

**RECORD OF WELL DRILLING OR DEEPENING**

USE APPROPRIATE BLOCKS, FOR ITEMS NOT LISTED SUBMIT ATTACHMENTS.

REQUIRED BY AUTHORITY OF:

ACT 81, P.A. 1939, AS AMENDED. (Submit 2 copies within 30 days of completion)  
 ACT 315, P.A. 1969, AS AMENDED. (Submit 2 copies within 60 days of completion)

NON-SUBMISSION AND/OR FALSIFICATION OF THIS INFORMATION MAY RESULT IN FINES AND/OR IMPRISONMENT.

PERMIT NO./DEEPENING PERMIT NO. <b>41,034 # 40134</b>	TYPE OF WELL (after completion) <b>Oil</b>
FIELD/FACILITY NAME <b>Frederic 11A Field/Frederic 2 CPF</b>	
WELL NAME & NUMBER <b>Wood 5-11</b>	
SURFACE LOCATION <b>NW 1/4 of NE 1/4 of SE 1/4 Section 11 T 28N R 4W</b>	
TOWNSHIP <b>Frederic</b>	COUNTY <b>Crawford</b>
FOOTAGES: NORTH/SOUTH EAST/WEST <b>349 Ft. from N Line and 1300ft. from E Line of 1/4 Sec.</b>	
SUBSURFACE LOCATION (if directionally drilled) <b>1/4 of 1/4 of 1/4 Section T R</b>	
TOWNSHIP	COUNTY
FOOTAGES: NORTH/SOUTH EAST/WEST <b>Ft. from Line and Ft. from Line of 1/4 Sec.</b>	
TOTAL DEPTH OF WELL <b>7222</b>	FORMATION AT T.D. <b>Grey Niagaran</b>
PROD. FORMATION(S) <b>A1C, Niagaran</b>	FEET DRILLED - CABLE TOOLS <b>From To</b>
	FEET DRILLED - ROTARY TOOLS <b>From 0 To 7222</b>
DATE OF FIRST INJECTION	INJECTED FORMATION
	SOLUTION FORMATION
ELEVATIONS K.B. <b>1258.9</b> R.F. ft. R.T. ft. Grd. <b>1245.9</b> ft.	

NAME AND ADDRESS OF OWNER <b>Shell Western E&amp;P Inc. Grandview Plaza Traverse City, MI 49684</b>		
NAME AND ADDRESS OF DRILLING CONTRACTOR <b>Bigard Drilling 1315 N. Mission Rd, P.O. Box 509 Mt Pleasant, MI 48858</b>		
DATE DRILLING BEGAN <b>12/17/86</b>	DATE DRILL. COMPLETED <b>1/5/87</b>	DATE WELL COMPLETED <b>1/9/87</b>
TOTAL DEPTH OF WELL <b>7222</b>	FORMATION AT T.D. <b>Grey Niagaran</b>	PROD. FORMATION(S) <b>A1C, Niagaran</b>
DATE OF FIRST INJECTION	INJECTED FORMATION	SOLUTION FORMATION

**CASING, CASING LINERS AND CEMENTING, OPERATING STRINGS**

**PERFORATIONS**

SIZE	WHERE SET	CEMENT	FT. PULLED	DATE	NUMBER HOLES	INTERVAL PERFORATED	OPEN	
							YES	NO
16"	81'	Driven	-				X	
11 3/4"	940'	670 sx	-	1/9/87	28	6752-7126		
8 5/8"	3723'	500 sx	-					
5 1/2"	7222'	550 sx	-					

**GROSS PAY INTERVALS**

**ALL OTHER OIL AND GAS SHOWS OBSERVED OR LOGGED**

FORMATION	OIL OR GAS	FROM	TO	FORMATION	OIL OR GAS	DEPTH	WHERE OBSERVED (X)					
							Sam- ples	Odor	Pits	Mud Line	Gas Log	Fill Up
A1Carbonate	Gas	6570	6630	A1Carbonate	Gas	6571				X		
Niagaran	Gas	6630	7126	Niagaran	Gas	6640				X		
				Grey Niagaran	Gas	7160				X		

**STIMULATION BY ACID OR FRACTURING**

**WATER FILL UP (F.U.) OR LOST CIRCULATION (L.C.) (X)**

DATE	INTERVAL TREATED	MATERIALS AND AMOUNT USED	FORMATION	F.U.	L.C.	DEPTH	AMOUNT
1/87	6752-7126	7909 gal 28% HCl	A1C	X		6588	25 bbl
			Niagaran	X		6625-7222	365 bbl

