Case No:
2909

Large
Exhibits

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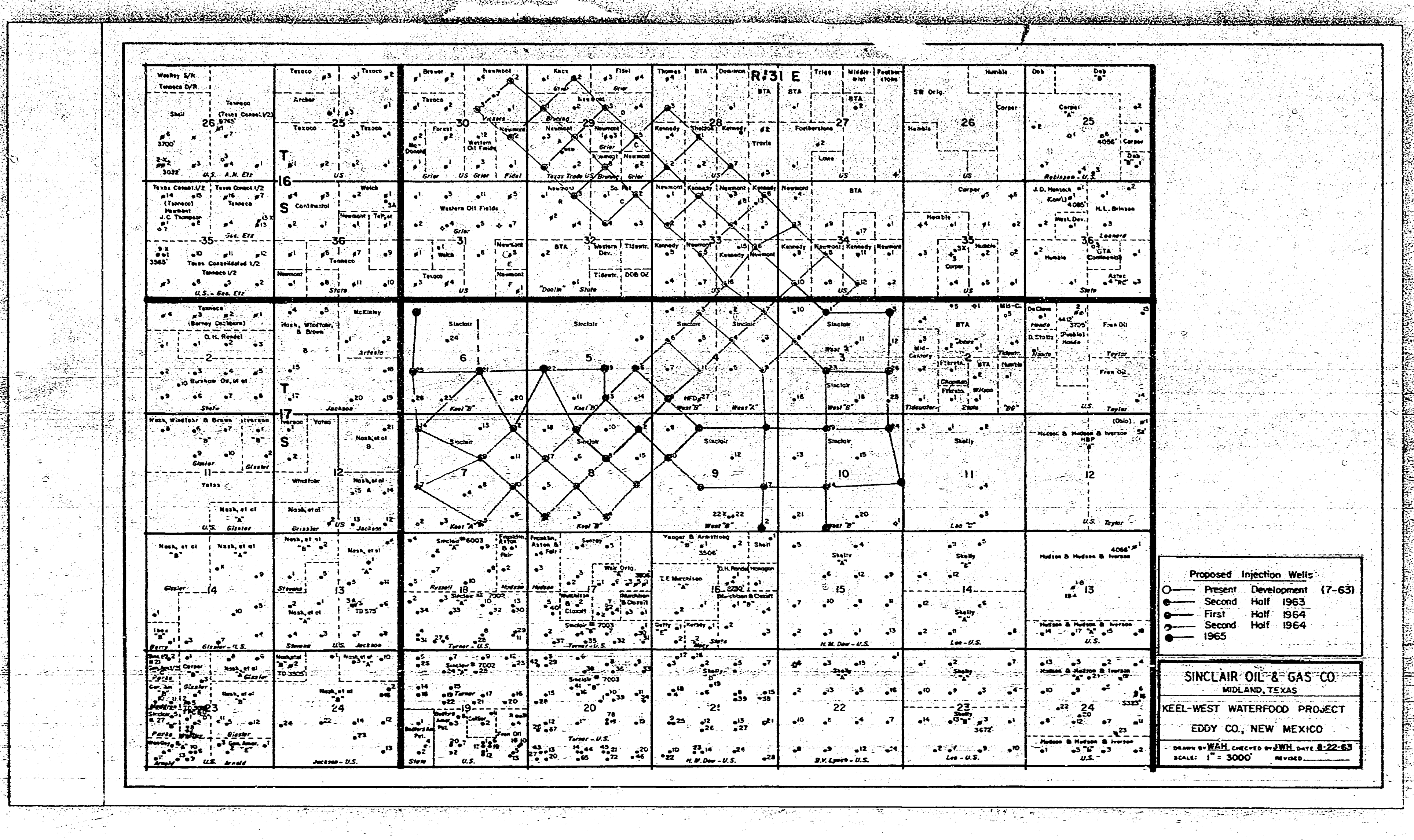
CASE NO:
2909

Large
Exhibits



Proposed Injection Wells

- ○—— Present Development (7-63)
- ●—— Second Half 1963
- ●—— First Half 1964
- ●—— Second Half 1964
- ●—— 1965

