil)

JUL 26 1974

Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	<p>7/27: 11,839/83/120/85. Drilling. Circ for short trip at 11,768. Worked through tight spot at 11,678. Washed back to btm. Repaired pumps 2 hrs. Background gas: 22 units. Mud: (.535) 10.3+ x 50 x 2.9 (5% oil)</p> <p>7/28: 11,941/83/121/102. Drilling. Circ and cond hole for short trip at 11,857. Hit tight spots at 11,815 and 11,538. Washed and reamed tight spots at 11,788 and 11,815 - 4' of fill. Background gas: 22 units. Mud: (.540) 10.4 x 52 x 3.5 (6% oil)</p> <p>7/29: 12,040/83/122/99. Drilling. Circ and cond hole for short trip at 11,957. Hit tight spots at 11,740 and 11,730. Tripped in w/no fill. Hit tight spot from 12,015-12,010 while starting connection at 12,025 - worked by boulder. Background gas: 30 units. Mud: (.535) 10.3 x 42 x 3.2 (4% oil) JUL 29 1974</p>
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	<p>12,149/83/123/109. Drilling. Short tripped at 12,051 with tight spots at 12,013, 11,923 and 11,890. Washed and reamed from 11,995-12,051 (10' of fill). Background gas: 22-28 units. Mud: (.540) 10.4 x 45 x 3.4 (5% oil) JUL 30 1974</p>
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	<p>12,179/83/124/30. Drilling. Dev: 16 deg at 12,140. Slugged pipe and tripped out hitting tight spots at 12,047, 12,030, 11,717, 11,507. Magnafluxed DC's, BHA, kelly and subs. Tripped in w/new bit at 12,160 and washed and reamed from 12,050-12,160. Mud: (.540) 10.4 x 49 x 2.9 (4%+ oil) JUL 31 1974</p>
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	<p>12,270/83/125/91. Drilling. Changed out torque wheel. Mud: (.540) 10.4 x 52 x 3.6 (6% oil) AUG - 1 1974</p>
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	<p>12,343/83/126/73. Drilling. Short tripped at 12,279 w/tight spots at 12,110, 12,025, 11,990. Washed through bridge at 11,910 on trip in. Washed and reamed 30' to btm - 5' of fill. While drlg at 12,318, worked up through spots from 12,308-12,303. Drld 1-1/4 hrs and worked up through tight spots from 12,322-12,307. Background gas: 24 units. Mud: (.546) 10.5 x 56 x 3.0 (6% oil) AUG - 2 1974</p>
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	<p>8/3: 12,395/83/127/52. Laying down 3-1/2" DP. Reamed tight spots from 12,364-12,389. Circ to cln hole and sptd pill. Tripped in w/DP and started laying down DP. Mud: (.540) 10.4 x 50 x 2.7 (5% oil)</p> <p>8/4: 12,402/83/128/7. Drilling. Dev: 16 deg at 12,390. Finished laying down downgraded 3-1/2" DP and ran in w/upgraded 3-1/2" DP to 12,270. Reamed and washed from 12,270-12,395. Mud: (.546) 10.5 x 52 x 2.8 (4% oil)</p> <p>8/5: 12,480/83/129/78. Drilling. Background gas: 20 units. Mud: (.540) 10.4 x 55 x 2.6 (5% oil) AUG - 5 1974</p>

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

12,503/83/130/23. Tripping in w/new bit. Made 6-std short trip from 12,489-11,890 - 10-15,000# drag at 12,180, 12,070, and 12,040. Wiped drag spots - no setdown wt back to 12,479. Reamed and washed from 12,479-12,489. Circ to cln.bit at 12,500 and circ to spot pill for trip out for new bit.

Mud: (.540) 10.4 x 52 x 2.6 (4% oil)

AUG - 6 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

12,542/83/131/39. Drilling. Washed and reamed from 12,390-12,503 - 5' of fill. Background gas: 20 units.

