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MAY 30 2006
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Geological Report

Roether #1-16

NE NE SE

2310 FSL, 330 FEL

Section 16-T16S-R25E

Miami Co., Kansas

API# 15-121-28184

Elevation: 1023' GL

Drilling Contractor: Glaze Drilling (Lic. #5885)

Spud: 04-17-06

Production Bore Hole: 9 3/4"

Rotary Total Depth: 600' on 04-19-06

Drilling Fluid: air

Production Csg.: 7"

Geologist: Meredith Pearce

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Formation	Driller Log Tops	Datum
Stark Shale	183'	840'
Hushpuckney Shale	210'	813'
Base Kansas City	225'	798'
Knobtown Sand	250'	773'
Carbonaceous Zone in Tacket Fm.	No call	
"Big Lake" Sand	No call	
South Mound Zone	382'	641'
Hepler (Wayside) Sand	No call	
"Upper" Mulberry Zone	No call	
Mulberry Zone	No call	
Weiser Sand	440'	583'
Myrick Station	460'	563'
Anna Shale (Lexington Coal Zone)	464'	559'
Peru Sand	No call	
Summit Shale Zone	502'	521'
Mulky Coal/Shale Zone	530'	493'
Squirrel Sand	550'	473'
Rotary Total Depth	600'	

16-16-25 E

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Drilling at 180' in the Kansas City on 04-18-06
Background Gas (BG) 9 units

STARK FORMATION driller called @183-184', gas kick to 11 units, 1 over BG

****GAS TEST @200', No Open Flow****

180-190 SH: gy, dark gy, blk
190-200 LS: tan, gy, calcite in fractures, TR fossils
CG @200 8 units, 6 BG
200-210 LS: tan, calcite in fractures, TR fossils - SH: gy, TR blk

HUSHPUCKNEY SHALE driller called @210-211', kick to 7 units, 3 over BG

****GAS TEST @220', No Open Flow****

210-220 SH: gy, dark gy, blk - LS: tan, brn, calcite in fractures
CG @220 14 units, 6 BG
220-230 LS: tan, calcite in fractures - SH: gy, silty, dark gy
230-240 SH: Lt. greenish-gy, silty
CG @240 6 units, 3 BG
240-250 SH: gy

KNOBTOWN SAND driller called @250-256', kick to 9 units, 6 over BG

****GAS TEST @260', No Open Flow****

250-260 SS: clear, gy, mica, TR pyrite, angular, free oil - SH: gy, sandy
CG @260 13 units, 4 BG
260-270 SH: gy
270-280 SH: gy
CG @280 11 units, 3 BG
280-290 SH: gy
290-300 SH: gy
CG @300 10 units, 4 BG
300-310 SH: gy
310-320 SH: gy, silty
CG @320 7 units, 3 BG
320-330 SH: gy, silty

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"BIG LAKE" SAND not called, gas kick to 6 units, 3 over BG

330-340 SH: gy, sandy, TR coal w/free gas
CG @340 5 units, 3 BG
340-350 SH: gy, sandy in places
350-360 SH: gy
CG @360 8 units, 3 BG
Gas kick to 5 units, 2 over BG
360-370 SH: gy
370-380 SH: gy
CG @380 7 units, 3 BG

SOUTH MOUND ZONE driller called @382-385', gas kick to 561 units, 557 over BG

****GAS TEST @400', 27 MCF Total****

380-390 SH: gy, dark gy, blk w/free gas
390-400 SH: Lt gy, silty
Drilling stopped @400' at 5pm

Resumed drilling on 04-19-06 at

****MORNING GAS TEST @400', "Puff" of gas****

400-410 SH: gy, silty
410-420 LS: tan, calcite in fractures - SH: gy
CG @420 236 units, 116 BG

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420-430 SH: gy - LS: tan, brn, calcite in fractures
430-440 LS: tan, brn, calcite
CG @440 248 units, 100 BG