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS

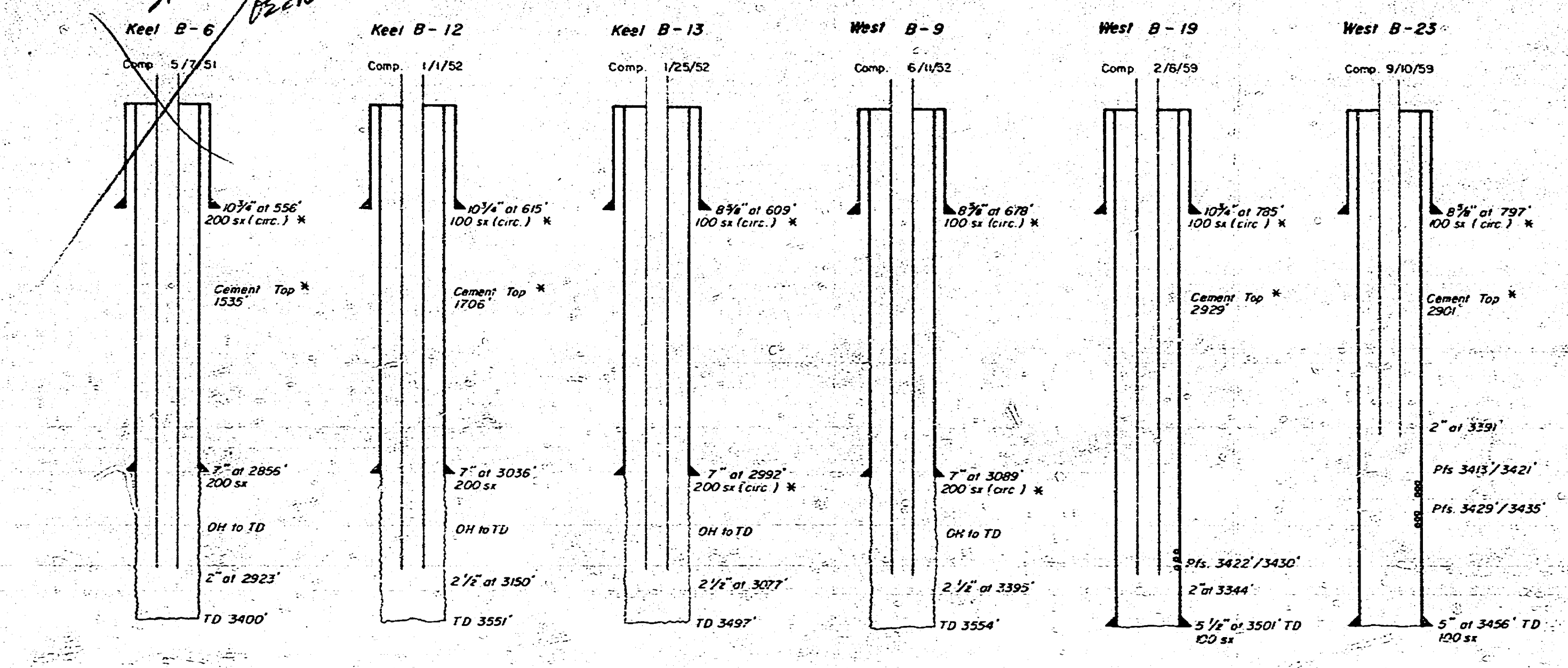
KEEL-WEST WATERFOOD PROJECT

EDDY CO., NEW MEXICO

DRAWN BY WAH CHECKED BY JWH DATE 8-22-63
SCALE: 1" = 3000' REVISED

## SECOND HALF 1963 EXPANSION

incorrect
Should have
BEEN


Keel B-6
Comp. 5/7/51
10¾" at 556'
200 sx (circ.) *
Cement Top *
1535'
7" at 2856'
200 sx
OH to TD
2" at 2923'
TD 3400'
Keel B-12
Comp. 1/1/52
10¾" at 615'
100 sx (circ.) *
Cement Top *
1706'
7" at 3036'
200 sx
OH to TD
2½" at 3150'
TD 3551'
Keel B-13
Comp. 1/25/52
8⅝" at 609'
100 sx (circ.) *
7" at 2992'
200 sx (circ.) *
OH to TD
2½" at 3077'
TD 3497'
West B-9
Comp. 6/11/52
8⅝" at 678'
100 sx (circ.) *
7" at 3089'
200 sx (circ.) *
OH to TD
2½" at 3395'
TD 3554'
West B-19
Comp. 2/6/59
10¾" at 785'
100 sx (circ.) *
Cement Top *
2929'
Pfs. 3422'/3430'
2" at 3344'
5½" at 3501' TD
100 sx
West B-23
Comp. 9/10/59
8⅝" at 797'
100 sx (circ.) *
Cement Top *
2901'
2" at 3391'
Pfs 3413'/3421'
Pfs. 3429'/3435'
5" at 3456' TD
100 sx

Out –
see Ex 2

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS

PROPOSED INJECTION WELLS

*KEEL-WEST WATERFLOOD PROJECT*
*GRAYBURG-JACKSON POOL*
Eddy County, New Mexico

DRAWN BY RJC CHECKED BY RMA DATE 8/22/63
NO SCALE REVISED ____

* Theoretical Fillup

U.N.M.C.P. MICROGRAPHICS
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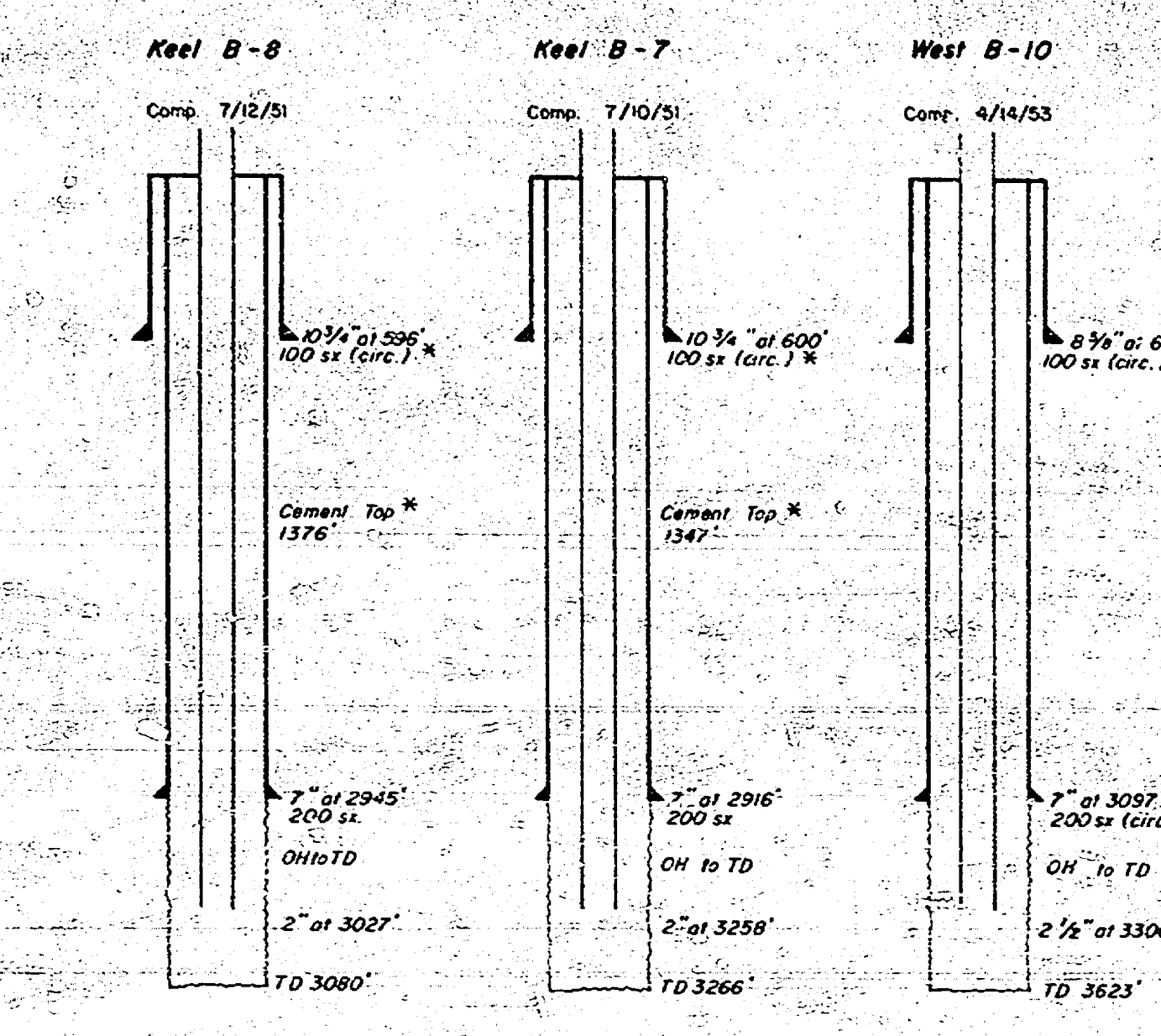
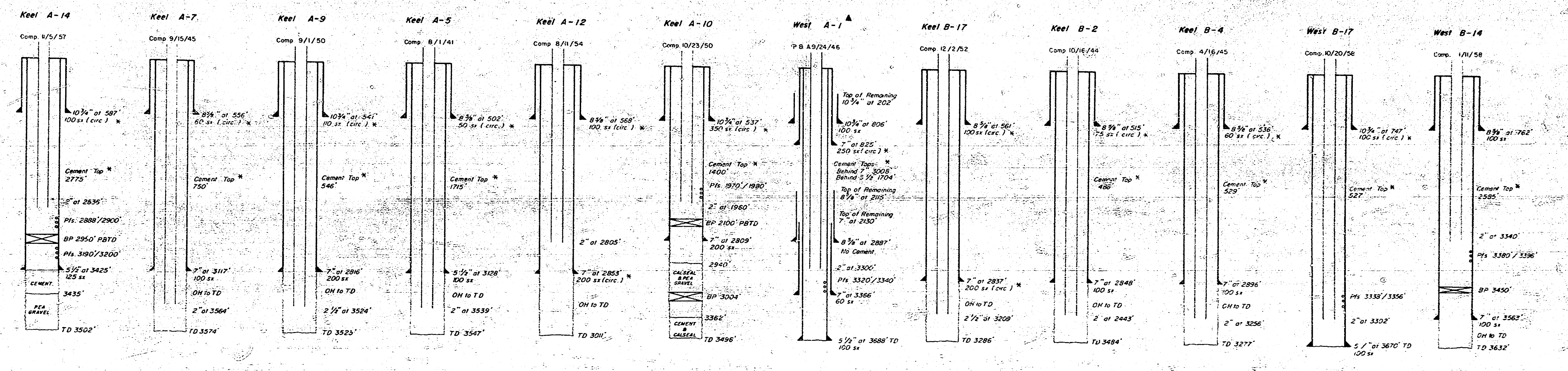
## FIRST HALF 1964 EXPANSION