**MECHANICAL LOGS, LIST EACH TYPE RUN**

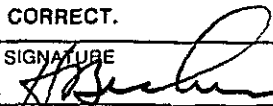
**DEPTH CORRECTION DEVIATION SURVEY PLUGGED BACK**

BRAND	(X)	LOG TYPES	LOGGED INTERVALS	DEPTH	CORRECTION	RUN AT	DEGREES	YES	NO	DEPTH
Schlumberger	X	LDT/CNL/GR	200-7227'						X	
Birdwell		DLL/MLL/GR	6400-7227'							
Northwood	X	Mud Log	6400-7222'							
McCullough	X	Neutron/CCL	6390-7181'							

**PRODUCTION TEST DATA**

OIL - Bbls/day <b>96</b>	GRAVITY - °API <b>48.3</b>	COND. Bbls/day <b>-</b>	GAS - MCF/day <b>503</b>	WATER - Bbls/day <b>2</b>	H <sub>2</sub> S - Grains/100 cu. ft. <b>-</b>	B.H.P. AND DEPTH <b>1809 psi @ 6939'</b>
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I AM RESPONSIBLE FOR THIS REPORT. THE INFORMATION IS COMPLETE AND CORRECT.

DATE <b>1/30/87</b>	NAME AND TITLE (PRINT) <b>J. E. Haines, Operations Manager, MI</b>	SIGNATURE 	For: <b>J. E. Haines</b>
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#40134

FORMATION RECORD  
(ATTACH ADDITIONAL SHEETS IF NECESSARY)

ELEVATION USED KB	GEOLOGIST NAME: N/A	TOPS TAKEN FROM: <input type="checkbox"/> DRILLERS LOG <input type="checkbox"/> SAMPLE LOG <input checked="" type="checkbox"/> ELECTRIC LOG
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FROM	TO	FORMATION (TYPE, COLOR, HARDNESS)	FROM	TO	FORMATION (TYPE, COLOR, HARDNESS)
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NOTE: IF WELL DIRECTIONALLY DRILLED, ADD TRUE VERTICAL DEPTH FORMATION TOPS WHERE APPROPRIATE.

Tops from LDT/CNL/GR Log  
 Base Drift 594  
 Antrim Shale 1700  
 Traverse Frm 1890  
 Traverse Lime 1944  
 Bell Shale 2594  
 Dundee 2662  
 Det Riv Evap 2959  
 Richfield 3631  
 Filer Sandstone -  
 Amherstburg 3935  
 Bois Blanc 4198  
 Bass Islands 4601  
 G Unit 4946  
 F Unit 4991  
 F Salt 5029  
 E Unit 5775  
 D Unit 5912  
 C Shale 5956  
 B Unit 6043  
 B Salt 6083  
 A2 Carbonate 6420  
 A2 Evaporite 6522  
 A1 Carbonate 6570  
 A1 Evaporite -  
 Niagaran 6630  
 Gray Niagaran 7132  
 TD 7222

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IF WELL WAS CORED, ATTACH CORE DESCRIPTION

DRILL STEM TEST DATA

N/A					
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LIST ATTACHMENTS:

Mud Log  
 Dual Laterolog/Micro Laterolog  
 Litho Density/Compensated Neutron

GEOLOGICAL SURVEY USE ONLY

REVIEWED BY:
DATE OF REVIEW

SAMPLE DESCRIPTIONWOOD 5-11A<sub>2</sub> Carbonate Top @ 6420':

6420' - 6522'

Dolomite - light tan, gray, brown, micro-crystalline to very finely microcrystalline, slightly argillaceous, faint laminae pyrite.

A<sub>2</sub> Evaporite Top @ 6522':

6522' - 6544'

Massive salt.

6544 - 6570

Anhydrite - white soft &amp; gummy with interbedded dolomite, dark brown-gray, very finely crystalline, slightly argillaceous, friable.

A<sub>1</sub> Carbonate Top @ 6570':

6570' - 6630'

Dolomite, white to tan, gray to brown, very fine to finely crystalline, trace intercrystalline &amp; vuggy porosity, trace amount of fossils and salt plugging.

A<sub>1</sub> Evaporite Top @ Not PresentNiagaran Top @ 6630':

6630' - 6680'

Dolomite, white to gray, tan to brown, very fine to finely crystalline, slight to fair intercrystalline porosity, fair porosity, limestone increasing downward.

6680' - 6700'

Dolomite as above and limestone - buff to tan, dense, clean, increasing downward.

6700' - 7132'

Limestone - white, buff tan, microcrystalline to very finely crystalline, slightly grainy, dense, clean, some dolomite.

Gray Niagaran Top @ 7132':

7132' - 7192'

Dolomite, brown to gray, micro to very finely crystalline, dense argillaceous, pyrite.

7192' - 7222'

Limestone - Gray to tan, micro to very finely crystalline, dense, argillaceous, silty, slightly dolomitic.