Mud: (.540) 10.4 x 52 x 2.6 (5% oil)

AUG - 7 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

12,559/83/132/17. Tripping in w/core bbl. Dev: 16 deg at 12,520. Short trip into csg at 12,553 - 6 tight spots. Pulled 10-15,000 - 4 spots took 10-15,000. Tripped out at 12,559 to pick up core bbl - 3 spots - pulled 10-15,000. Picked up core bbl and spaced out inner bbl.

Mud: (.535) 10.3 x 46 x 3.0 (5% oil)

AUG - 8 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

12,609/83/133/50. Coring. Washed and reamed from 12,510-12,559 - 2' of fill. Background gas: 18-22 units.

Mud: (.540) 10.4 x 51 x 3.0 (5% oil)

AUG - 9 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

8/10: 12,649/83/134/40. Drilling. While tripping out w/core bbl, four spots pulled 10-15,000#. Washed and reamed from 12,495-12,614. Background gas: 18 units. Core #2: 12,559-12,614 - cut and rec 55'.

Mud: (.540) 10.4 x 49 x 3.0 (5% oil)

8/11: 12,733/83/135/84. Drilling. Background gas: 25 units.

Mud: (.530) 10.2+ x 52 x 3.1 (5% oil)

8/12: 12,769/83/136/36. Tripping. Dev: 17 deg at 12,730. Made 5 std short trip at 12,743. Three spots pulled 10-15,000#. Tripped in w/one spot taking 15,000#. Washed and reamed from 12,719-12,743 (6' of fill).

Slugged pipe and tripped for bit w/five spots pulling 5-20,000#.

Mud: (.551) 10.6 x 63 x 3.3 (4+Z oil)

AUG 12 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

12,817/83/137/48. Drilling. Changed out six bent jts of DP. Washed and reamed from 12,680-12,769. Background gas: 25 units.

Mud: (.546) 10.5+ x 54 x 3.5 (4+Z oil)

AUG 13 1974

Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	12,875/83/138/58. Drilling. Made short trip - no fill. Had 25,000# drag on 3rd, 4th and 15,000# on 6th std going back to btm. Background gas: 25 units. Mud: (.551) 10.6 x 57 x 3.0 (4% oil)	AUG 14 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	12,900/83/139/25. Drilling. Dev: 17 deg at 12,895. Tripped for bit at 12,899. Washed 96' to btm - no fill. Max drag of 15,000# on 5th std. Laid down one DC w/bad box. Mud: (.551) 10.6 x 60 x 3.6 (5% oil)	AUG 15 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	12,938/83/140/38. Repairing pump. Down 5-3/4 hrs for pump repairs. Mud: (.540) 10.4 x 55 x 3.3 (4% oil)	AUG 16 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	8/17: 12,971/83/141/33. Drilling. Down 6-1/2 hrs for pump repairs Mud: (.546) 10.5 x 57 x 2.8 (5% oil) 8/18: 12,974/83/142/3. Drilling. Tripped and magna- fluxed drlg assembly, laying down three 4-3/4" DC's w/ cracked pins. Reamed and washed. Mud: (.547) 10.5+ x 60 x 2.8 (4%+ oil) 8/19: 13,022/83/143/48. Tripping for bit. Dev: 17 deg at 12,955. Mud: (.551) 10.6 x 53 x 2.8 (5% oil)	AUG 19 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	13,041/83/144/19. Tripping. Finished out w/bit, pmpd pill and worked tight spot at 13,026. Mud: (.551) 10.6 x 52 x 2.7 (5% oil)	AUG 20 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	13,069/83/145/28. Drilling. Tripped in w/new bit, reaming and washing 56' to btm. Mud: (.551) 10.6 x 52 x 2.6 (5% oil)	AUG 21 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	13,108/83/146/39. Drilling. Mud: (.551) 10.6 x 54 x 2.5 (6% oil)	AUG 22 1974
Shell-Santa Fe #2 (WC) Loffland #8 14,000' Entrada Test KB 5216', GL 5194' 7" csg @ 11,231'	13,131/83/147/23. Coring. Dev: 18 deg at 13,100. Mud: (.550) x 10.6 x 52 x 2.5 (6% oil)	AUG 23 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