Keel B-8
Comp. 7/12/51
10¾" at 596'
100 sx (circ.) *
Cement Top *
1376'
7" at 2945'
200 sx.
OH to TD
2" at 3027'
TD 3080'
Keel B-7
Comp. 7/10/51
10¾" at 600'
100 sx (circ.) *
Cement Top *
1347'
7" at 2916'
200 sx
OH to TD
2" at 3258'
TD 3266'
West B-10
Comp. 4/14/53
8⅝" at 642'
100 sx (circ.) *
7" at 3097'
200 sx (circ.) *
OH to TD
2½" at 3300'
TD 3623'

* Theoretical Fillup

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS
PROPOSED INJECTION WELLS
KEEL-WEST WATERFLOOD PROJECT
GRAYBURG-JACKSON POOL
Eddy County, New Mexico
DRAWN BY RPG CHECKED BY RMA DATE 8/22/63
NO SCALE REVISED ________

## SECOND HALF 1964 EXPANSION

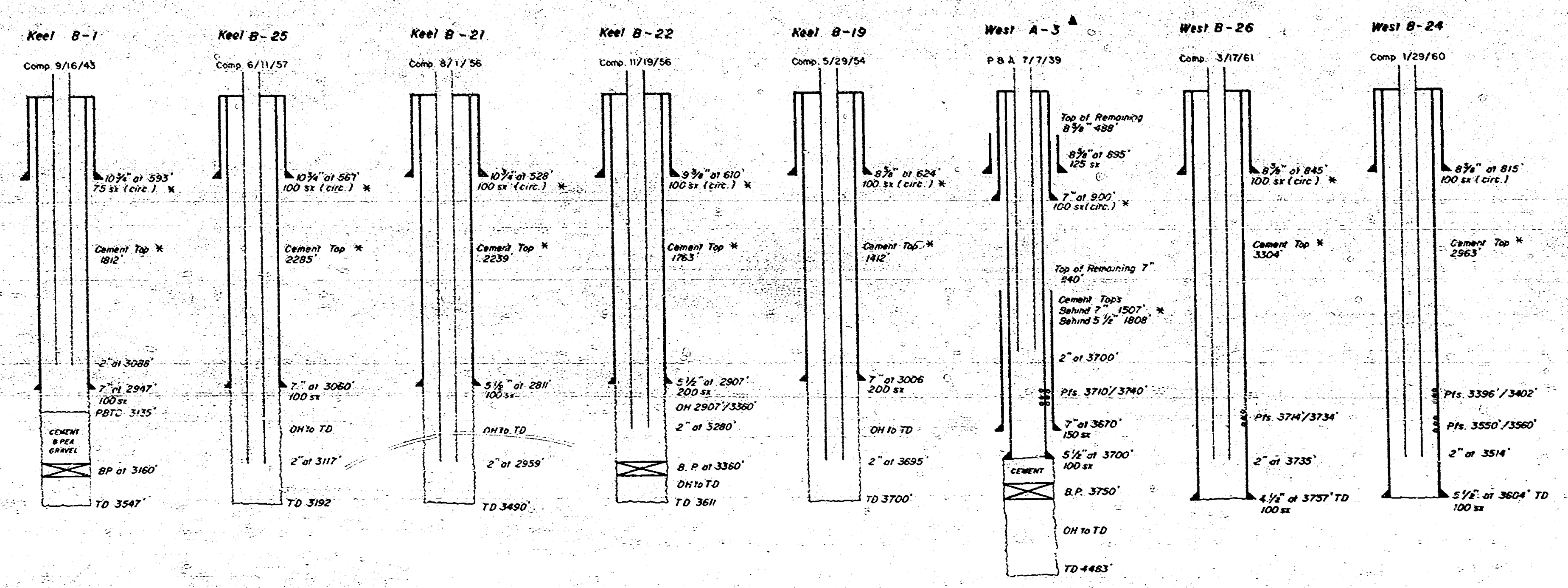

Keel A-14
Comp. 11/5/57
10 3/4" at 587' 100 sx (circ) *
Cement Top * 2775'
2" at 2836'
Pfs. 2888'/2900'
BP 2950' PBTD
Pfs. 3190'/3200'
5 1/2" at 3425' 125 sx
CEMENT
3435'
PEA GRAVEL
TD 3502'
Keel A-7
Comp 9/15/45
8 5/8" at 556' 60 sx (circ.) *
Cement Top * 750'
7" at 3117' 100 sx
OH to TD
2" at 3564'
TD 3574'
Keel A-9
Comp 9/1/50
10 3/4" at 541' 110 sx (circ.) *
Cement Top * 546'
7" at 2816' 200 sx
OH to TD
2 1/2" at 3524'
TD 3525'
Keel A-5
Comp 8/1/41
8 5/8" at 502' 50 sx (circ.) *
Cement Top * 1715'
5 1/2" at 3128' 100 sx
OH to TD
2" at 3539'
TD 3547'
Keel A-12
Comp 8/11/54
8 5/8" at 568' 100 sx (circ) *
2" at 2805'
7" at 2853' 200 sx (circ.) *
OH to TD
TD 3011'
Keel A-10
Comp 10/23/50
10 3/4" at 537' 350 sx (circ) *
Cement Top * 1400'
Pfs 1970'/1980'
2" at 1960'
BP 2100' PBTD
7" at 2809' 200 sx
2940'
CALSEAL & PEA GRAVEL
BP 3004'
3362'
CEMENT & CALSEAL
TD 3496'
West A-1 ▲
P & A 9/24/46
Top of Remaining 10 3/4" at 202'
10 3/4" at 806' 100 sx
7" at 825' 250 sx (circ) *
Cement Tops * Behind 7" 3008' Behind 5 1/2" 1704'
Top of Remaining 8 5/8" at 2115'
Top of Remaining 7" at 2130'
8 5/8" at 2887' No Cement
2" at 3300'
Pfs 3320'/3340'
7" at 3366' 60 sx
5 1/2" at 3688' TD 100 sx
Keel B-17
Comp 12/2/52
8 5/8" at 561' 100 sx (circ.) *
7" at 2837' 200 sx (circ) *
OH to TD
2 1/2" at 3209'
TD 3286'
Keel B-2
Comp 10/16/44
8 5/8" at 515' 75 sx (circ) *
Cement Top * 480'
7" at 2848' 100 sx
OH to TD
2" at 2443'
TD 3484'
Keel B-4
Comp 4/16/45
8 5/8" at 536' 60 sx (circ.) *
Cement Top * 529'
7" at 2896' 100 sx
OH to TD
2" at 3256'
TD 3277'
West B-17
Comp 10/20/58
10 3/4" at 747' 100 sx (circ.) *
Cement Top * 527'
Pfs 3333'/3356'
2" at 3302'
5 1/2" at 3670' TD 100 sx
West B-14
Comp. 1/11/58
8 5/8" at 762' 100 sx
Cement Top * 2555'
2" at 3340'
Pfs 3380'/3396'
BP 3450'
7" at 3563' 100 sx
OH to TD
TD 3632'