WEISER SAND driller called @440-445', gas kick to 116 units, 16 over BG
****GAS TEST @460', 22 MCF Total**** return of South Mound not new from sand
440-450 SS: clear, brn, gy, angular, free oil, odor - SH: gy, sandy
450-460 SH: gy, silty
CG @460 282 units, 124 BG

LEXINGTON COAL ZONE driller called @464-466', kick to 580 units, 496 over BG
****GAS TEST @480', inc. 9 MCF to 31 MCF Total****
460-470 LS: brn, calcite in frags - SH: dark gy, blk, coaly, v slight free gas
470-480 LS: tan, brn, calcite in frags - SH: gy, TR blk, coaly
CG @480 1742 units, 448 BG
480-490 SH: gy - LS: tan, gy, calcite in frags
490-500 LS: tan, gy, calcite, TR fossils - SH: gy, TR dark gy, slight free gas
CG @500 896 units, 292 BG

SUMMIT SHALE ZONE driller called @502-504', kick to 384 units, 80 over BG
****GAS TEST @520', No increase****
500-510 SH: gy, dark gy, blk, slight free gas
510-520 SH: gy, TR dark gy - LS: tan
CG @520 1352 units, 360 BG
520-530 SH: gy

MULKY COAL/SHALE ZONE driller called @530-534', kick to 384 units, 32 over BG
****GAS TEST @540', No Increase****
530-540 SH: gy, dark gy, blk, coaly, free gas
CG @540 1528 units, 336 BG
540-550 SH: gy, sandy in places

SQUIRREL SAND driller called @550-590', no kick with this
****GAS TEST @580', No Increase****
550-560 SS: clear, brn, angular, mica
CG @560 960 units, 272 BG
560-570 SS: clear, brn, angular, mica, TR coal
570-580 SS: clear, brn, angular, mica, TR coal
CG @580 1512 units, 280 BG
580-590 SS: clear, brn, angular, mica, TR coal
590-600 SH: gy, sandy, TR LS: tan
****GAS TEST @600', No Increase, 31 MCF Total for the Day****
TD @600 on 04-19-06 at 4:30pm

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Brief Summary

Stark	No open flow
Hushpuckney	No open flow
Knobtown	No open flow
South Mound	27 MCF
Lexington	9 MCF
Summit	No increase
Mulky	No increase
Squirrel Sand	No increase
Total	36 MCF

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PAGE3

MAY 30 2006

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CUSTOMER OSBORN ENERGY.
 LEASE NAME Raether
 WELL NUMBER 1-16
 SPUD DATE 4-17-06
 SURFACE SIZE 10" HOLE SIZE 7/4"

WELL LOG

21	Surface	21	
22	Shale	43	
10	Lime	53	
30	Shale	83	
3	Lime	86	
44	Shale	130	
8	Lime	138	
14	Shale	152	
28	Lime	180	
3	Shale	183	
1	Blk Slate	184	
2	Shale	186	
21	Lime	207	
3	Shale	210	

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PAGE 4

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		210	
1	Blk slate	211	
3	Lime	214	
4	Shale	218	
7	Lime	225	Hertba
1	Shale(Dark)	226	
4	Shale(sandy)	230	
20	Shale	250	
6	Sandstone	256	
84	Shale	330	
20	Shale(sandy)	350	
32	Shale	382	
3	Blk Slate	385	27,000 CFM.
30	Shale	415	
4	Lime	419	
12	Shale	431	
9	Lime	440	
5	Sandstone	445	brown (oil smell)
14	Shale(Sandy)	458	
2	Lime	460	
4	Lime	464	
2	Blk Slate	466	9,000 CFM
10	Shale	476	Total 31,000 CFM.
4	Lime	480	
11	Shale	491	
8	Lime	499	
3	Shale(Dark)	502	
2	Blk Slate	504	0 gas
26	Shale	530	
4	Blk Slate	534	0 gas
10	Shale	544	
6	Shale(sandy)	550	
40	Sandstone	590	

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PAGE 5

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8 Shale
1 lime
1 Shale

598
599
600. T.D.

test @ I.D. total 31,000 CFM

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