

ATTACHMENT: A. R. Haley #1

TOTCO DEVIATION SURVEY

Depth	Degrees off Vertical	Depth	Degrees off Vertical
310	1/2	6900	1
2650	3/4	7297	1 1/2
3264	1 1/4	7758	1
3837	1	8194	1
4130	1	8251	1
4351	3/4	8380	3/4
5132	3/4	8598	2
5695	3/4	8659	2
6258	1	8775	1 1/4
6418	1	8940	3/4
6623	1	9147	3/4

CORE RECORD

No.	Top	Bottom	Res.	Description
1	9147	9191	44'	Recovered 44' lime & shale. 9147-9148 - 1' lime, no show. 9148-9149 - 1' lime, trace to 10% pin point porosity fair stain & fluorescence, poor show. 9149-9157 - 8' limestone 15-20% pin point vuggy porosity, good stain, fluorescence & cut good show. 9157-9191 - 34' lime & shale, no show.
2	9191	9242	50'	Recovered 50' lime & shale. 9191-9219 1/2 - 28 1/2' lime & shale, no show. 9219 1/2 - 9230 1/2 - 11' limestone, very finely crystalline cream to tan w/trace of small vuggy porosity - trace of stain, good fluorescence & cut - fractured. 9230 1/2 - 9241 - 10 1/2' lime & shale, no show. 9241-9242 - 1' lost.

DRILL STEM TESTS

No.	Date	From	To	No Kind & Size or Open Hole	Tool Set @	Chokes Top Bottom	Water Cushion	Time Tested
1	5/7/57	4520	4590	Open Hole	4520	5/8" 1"	None	
(San Andres) - Leak in drill pipe 900' off bottom. Pulled & reran, packer failed.								
2	5/8/57	4510	4590	Open Hole	4510	5/8" 1"	None	3 Hr.
(San Andres) Gas to surface 16 minutes 30.58 MCF/day. Recovered 150' of heavy gas and oil out drilling mud + 1200' of free oil. SFP 11#, BHFP 230-460#, 30 minutes. SIP 1170#, HH 2780# in and out.								
3	6/19/57	9121	9191	Open Hole	9121	5/8" 5/8"	None	2 1/2 Hr.
(Bough B) Gas to surface in 9 minutes. Mud in 23 minutes. Oil in 28 minutes. Cleaned to pits 7 minutes. Flowed 40 BO in 1 hour 5/8" choke. SFP 370#. Flowed 51 BO in 1 hour 1/2" choke SFP 450#, GOR 606-1, Gravity 45 @ 60 degrees. BHFP 250# 30 minutes SIP 3160#, HH 5555-5580#.								
4	6/23/57	9197	9242	Open Hole	9197	5/8" 1"	None	1 Hr.
(Bough C) Nothing to surface. Recovered 15' drilling mud, no show. All pressures 0#. HH 5200-5260.								

ACIDIZING RECORD

6/27/57	The Western Company acidized perforations 9216-9230 w/1000 gals. 15% regular acid. TP 4900-4500#, 5 minutes. S/D pressure 4400#. 1.4 BPM. Swabbed 37 BLO + 6 BAW in 7 hours.
6/30/57	The Western Company reacidized perforations 9216-9230 w/3000 gals. 15% regular acid. TP 4900-Q#. 3.4 BPM. Swabbed 37 BLO in 4 hours. Swabbed & flowed 85 BNO + 37 BAW in 10 hours. S/O 10% water

FOIA b 7 - D, b 7 - C, b 7 - E

Isolated the material	Isolated the material	Isolated the material	Isolated the material
1	0000	5/1	0000
2/1	0001	5/1	0001
3/1	0002	5/1	0002
4/1	0003	5/1	0003
5/1	0004	5/1	0004
6/1	0005	5/1	0005
7/1	0006	5/1	0006
8/1	0007	5/1	0007
9/1	0008	5/1	0008
10/1	0009	5/1	0009
11/1	0010	5/1	0010
12/1	0011	5/1	0011
13/1	0012	5/1	0012
14/1	0013	5/1	0013
15/1	0014	5/1	0014
16/1	0015	5/1	0015
17/1	0016	5/1	0016
18/1	0017	5/1	0017
19/1	0018	5/1	0018
20/1	0019	5/1	0019
21/1	0020	5/1	0020
22/1	0021	5/1	0021
23/1	0022	5/1	0022
24/1	0023	5/1	0023
25/1	0024	5/1	0024
26/1	0025	5/1	0025
27/1	0026	5/1	0026
28/1	0027	5/1	0027
29/1	0028	5/1	0028
30/1	0029	5/1	0029
31/1	0030	5/1	0030
32/1	0031	5/1	0031
33/1	0032	5/1	0032
34/1	0033	5/1	0033
35/1	0034	5/1	0034
36/1	0035	5/1	0035
37/1	0036	5/1	0036
38/1	0037	5/1	0037
39/1	0038	5/1	0038
40/1	0039	5/1	0039
41/1	0040	5/1	0040
42/1	0041	5/1	0041
43/1	0042	5/1	0042
44/1	0043	5/1	0043
45/1	0044	5/1	0044
46/1	0045	5/1	0045
47/1	0046	5/1	0046
48/1	0047	5/1	0047
49/1	0048	5/1	0048
50/1	0049	5/1	0049
51/1	0050	5/1	0050
52/1	0051	5/1	0051
53/1	0052	5/1	0052
54/1	0053	5/1	0053
55/1	0054	5/1	0054
56/1	0055	5/1	0055
57/1	0056	5/1	0056
58/1	0057	5/1	0057
59/1	0058	5/1	0058
60/1	0059	5/1	0059
61/1	0060	5/1	0060
62/1	0061	5/1	0061
63/1	0062	5/1	0062
64/1	0063	5/1	0063
65/1	0064	5/1	0064
66/1	0065	5/1	0065
67/1	0066	5/1	0066
68/1	0067	5/1	0067
69/1	0068	5/1	0068
70/1	0069	5/1	0069
71/1	0070	5/1	0070
72/1	0071	5/1	0071
73/1	0072	5/1	0072
74/1	0073	5/1	0073
75/1	0074	5/1	0074
76/1	0075	5/1	0075
77/1	0076	5/1	0076
78/1	0077	5/1	0077
79/1	0078	5/1	0078
80/1	0079	5/1	0079
81/1	0080	5/1	0080
82/1	0081	5/1	0081
83/1	0082	5/1	0082
84/1	0083	5/1	0083
85/1	0084	5/1	0084
86/1	0085	5/1	0085
87/1	0086	5/1	0086
88/1	0087	5/1	0087

PAUL J. ROY

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RESEARCH DESIGN

No.	Date	Time	Loc	Drill Hole	Depth	Remarks
1	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
2	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
3	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
4	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
5	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
6	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
7	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
8	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
9	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.
10	5/15/57	4:50	4530	Open Hole	4530	100' in drill pipe 100' off bottom. Filled in return, bottom sealed.

RESEARCH DESIGN

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