* Theoretical Fillup

▲ To Be Redrilled If Necessary

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS
PROPOSED INJECTION WELLS
KEEL - WEST WATERFLOOD PROJECT
GRAYBURG - JACKSON POOL
Eddy County, New Mexico
DRAWN BY RPG CHECKED BY RMA DATE 8/22/63
NO SCALE REVISED

# 1965 EXPANSION


Keel B-1
Comp. 9/16/43
10¾" at 593'
75 sx (circ.) *
Cement Top *
1812'
2" at 3086'
7" at 2947'
100 sx
PBTD 3135'
CEMENT & PEA GRAVEL
BP at 3160'
TD 3547'
Keel B-25
Comp. 6/11/57
10¾" at 567'
100 sx (circ.) *
Cement Top *
2285'
7" at 3060'
100 sx
OH to TD
2" at 3117'
TD 3192
Keel B-21
Comp. 8/1/56
10¾" at 528'
100 sx (circ.) *
Cement Top *
2239'
5½" at 2811'
100 sx
OH to TD
2" at 2959'
TD 3490'
Keel B-22
Comp. 11/19/56
9⅝" at 610'
100 sx (circ.) *
Cement Top *
1763'
5½" at 2907'
200 sx
OH 2907'/3360'
2" at 3280'
B. P. at 3360'
OH to TD
TD 3611
Keel B-19
Comp. 5/29/54
8⅝" at 624'
100 sx (circ.) *
Cement Top *
1412'
7" at 3006
200 sx
OH to TD
2" at 3695'
TD 3700'
West A-3 ▲
P & A 7/7/39
Top of Remaining
8⅝" 488'
8⅝" at 695'
125 sx
7" at 900'
100 sx (circ.) *
Top of Remaining 7"
840'
Cement Tops
Behind 7" 1507' *
Behind 5½" 1808'
2" at 3700'
Pfs. 3710'/3740'
7" at 3670'
150 sx
5½" at 3700'
100 sx
CEMENT
B.P. 3750'
OH to TD
TD 4483'
West B-26
Comp. 3/17/61
8⅝" at 845'
100 sx (circ.) *
Cement Top *
3304'
Pfs. 3714'/3734'
2" at 3735'
4½" at 3757' TD
100 sx
West B-24
Comp. 1/29/60
8⅝" at 815'
100 sx (circ.)
Cement Top *
2563'
Pfs. 3396'/3402'
Pfs. 3550'/3560'
2" at 3514'
5½" at 3604' TD
100 sx

* Theoretical Fillup

▲ To Be Redrilled If Necessary

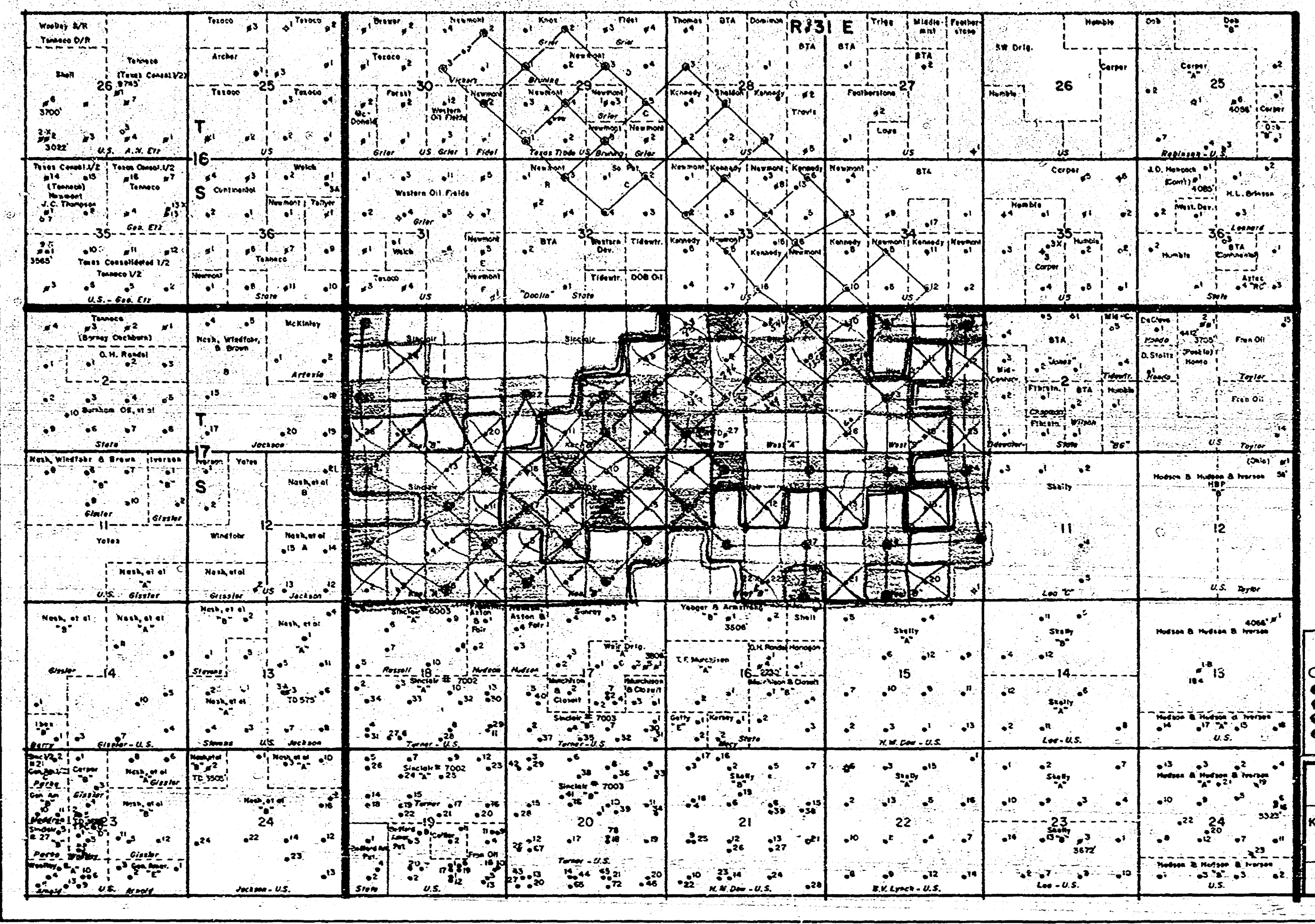
1965

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS

PROPOSED INJECTION WELLS

KEEL - WEST WATERFLOOD PROJECT
GRAYBURG - JACKSON POOL
Eddy County, New Mexico

DRAWN BY [illegible] CHECKED BY [illegible] DATE [illegible]
NO SCALE REVISED



10¾" $8.51
have 12.5 mi
pipeline to bring
water from Sec 31
T 15 S R 32 E

$250,000

6-21-62
R-2268 authorized flood
Case 2576-

ave prod 7-63
Keel A lse 5.5 BOPD/well
B lse 2.3 BOPD/well
West A) outside 2.6
B) proj 5.6