8/24: 13,162/83/148/31. Washing to btm. Core jammed.
Washed 75' - no fill. Core #3: 13,108-13,162, cut & rec 54'.
Mud: (.551) 10.6 x 56 x 2.5 (5% oil)
8/25: 13,235/88/149/73. Drilling. Finished washing
to btm
Mud: (.551) 10.6 x 48 x 2.7 (4%+ oil)
8/26: 13,278/88/150/43. Drilling. Dev: 18 deg at
13,240. Changed bit at 13,252. Background gas: 22
units. Trip gas: 30 units.
Mud: (.551) 10.6+ x 60 x 2.8 (5% oil) AUG 26 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,315/88/151/37. Tripping for bit and checking DC's.
Tripped out and magnafluxed DC's, lower end of kelly
and subs. AUG 27 1974
Mud: (.551) 10.6 x 60 x 2.7 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,373/88/152/58. Drilling. Finished magnafluxing
DC's and stab. Tripped in - swivel leaking. Tightened
packing - still leaked. Pulled 5 stds, packed swivel,
broke circ and ran 5 stds in-hole. Washed 35' to btm.
Background gas: 20 units. Trip gas: 25 units. AUG 28 1974
Mud: (.551) 10.6 x 54 x 2.7 (5% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,443/88/153/70. Drilling. Background gas: 20 units.
Mud: (.556) 10.7 x 59 x 2.5 (4% oil) AUG 29 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,522/88/154/79. Drilling. Short tripped at 13,450.
Background gas: 20 units. AUG 30 1974
Mud: (.551) 10.6 x 57 x 2.6 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

8/31: 13,559/88/155/37. Washing and reaming at 13,550.
Dev: 21+ degrees at 13,550. Short tripped at 13,532
hitting three tight spots - no fill. Drld 9 hrs, slugged
pipe and tripped out. Changed bit and tripped in, hitting
several tight spots. Washed and reamed from 13,470-550.
Mud: (.556) 10.7 x 58 x 2.5 (5% oil)
9/1: 13,613/88/156/54. Drilling. Washed and reamed
from 13,550-13,559.
Mud: (.556) 10.7 x 54 x 2.7 (6% oil)
9/2: 13,663/88/157/50. Drilling.
Mud: (.556) 10.7 x 55 x 2.8 (5% oil)
9/3: 13,732/88/158/69. Drilling. Made 6-std short
trip - no fill.
Mud: (.551) 10.6 x 55 x 2.7 (5% oil) SEP - 3 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,775/88/159/43. Tripping in w/new bit. Dev: 20 deg
at 13,750. Tripped for bit and changed out 16 jts DP.
Pulled bit had cored out, 1" in center.
Mud: (.556) 10.7 x 59 x 2.6 (4% oil) SEP - 4 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,844/88/160/69. Drilling. Finished tripping in w/new
bit, washing to btm.
Mud: (.546) 10.5+ x 56 x 2.8 (6% oil) SEP - 5 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

13,894/88/161/50. Drilling. Tripped for bit at 13,865.
Reamed and washed 40' - 2' of fill.
Mud: (.556) 10.7 x 65 x 2.9 (6% oil) SEP - 6 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5216', GL 5194'
7" csg @ 11,231'

