

# New Mexico Geological Society

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## *New Mexico's deepest oil test*

P. W. Hughes, 1954, pp. 124-130

*in:*  
*Southeastern New Mexico*, Stipp, T. F.; [ed.], New Mexico Geological Society 5<sup>th</sup> Annual Fall Field Conference Guidebook, 209 p.

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*This is one of many related papers that were included in the 1954 NMGS Fall Field Conference Guidebook.*

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## **Annual NMGS Fall Field Conference Guidebooks**

Every fall since 1950, the New Mexico Geological Society (NMGS) has held an annual [Fall Field Conference](#) that explores some region of New Mexico (or surrounding states). Always well attended, these conferences provide a guidebook to participants. Besides detailed road logs, the guidebooks contain many well written, edited, and peer-reviewed geoscience papers. These books have set the national standard for geologic guidebooks and are an essential geologic reference for anyone working in or around New Mexico.

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pears to be well presented evidence indicating the presence of bioherm or reefoid developments in various places in outcrop areas. Similar conditions may well exist in various places in subsurface. To date the "reef" school advocates appear to have submitted little in the way of factual data to indicate in what areas or to what extent reefing conditions existed subsurface in southeastern New Mexico. Statements to the effect that a great arcuate "reef" is present are relatively common, but detailed information to back up such statements seems to be largely lacking.

Under either the belief that the Capitan is Bell Canyon equivalent or that it is the equivalent of the Castile series it is quite difficult to picture the growth of a "reef" front in the location in which it is supposed to be. Either possibility would appear to call for conditions that would have been unfriendly for the prolific development of colonial organisms. However, of the two possible conditions, it would appear that it would actually have been easier to have developed a "reef" closely adjacent to the deposition of anhydrite. Special conditions would have had to exist, but they would probably not have been as complicated and special as would have been required to have an organic "reef" growing in juxtaposition to fine, silty sandstones.

The writer is fully aware that the foregoing notes will call forth a very appreciable amount of criticism and it is certainly to be hoped that they will. No claim is made that the generalized ideas as set forth herein are the final solution to the whole Capitan-Castile-Delaware Mountains problem. Personally the writer feels that the whole problem is far from settled and that it is therefore imperative that it should be kept alive. If the notes herein contained do nothing more than cause the "reef" school to amplify the data on which some of their statements have been based they will have accomplished something.

**NEW MEXICO'S DEEPEST OIL TEST**

**P. W. Hughes, Geologist**

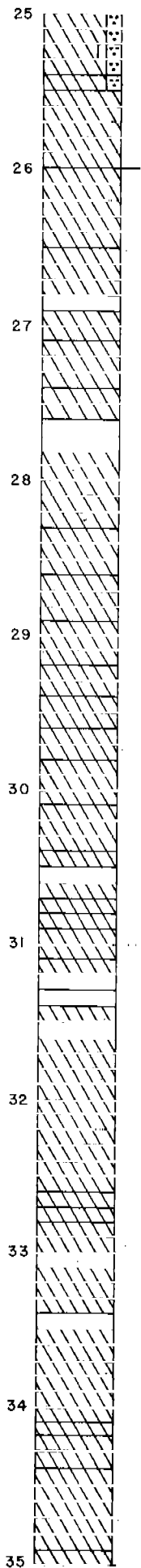
The Richardson & Bass #1 Harrison-Federal, recently abandoned oil test in Southeastern Eddy County at a total depth of 16,705', is to date the deepest attempt for production in New Mexico. Location of the above

test is in Sec. 12, Twp. 25-S, Rge. 30-E in the subsurface province referred to as the Delaware Basin. Approximately 2,000' of Siluro-Devonian and Ordovician rocks lie between the basement complex and therefore the total thickness of sediments is known to exceed 18,500' in the New Mexico portion of the Basin.

Listed below are the sample tops and thicknesses of the various lithologic units generally picked in this area. There is little agreement as to the tops of the Leonard and Wolfcamp Series of the Permian and the Strawn and Atoka Series of the Pennsylvanian. Division of Permian and Pennsylvanian units are difficult from an examination of samples alone, and other aids such as paleontology and electrical logs are desirable.