3-400 BWPD inj. to fillup
250-260 after fillup

1966 peak rate of prod
34/day/well

Sinclair Oil & Gas Co.
Exhibit No. 1
Case 2909

**Proposed Injection Wells**

○ Present Development (7-63)
● Second Half 1963
● First Half 1964
● Second Half 1964
● 1965

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS

KEEL-WEST WATERFOOD PROJECT

EDDY CO., NEW MEXICO

DRAWN BY WAH CHECKED BY JWM DATE 8-22-63
SCALE: 1" = 3000' REVISED

[illegible] MICROGRAPHICS
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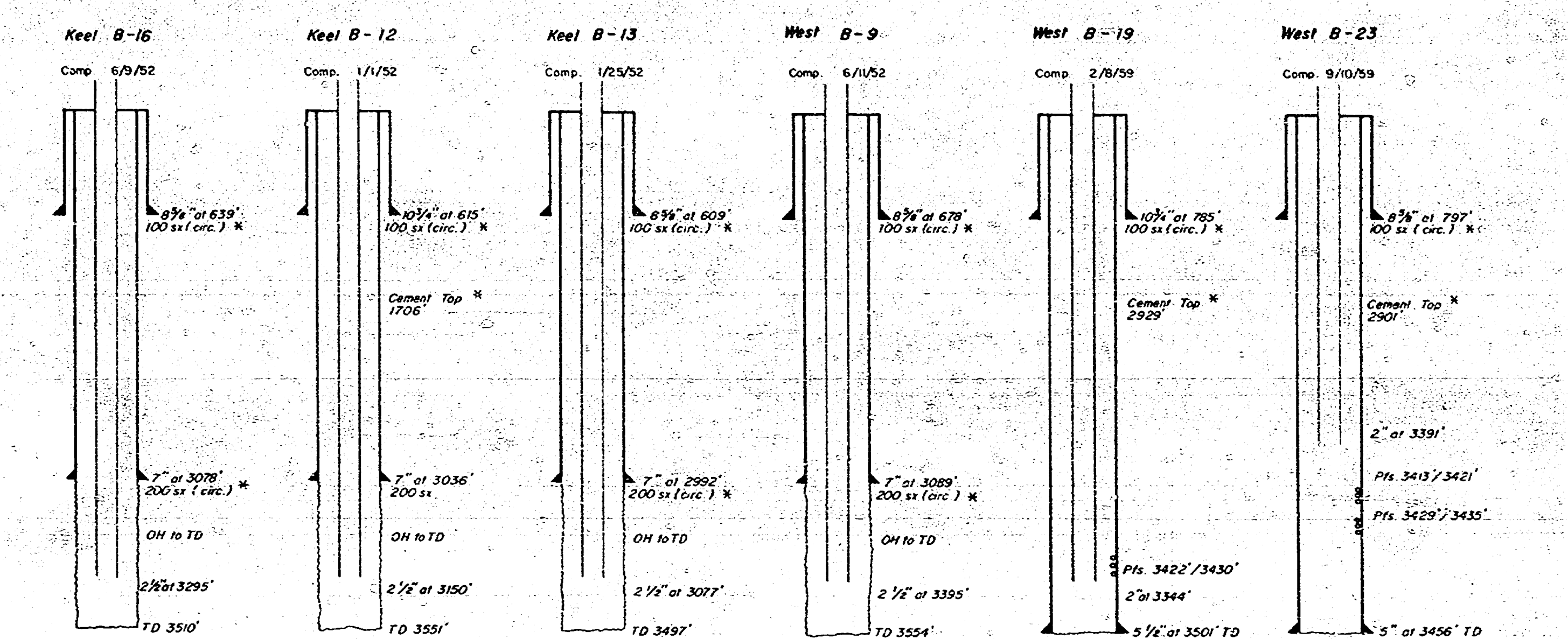
## SECOND HALF 1963 EXPANSION


Keel B-16
Comp. 6/9/52
8⅝" at 639'
100 sx (circ.) *
7" at 3078'
200 sx (circ.) *
OH to TD
2½" at 3295'
TD 3510'
Keel B-12
Comp. 1/1/52
10¾" at 615'
100 sx (circ.) *
Cement Top *
1706'
7" at 3036'
200 sx
OH to TD
2½" at 3150'
TD 3551'
Keel B-13
Comp. 1/25/52
8⅝" at 609'
100 sx (circ.) *
7" at 2992'
200 sx (circ.) *
OH to TD
2½" at 3077'
TD 3497'
West B-9
Comp. 6/11/52
8⅝" at 678'
100 sx (circ.) *
7" at 3089'
200 sx (circ.) *
OH to TD
2½" at 3395'
TD 3554'
West B-19
Comp. 2/8/59
10¾" at 785'
100 sx (circ.) *
Cement Top *
2929'
Pfs. 3422'/3430'
2" at 3344'
5½" at 3501' TD
100 sx
West B-23
Comp. 9/10/59
8⅝" at 797'
100 sx (circ.) *
Cement Top *
2901'
2" at 3391'
Pfs. 3413'/3421'
Pfs. 3429'/3435'
5" at 3456' TD
100 sx

* Theoretical Fillup

Sinclair Oil & Gas Co.
Exhibit No. 2

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS
PROPOSED INJECTION WELLS
KEEL - WEST WATERFLOOD PROJECT
GRAYBURG - JACKSON POOL
Eddy County, New Mexico
DRAWN BY RPG CHECKED BY RWA DATE 8/22/63
NO SCALE REVISED

N.M.O.C.D. MICROGRAPHICS
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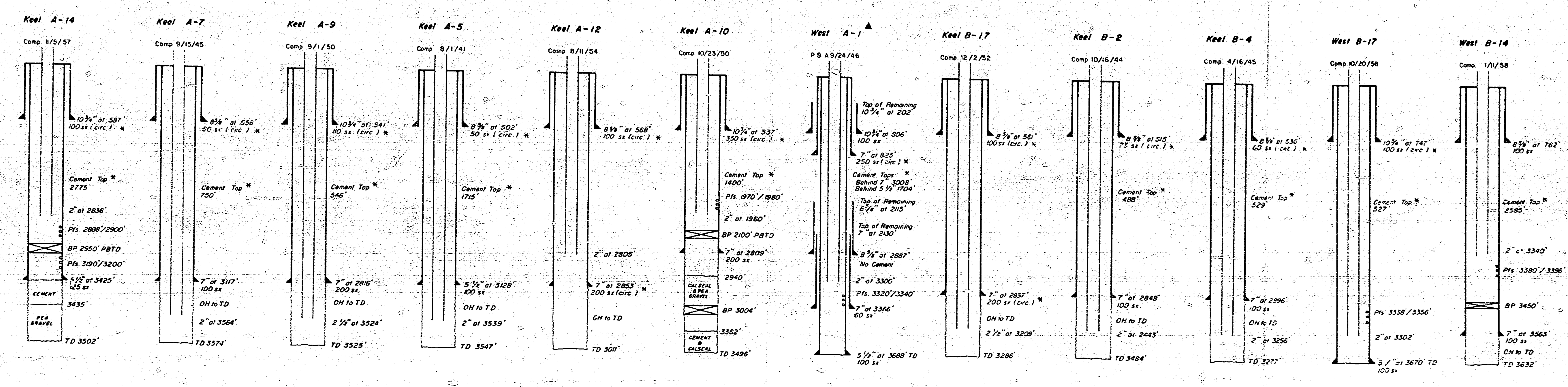
## SECOND HALF 1964 EXPANSION