9/7: 13,975/83/162/81. Tripping for core bbl.
Dev: 19 degrees at 13,965. Checked for flow at
13,913 and 13,929 - no flow. Background gas: 18 units.
Mud: (.551) x 10.6 x 65 x 2.7 (6% oil)
9/8: 14,011/83/163/36. Coring. Dev: 19 degrees
at 13,965. Finished tripping out, picked up core
bbl. Washed and reamed 20' to bottom.
Mud: (.551) x 10.6 x 54 x 3.2 (6% oil)
9/9: 14,011/83/164/0. Prep to log. Tripped out
w/core. Cut and rec. 36.5 ft. Reamed and washed
60' to bottom. Background gas: 15-18 units. Trip
gas: 22 units.
Mud: (.551) x 10.6 x 65 x 2.7 (6% oil) SEP - 9 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,011/83/165/0. Prep to log. Circ & conditioned
hole. Made short trip, tight spots on 13, 22, 23 &
27th stds out. Made three trips from 12,200-11,400
working up & down through tight spots until clear.
Mud: (.562) x 10.7 x 58 x 2.8 (6% oil) SEP 10 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5126, GL 5194'
7" csg @ 11,231'

14,011/83/166/0. Running bit prep to drill. Ran Schl.
logs as follows: Run #1 DIL/SP to bottom - OK. Run #2
BHC/GR/Cal. to within 10' of Schl. TD. Run #3 7'-9'
Sonic/GR/Cal., had hole problems, could not pass 13,960-
13,980 interval. Run #4 5'-7' Sonic/GR/Cal., could not
get to bottom, logged from 13,350. GR not working.
Sch. TD 14,020, csg 11,233, maximum recorded temp.
322 deg F.
Mud: (.562) 10.7 x 57 x 2.8 (6% oil) SEP 11 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5126, GL 5194'
7" csg @ 11,231'

14,031/83/167/20. Drilling. Finished tripping in hole. Broke circ at 9200, 10,960, 12,900. Reamed out tight spots at 12,994, 13,080, 13,180, 13,240-13,310. Washed and reamed from 13,310-14,011. Background gas: 16 units. Mud: (.562) 10.7 x 59 x 2.4 (5% oil) SEP 12 1974

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5126, GL 5194'
7" csg @ 11,231'

14,079/83/168/48. Washing to bottom. Started out of hole, pulled 2 stds, worked through tight spots. Latched on to 3rd std, could not move pipe. Picked up kelly, could not break circ, worked pipe and regained circ. Circ and cond mud on 13,800. Raising vis. SEP 13 1974
Mud: (.556) 10.7 x 24 x 2 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

9/14: 14,095/83/169/16. Running 7" csg caliper. Finished washing to btm. Made short trip up into csg after drlg 3-3/4 hrs. Washed back to btm. Tripped out and RU Dialog to run csg caliper. Mud: (.556) 10.7 x 64 x 1.8 (6% oil)
9/15: 14,121/83/170/26. Drilling. Finished running csg caliper log. Tested BOPE to 5000 psi for 15 min, OK. Tested Hydril to 2500 psi, OK. Tripped in and circ and cond mud at 10,800. Washed and reamed 90' to btm - had 1' of fill.
Mud: (.556) 10.7 x 68 x 2.1 (6% oil)
9/16: 14,200/83/171/79. Drilling. SEP 16 1974
Mud: (.551) 10.6+ x 73 x 2.3 (6% oil)

Shell-Santa Fe #2
(WC) Loffland #8
14,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,266/83/172/66. Drilling. Mud: (.551) 10.6 x 88 x 2.2 (6% oil) SEP 17 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,290/83/173/24. Coring. Reamed and washed hole prior to tripping for core bbl. Mud: (.556) 10.7 x 64 x 2.1 (5% oil) SEP 18 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,302/83/174/12. Cond hole for logs. Tripped out w/ core bbl. Reamed and washed to clean hole from 14,230-14,293. Circ and drld w/light wt 6-1/4 hrs to cond hole for logs. Core #5: 14,272-14,293. Cut and rec 21'. Dev: 18 deg at 14,262. Mud: (.556) 10.7 x 72 x 2.6 (5% oil) SEP 19 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,305/83/175/3. Logging. Circ and cond hole for logs
9-1/2 hrs, making 3'. Made 34-std short trip and tripped
out. RU Schl and started logging. Logger's TD 14,297.
Mud: (.551) 10.6 x 75 x 2.3 (6% oil)

SEP 20 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

9/21: 14,305/83/176/0. Tripping in to cond hole.
Finished logging as follows: DIL/SP to 14,297, Dipmeter
to 14,301, Seismic Reference Survey to 13,930, Proximity
Microlog to 11,231 (failed), and CNL/FDC-GR w/cal to
12,562 (tool sticking).