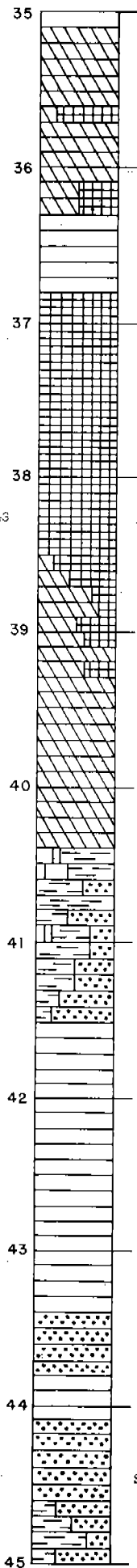
<u>PERMIAN</u>		
	<u>Top</u>	<u>Thickness</u>
Ochoa Series	1160'	2880'
Guadalupe Series	4040'	3860'
Leonard Series	7900'	2920'
Wolfcamp Series	10820'	2918'
Total thickness . . . . .		12578'
<u>PENNSYLVANIAN</u>		
Strawn Series	13738'	232'
Atoka Series (and Morrow)	13970'	1890'
Total thickness . . . . .		2122'
<u>MISSISSIPPIAN</u>		
Mississippian Shale	15860'	230'
Mississippian Limestone	16090'	390'
Woodford Shale	16480'	140'
Total thickness . . . . .		760'
<u>SIL - DEVONIAN</u>		
	16620'	





SH; GRY

ANHY; WHT W/BRN LS PARTINGS



SALT; GLI ANHY

ANHY; WHT W/BRN LS PARTINGS

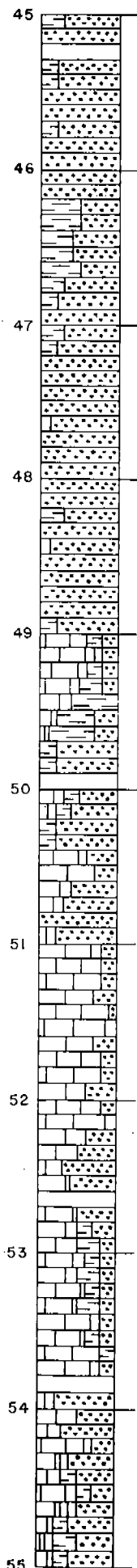
TOP DELAWARE "LS" 4040'  
 LS; BRN, DNS-FX  
 SH; BRN-GRY, LY  
 SS; GRY, F GR  
 TOP DELAWARE SD 4080'  
 SS; GRY, F GR

CAVING CASTILE ANHYDRITE  
 TO 4350'

SS; GRY, F-MED GR, LY

TR. FQGs

SH; BRN



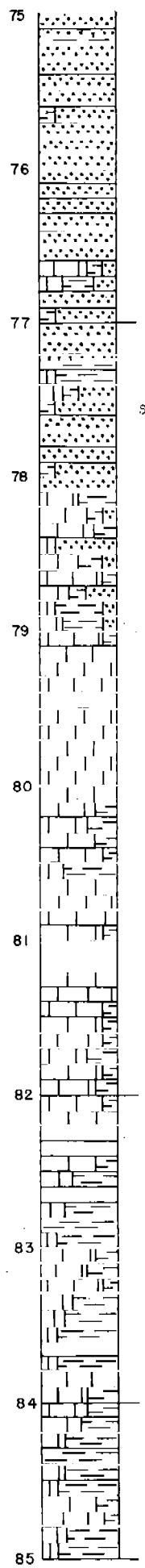
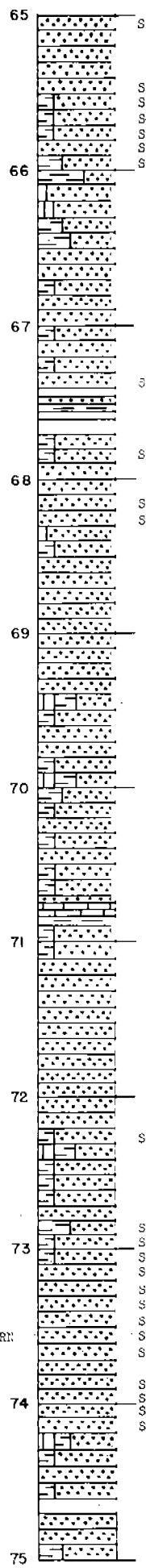
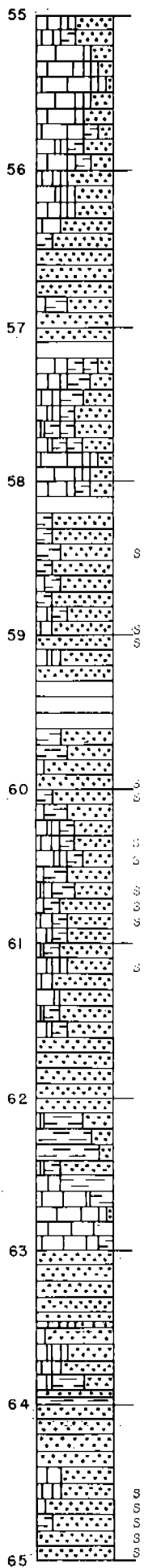
SS; GRY, F GR, LY