Keel A-14
Comp 4/5/57
10¾" at 587' 100 sx (circ.) *
Cement Top * 2775'
2" at 2836'
Pfs. 2808'/2900'
BP 2950' PBTD
Pfs. 3190'/3200'
5½" at 3425' 125 sx
CEMENT
3435'
PEA GRAVEL
TD 3502'
Keel A-7
Comp 9/15/45
8⅝" at 556' 60 sx (circ.) *
Cement Top * 750'
7" at 3117' 100 sx
OH to TD
2" at 3564'
TD 3574'
Keel A-9
Comp 9/1/50
10¾" at 541' 110 sx (circ.) *
Cement Top * 546'
7" at 2816' 200 sx
OH to TD
2½" at 3524'
TD 3525'
Keel A-5
Comp 8/1/41
8⅝" at 502' 50 sx (circ.) *
Cement Top * 1715'
5½" at 3128' 100 sx
OH to TD
2" at 3539'
TD 3547'
Keel A-12
Comp 8/11/54
8⅝" at 568' 100 sx (circ.) *
2" at 2805'
7" at 2853' 200 sx (circ.) *
OH to TD
TD 3011'
Keel A-10
Comp 10/23/50
10¾" at 537' 350 sx (circ.) *
Cement Top * 1400'
Pfs. 1970'/1980'
2" at 1960'
BP 2100' PBTD
7" at 2809' 200 sx
2940'
CALSEAL & PEA GRAVEL
BP 3004'
3362'
CEMENT & CALSEAL
TD 3496'
West A-1 ▲
P & A 9/24/46
Top of Remaining 10¾" at 202'
10¾" at 806' 100 sx
7" at 825' 250 sx (circ.) *
Cement Tops * Behind 7" 3008' Behind 5½" 1704'
Top of Remaining 8⅝" at 2115'
Top of Remaining 7" at 2130'
8⅝" at 2887' No Cement
2" at 3300'
Pfs. 3320'/3340'
7" at 3366' 60 sx
5½" at 3688' TD 100 sx
Keel B-17
Comp 12/2/52
8⅝" at 561' 100 sx (circ.) *
7" at 2837' 200 sx (circ.) *
OH to TD
2½" at 3209'
TD 3286'
Keel B-2
Comp 10/16/44
8⅝" at 515' 75 sx (circ.) *
Cement Top * 488'
7" at 2848' 100 sx
OH to TD
2" at 2443'
TD 3484'
Keel B-4
Comp 4/16/45
8⅝" at 536' 60 sx (circ.) *
Cement Top * 529'
7" at 2896' 100 sx
OH to TD
2" at 3256'
TD 3277'
West B-17
Comp 10/20/58
10¾" at 747' 100 sx (circ.) *
Cement Top * 527'
Pfs. 3338'/3356'
2" at 3302'
5½" at 3670' TD 100 sx
West B-14
Comp 1/11/58
8⅝" at 762' 100 sx
Cement Top * 2585'
2" at 3340'
Pfs. 3380'/3396'
BP 3450'
7" at 3563' 100 sx
OH to TD
TD 3632'

* Theoretical Fillup

▲ To Be Redrilled If Necessary

Sinclair Oil & Gas Co.
Exhibit No. 4

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS
PROPOSED INJECTION WELLS
KEEL - WEST WATERFLOOD PROJECT
GRAYBURG - JACKSON POOL
Eddy County, New Mexico
DRAWN BY [illegible] CHECKED BY [illegible] DATE 8/22/63
NO SCALE REVISED

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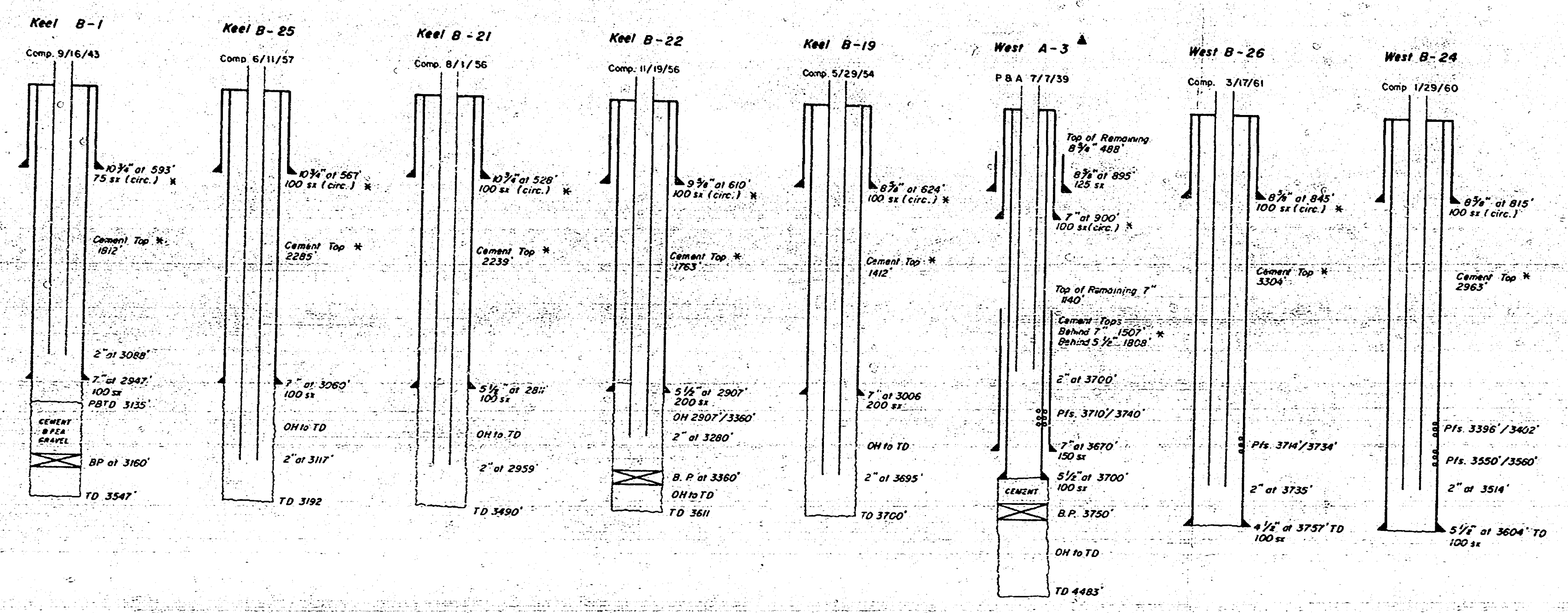
## 1965 EXPANSION