Mud: (.551) 10.6 x 75 x 2.3 (6% oil)

9/22: 14,305/83/177/0. Logging. Circ at 10,800 and
tripped to 12,920. Broke circ and tripped to 14,245.
Washed and reamed 60' to btm - 4' of fill. Circ and cond
hole and mud 4 hrs. WO Schl for repairs 3-1/4 hrs. Now
rerunning Proximity Microlog and DIL/SP.

Mud: (.556) 10.7 x 65 x 2.3 (6% oil)

9/23: 14,305/83/178/0. Circ and cond hole. WO another
Schl logging truck 5-1/4 hrs. Ran Sonic-GR w/cal - could
not get below 11,335. Tripped in and circ @ 11,040. Ran
in hitting bridge @ 11,412. Broke circ @ 12,920. Washed
and reamed from 14,187-14,305. Circ and cond hole and
mud 1-1/4 hr.

Mud: (.556) 10.7 x 72 x 2/3 (6% oil)

SEP 23 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,305/83/179/0. Cond hole. Circ and cond hole 3 hrs.
Ran Sonic-GR w/cal to 14,196 and CNL-FDC-GR w/cal to
14,231. Repeated w/Diff tool to 11,950. Ran sidewall
core gun in hole - could not get below 11,632. Now
making cond trip.

Mud: (.556) 10.7 x 64 x 2.2 (6% oil)

SEP 24 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,305/83/180/0. Sidewall coring. Circ at 11,200
and broke circ at 13,200. Washed and reamed 60' to
btm. Circ and cond hole 4 hrs for sidewall cores.
Slugged pipe and tripped out. Ran gun #1 in hole
and fired 2 shots - gun failed. Now running gun #2.

Mud: (.556) 10.7 x 75 x 2.3 (6% oil)

SEP 25 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,305/83/181/0. Tripping in. Made five additional
sidewall core runs. Left four catchers in hole.

Mud: (.556) 10.7 x 75 x 2.3 (6% oil)

SEP 26 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

14,305/83/182/0. PB 13,500. Pulling DP to 11,300.
Circ at 10,800 and broke circ at 12,900. Washed
and reamed. Circ and cond hole and mud 4 hrs. Made
SLM out of hole. Tripped in to 14,000' and circ and
cond mud 2-1/2 hrs. Sptd 75 sx Class "B" cmt w/40%
silica flour, 1% CFR-2 and 1% HR-12 from 14,000-13,500.
Plug in place at 5:20 AM, 9/27.

Mud: (.556) 10.7 x 82 x 2.3 (6% oil)

SEP 27 1974

Shell-Santa Fe #2
(WC) Loffland #8
15,000' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

9/28: 14,305/83/183/0. PB 11,000. Laying down csg. Pulled DP to 11,300 and circ 15 min. Sptd 50 sx Class "B" w/40% silica flour, 1% CFR-2 and 1% HR-12 from 11,300-11,000. Pulled wear flange and picked up BOP, hanging same. Removed AP spool and picked up spear. Pulled 7" csg spool. RU Dialog and ran freepoint and cut off csg at 3320. Laid down spear and RU to pull 7" csg.

9/29: 14,305/83/184/0. PB 2981. Circ and cond mud. Finished laying down 77 jts 7" csg. Nippled up drlg nipple and tripped in openended to 3320. Circ and cond hole 2 hrs. Sptd 157 sx Class "B" neat w/btm of plug at 3420. Plug in place at 3 PM, 9/28. WOC 12-1/2 hrs and tripped in tagging top of plug at 2981. Pulled to 2600.

