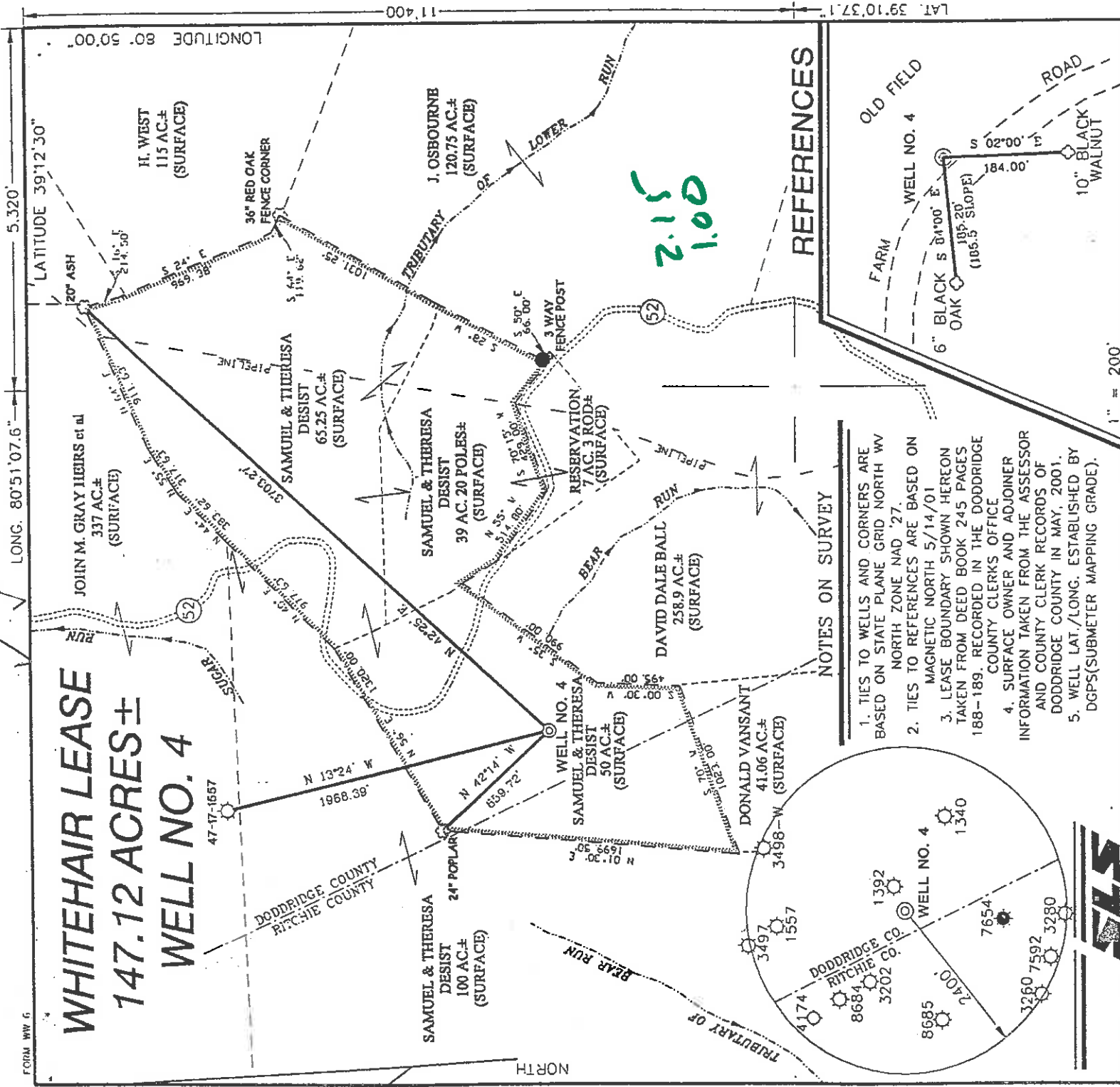
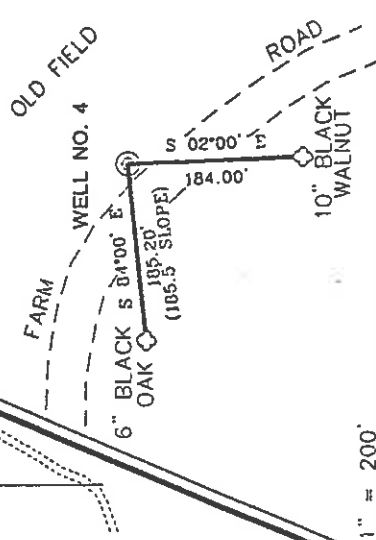


WHITEHAIR LEASE 147.12 ACRES ± WELL NO. 4



REFERENCES



NOTES ON SURVEY

1. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH W/ NORTH ZONE NAD '27.
2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 5/14/01
3. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DEED BOOK 245 PAGES 188-189. RECORDED IN THE DODDRIDGE COUNTY CLERKS OFFICE
4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN MAY, 2001.
5. WELL LAT./LONG. ESTABLISHED BY DGPS(SUBMETER MAPPING GRADE).