SH; BRN

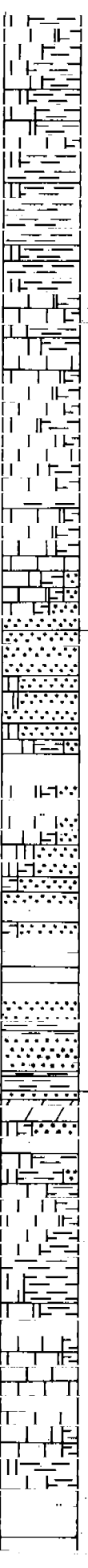
LS; TN-LT GRY, DNS

SH; BRN

SH; GRN-BRN  
 GRN SH; WAXY, TRANSL



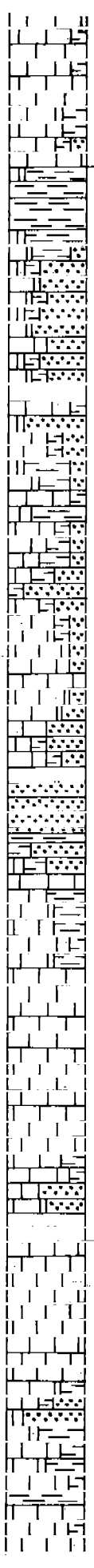
85  
86  
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95



SS; GR, F GR, LY

LS; GR, DNS-CHALKY,  
SILTY

95  
96  
97  
98  
99  
100  
101  
102  
103  
104  
105



SH; BRN

SS; GR, F GR

LS; BRN-GRY, DNS-CHALKY,  
SILTY

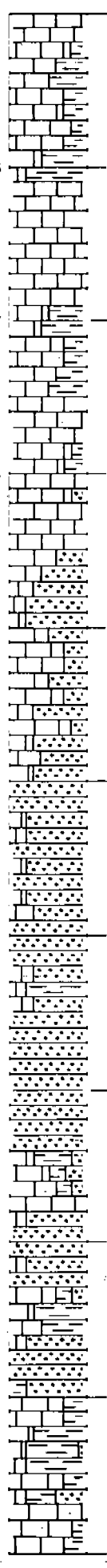
LS; BRN-GRY, DNS-FX

LS; BRN-GRY, DNS

LS; BRN, GR, DNS-FX

LS; BRN-GRY, DNS-CHALKY,

105  
106  
107  
108  
109  
110  
111  
112  
113  
114  
115



LS; BRN-GRY, DNS-FX  
SH; BRN

LS; BRN-GRY, DNS

LS; BRN-GRY, DNS-FX  
SS; GR, F GR, LY  
10,820' TOP WOLFCAMP SERIES,  
BY LITHOLOGY

LS; BRN-GRY, DNS  
SH; BRN

LS; BRN-GRY, FX-DNS

11,400'-13,540' WOLFCAMP  
FUSULINES, HUECO TYPES

LS; BRN-GRY, DNS

SS; GR, F GR, LY  
LS; DK BRN-GRY, DNS-FX