9/30: Well P&A'd. Cleaning mud pits. Circ at 2600' 15 min. Sptd 115 sx Class "B" neat from 2600-2300'. Plug in place at 7 AM, 9/29. Laid down DP and kelly. Nippled down BOP's. Cut off Bradenhead. Set 10' cmt plug at surface. Welded on csg cap and started clng mud pits.

SEP 30 1974

Shell-Santa Fe #2
(WC)
14,305' Entrada Test
KB 5126', GL 5194'
7" csg @ 11,231'

TD 14,305. RDRT. WELL PLUGGED AND ABANDONED.
Finished clng mud pits and started RD. Released rig at 8:00 AM, 9/30/74. Well plugged as follows:

Sx	Interval
75	14,000-13,500
50	11,300-11,000
157	3,420- 2,981
115	2,600- 2,300
10'	plug at sfc

Dry hole marker to be installed.

This was the first of a two-well program to evaluate structural prospects in the Albuquerque Basin.
FINAL REPORT.

OCT -1 1974

CASING AND CEMENTING

Field CACTUS AREA Well Santa Fe #2
Job: 13-3/8 " O.D. Casing ~~XXX~~ Ran to 425 feet (KB) on 3/30, 197 4
Jts. Wt. Grade Thread New Feet From To
9 54.5# K-55 ST&C Yes 324.09 KB 0 CHF 21.88
CHF 345.97
Float Insert 0 0 345.97
2 54.5# K-55 ST&C 78.25 424.22
Halliburton Guide Shoe .78 425.00

Casing Hardware:

Float shoe and collar type Halliburton Insert and Guide Shoe

Centralizer type and product number

Centralizers installed on the following joints 10' above shoe, #2 jt and #4 jt

Other equipment (liner hanger, D.V. collar, etc.)

Cement Volume:

Caliper type Est Caliper volume 295.20 ft³ + excess over caliper

244.14 ft³ + float collar to shoe volume 68.36 ft³ + liner lap

+ cement above liner ft³ = 607.70 ft³ (Total Volume).

Cement:

Preflush—Water 30 bbls, other Volume bbls

First stage, type and additives Class "B" w/2% CaCl₂ and 1/4# Flocele

Weight 15.6 lbs/gal, yield 1.18

ft³/sk, volume 515 sx. Pumpability hours at °F.

Second stage, type and additives

Weight lbs/gal, yield

ft³/sk, volume sx. Pumpability hours at °F.

Cementing Procedure:

Rotate/reciprocate

Displacement rate 5 B/M

Percent returns during job 100

Bumped plug at 1:48 AM/PM with 600 psi. Bled back 1/2 bbls. Hung csg with lbs on slips.

Remarks:

Circ out 28 bbls cmt

Drilling Foreman J. B. Smith

Date 3/30/74

CASING AND CEMENTING

Field Cactus Area (WC) Well Santa Fe #2
 Job: 9-5/8 " O.D. Casing/~~XXXX~~ Ran to 3202 feet (KB) on 4/5, 1974
 Jts. Wt Grade Thread New Feet From To
 : KB CHF 21.88
 77 40# K-55 LT&C Yes 3095.82 CHF 3114.70
 Float Collar (differential fill) 2.30 3117.00
 2 40# K-55 LT&C Yes 82.20 3199.20
 Float shoe (differential fill) 2.80 3202.00

Casing Hardware:

Float shoe and collar type Differential Fill - Howco
 Centralizer type and product number Howco Bow Spring
 Centralizers installed on the following joints 6' above shoe (3196) and top of #1 jt (3156) and
top of #3 jt (3073)
 Other equipment (liner hanger, D.V. collar, etc.) None

Cement Volume:

Caliper type 2 arm . Caliper volume 2850 ft³ + excess over caliper
1015 ft³ + float collar to shoe volume 35 ft³ + liner lap ft³
 + cement above liner ft³ = 3900 ft³ (Total Volume).