Keel B-1
Comp. 9/16/43
10¾" at 593'
75 sx (circ.) *
Cement Top *
1812'
2" at 3088'
7" at 2947'
100 sx
PBTD 3135'
CEMENT & PEA GRAVEL
BP at 3160'
TD 3547'
Keel B-25
Comp. 6/11/57
10¾" at 567'
100 sx (circ.) *
Cement Top *
2285'
7" at 3060'
100 sx
OH to TD
2" at 3117'
TD 3192
Keel B-21
Comp. 8/1/56
10¾" at 528'
100 sx (circ.) *
Cement Top *
2239'
5½" at 2811'
100 sx
OH to TD
2" at 2959'
TD 3490'
Keel B-22
Comp. 11/19/56
9⅝" at 610'
100 sx (circ.) *
Cement Top *
1763'
5½" at 2907'
200 sx
OH 2907'/3360'
2" at 3280'
B. P. at 3360'
OH to TD
TD 3611
Keel B-19
Comp. 5/29/54
8⅝" at 624'
100 sx (circ.) *
Cement Top *
1412'
7" at 3006
200 sx
OH to TD
2" at 3695'
TD 3700'
West A-3 ▲
P & A 7/7/39
Top of Remaining 8⅝" 488'
8⅝" at 895'
125 sx
7" at 900'
100 sx (circ.) *
Top of Remaining 7" 1140'
Cement Tops
Behind 7" 1507' *
Behind 5½" 1808'
2" at 3700'
Pfs. 3710'/3740'
7" at 3670'
150 sx
5½" at 3700'
100 sx
CEMENT
B.P. 3750'
OH to TD
TD 4483'
West B-26
Comp. 3/17/61
8⅝" at 845'
100 sx (circ.) *
Cement Top *
3304'
Pfs. 3714'/3734'
2" at 3735'
4½" at 3757' TD
100 sx
West B-24
Comp 1/29/60
8⅝" at 815'
100 sx (circ.)
Cement Top *
2963'
Pfs. 3396'/3402'
Pfs. 3550'/3560'
2" at 3514'
5½" at 3604' TD
100 sx

* Theoretical Fillup

▲ To Be Redrilled If Necessary

Sinclair Oil & Gas Co.
Exhibit No. 5

Case 2909

1965

SINCLAIR OIL & GAS CO.
MIDLAND, TEXAS

PROPOSED INJECTION WELLS

KEEL - WEST WATERFLOOD PROJECT
GRAYBURG - JACKSON POOL
Eddy County, New Mexico

DRA. BY RPG CHECKED BY RMA DATE [illegible]
NO SCALE REVISED

[illegible] MICROGRAPHICS
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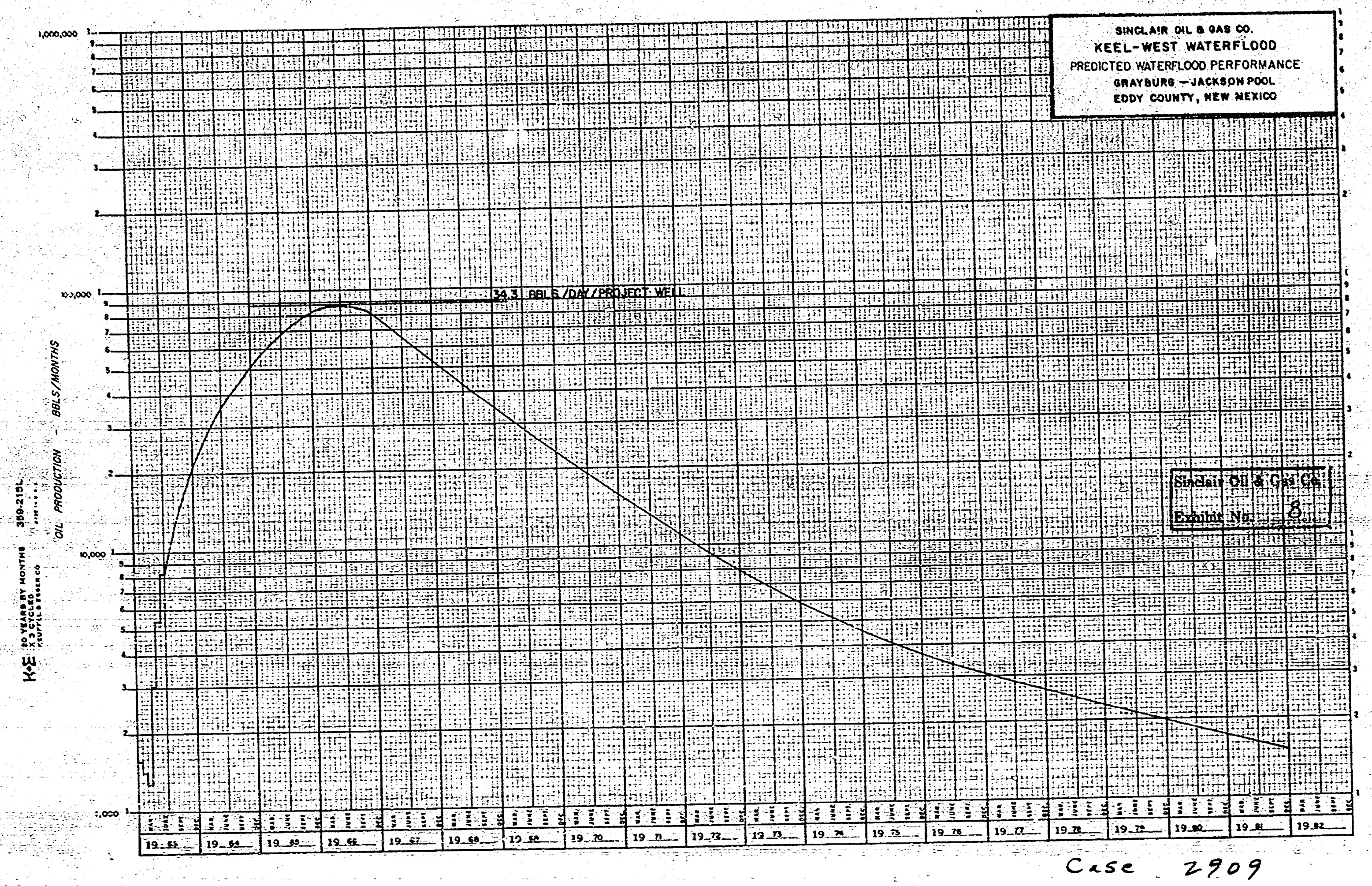

SINCLAIR OIL & GAS CO.
KEEL-WEST WATERFLOOD
PREDICTED WATERFLOOD PERFORMANCE
GRAYBURG – JACKSON POOL
EDDY COUNTY, NEW MEXICO