Cement:

Preflush—Water 20 bbls, other Volume bbls
 First stage, type and additives Howco "Lite" w/2% CaCl₂ and 1/4#/sk Flocele
 . Weight 12.5 lbs/gal, yield 1.95
 ft³/sk, volume 1750 sx. Pumpability 6.5 hours at 100 °F.
 Second stage, type and additives Neat "B" w/2% CaCl₂
 . Weight 15.6 lbs/gal, yield 1.18
 ft³/sk, volume 425 sx. Pumpability 1.1 hours at 100 °F.

Cementing Procedure:

~~XXXXX~~reciprocate until cement returns were observed
 Displacement rate 8 B/M
 Percent returns during job 100%
 Bumped plug at 2:10 AM/PM with 2000 psi. Bled back 1.5 bbls. Hung csg
 with lbs on slips.

Remarks:

Cemented to sfc. Had full returns w/300 sx (120 bbls) of cnt to sfc. Plug bumped at
237.5 bbls w/a 239 bbl calculated volume. Floats held. Hole averaged 16" caliper
and a 235 sk (Lite) excess was required over calculated volume to reach sfc. Total
excess for this job was 535 sx (Lite) or 45% over caliper. A 25% excess should be
considered on the next job.

Drilling Foreman M. G. Gray
 Date 4/5/74

CASING AND CEMENTING

Field Cactus Area (WC) Well Santa Fe #2
Job: 7" " O.D. Casing/~~XXXX~~ Ran to 11,231 feet (KB) on 7/12, 1974

Jts.	Wt.	Grade	Thread	New	Feet	From	To
					<u>16.36</u>	<u>KB</u>	<u>CHF 19.90</u>
						<u>CHF</u>	<u>19.90</u>

62	26#	S-95	8rd LT&C	Yes	2,630.71	2,650.61
128	26#	N-80	8rd LT&C	New & Used	5,127.05	7,777.66
32	26#	YS-95	8rd LT&C	Yes	1,310.35	9,088.01
13	29#	S-95	8rd ST&C	Yes	588.99	9,677.00
34	29#	S-95	8rd LT&C	Yes	1,438.24	11,115.24
Halliburton Differential Fill FC					1.94	11,117.18
3	29#	S-95	8rd LT&C	Yes	111.38	11,228.56
Casing Hardware: Halliburton Differential Fill Shoe					2.44	11,231.00

Float shoe and collar type _____
Centralizer type and product number Halliburton S-3 7"
Centralizers installed on the following joints 5' above float shoe, 10' below float collar
Other equipment (liner hanger, D.V. collar, etc.) _____

Cement Volume:

Caliper type _____ Caliper volume 1794 ft³ + excess over caliper
606 ft³ + float collar to shoe volume 24 ft³ + liner lap _____ ft³
+ cement above liner _____ ft³ = 2424 ft³ (Total Volume).

Cement:

Preflush-Water 25 bbls, other Mud Flush Volume 25 bbls
First stage, type and additives Pozmix 140
Weight 14.0 lbs/gal, yield 1.18
ft³/sk, volume 1800 sx. Pumpability 4+ hours at 250 °F.
Second stage, type and additives 200 sx Class "H" w/35% Silica Flour w/0.3% HR-7
Weight _____ lbs/gal, yield _____
ft³/sk, volume 200 sx. Pumpability 4+ hours at 250 °F.

Cementing Procedure:

~~Reciprocate~~ While circ mud
Displacement rate 8 to 3 bbls
Percent returns during job 100
~~Reciprocate~~ plug at 2:15 ~~PM~~ with 3500 psi. Bled back 2-1/2 bbls. Hung csg with 265,000 lbs on slips.

Remarks:

Lacked 17 bbls bumping plug. Hole sloughing and cement locked up.

Drilling Foreman J. B. Smith
Date 7/12/74