Sinclair Oil & Gas Co.
Exhibit No. 8

Case 2909

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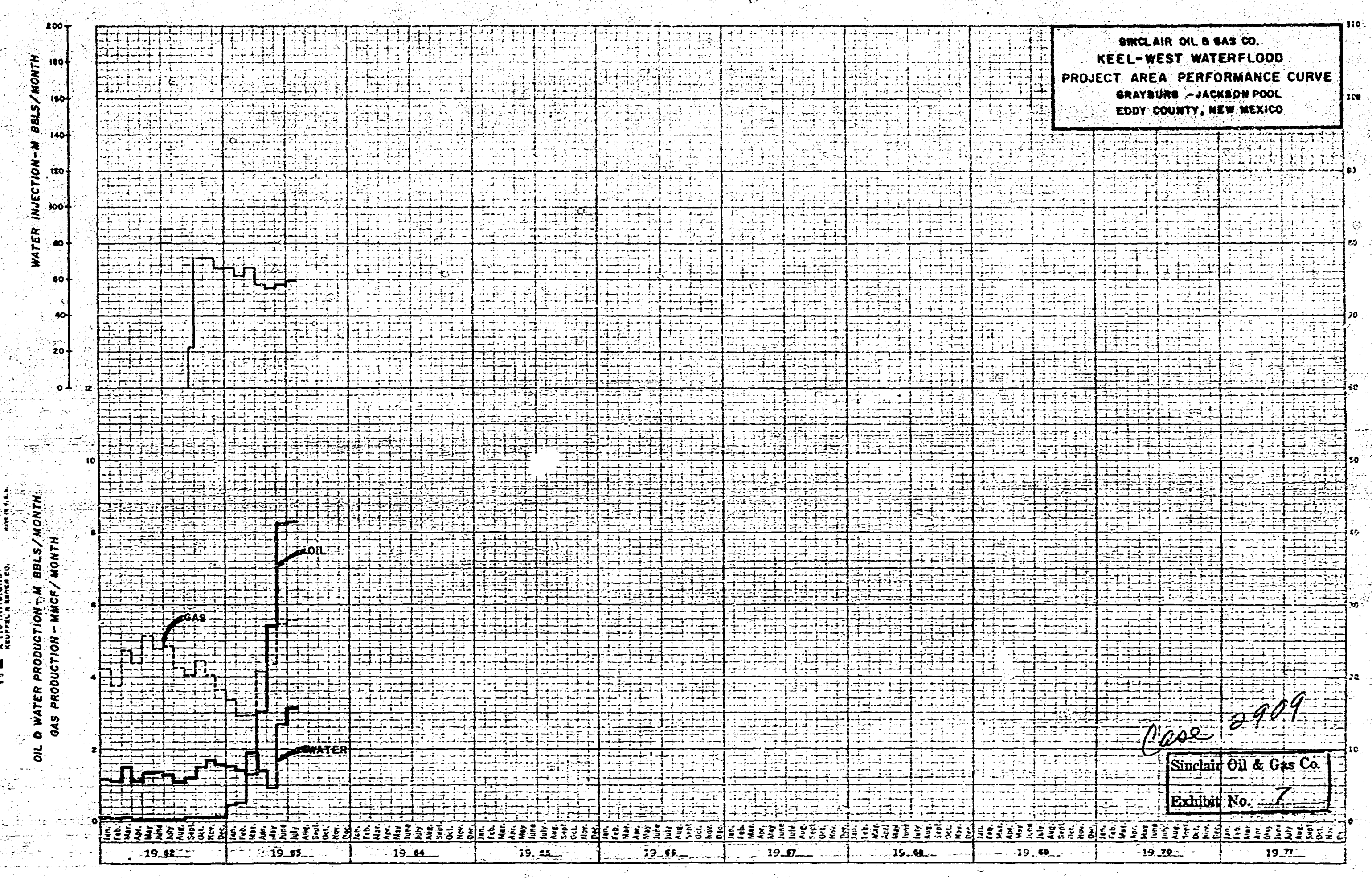

SINCLAIR OIL & GAS CO.
KEEL-WEST WATERFLOOD
PROJECT AREA PERFORMANCE CURVE
GRAYBURG -JACKSON POOL
EDDY COUNTY, NEW MEXICO

Case 2909

Sinclair Oil & Gas Co.
Exhibit No. 7

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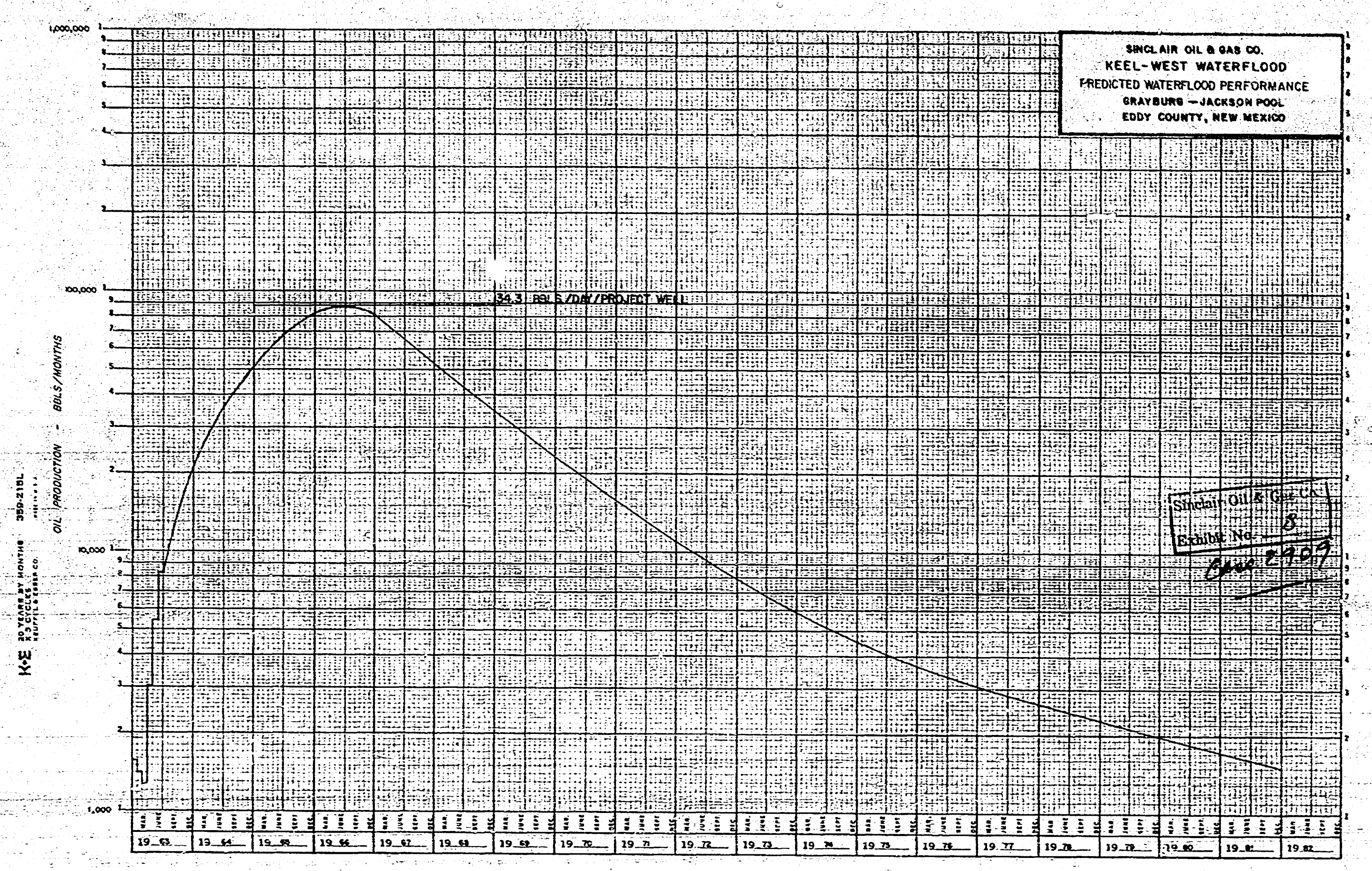

SINCLAIR OIL & GAS CO.
KEEL-WEST WATERFLOOD
PREDICTED WATERFLOOD PERFORMANCE
GRAYBURG — JACKSON POOL
EDDY COUNTY, NEW MEXICO

Sinclair Oil & Gas Co.
Exhibit No. 8
Case 2909

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