2.15
1.00



I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. *Gregory A. Smith*
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE JUNE 14 2001
OPERATORS WELL NO. WHITEHAIR NO. 4
API WELL NO. 47-17-1657 STATE WV COUNTY DODDRIDGE PERMIT NO. 04617

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 4352P4(104-29)
PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEVATION 1214' SCALE 1" = 800'



WELL TYPE : OIL GAS INJECTION WASTE LIQUID DISPOSAL "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION : ELEVATION 1141' WATERSHED BEAR RUN
DISTRICT SOUTHWEST COUNTY DODDRIDGE

SURFACE OWNER SAMPLUEL AND THERESA F. DESIST QUADRANGLE OXFORD 7.5'
ROYALTY OWNER PAULINE WHITEHAIR ET. AL. ACREAGE 50 OF 147.12
LEASE NO. 147.12

PROPOSED WORK :
DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
PHYSICAL CHANGE IN WELL (SPECIFY) ALEXANDER TARGET FORMATION 5600'
ESTIMATED DEPTH 5600'

WELL OPERATOR, KEY OIL COMPANY DESIGNATED AGENT JAN CHAPMAN
ADDRESS 22 GARTON PLAZA WESTON, WV 26452

0000 4617

6-6 133

JUL 20 2001

January 7, 2002
API# 47-017-04617

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Roll
Aub

Well Operators Report of Well Work

Farm name: Samuel DeSist, et ux Operator Well #: Whitehair #4

Location: Elevation: 1141' Quadrangle: Oxford 7.5'

District: Southwest County Doddridge
Latitude 11,400 feet south of 39 Deg. 12 Min. 30 Sec.
Longitude 5,320 feet west of 80 Deg. 50 Min. 00 Sec.

Company: Key Oil Company
22 Garton Plaza
Weston, WV 26452

Agent: Jan Chapman Casing Used in Left in Cement
Drilling Well Fill up

Inspector: Mike Underwood
Permit Issued: 06-14-01 8 5/8 1238 1163 230sks
Well Work Commenced: 11-24-01
Well Work Completed: 12-28-01 4 1/2 5324 5270 460 sks
Verbal Plugging

Permission granted on:

Rotary Cable Rig

Total Depth (ft) 5234'

Fresh water depth (ft) 175'

Salt water depth (ft) N/A

Is coal being mined in are (Y/N) N

Coal depths (ft)



OPEN FLOW DATA

Producing formation Alexander

Gas: Initial open flow odor mcf/d

Final open flow 1563 mcf/d

Time of open flow between initial and final tests

Static rock pressure 1950# psig (surface pressure)

Pay zone depths (ft) 5116-5162

Oil: Initial open flow bbls/day

Final open flow bbls/day

48 Hours

after 48 Hours

Other producing formation: Riley/Warren

Gas: Initial open flow * mcf/day Oil

Final open flow * mcf/day

Time of open flow between initial and final tests

Static rock pressure * psig (surface pressure)

*=commingled zones

Pay zone depths (ft) 3463-4860

Initial open flow bbls/day

Final open flow bbls/day

48 Hours

after 48 Hours

Dodd 4617

For: Key Oil Company

By: 

Date: 01-7-02

FEB 08 2002

47-017-04617
Whitehair # 4

Stage #1 Alexander	perfs 5116-5162	sand 600 sks	60 quality foam
Stage #2 Benson/3 rd Riley	4790-4860	400 sks	60 quality foam
Stage #3 Riley/ Lower Balltown	4074-4484	400 sks	60 quality foam
Stage #4 Upper Balltown/Spechley/3336-3820 Warren	500 sks	60 quality foam	

Drillers Log

Electric Log Tops

KB/GL	0-10		
Clay	10-12		
Sh/RR	12-167		
Sd/Sh	167-202	water @ 175' 1/2" stream	
Sh/Sd	202-302		
Sd/Sh	302-379		
Sh/RR	379-497		
Sd	497-530		
RR	530-560		
Sd/Sh	560-641		
Sand	641-647		
Sd/Sh	647-773		
Sh/RR	773-837		
Sd/Sh	837-933		
Sand	933-1050		
Sd/Sh	1050-1920	water @ 1418' damp	
L. Lime	1920-1965	gas check @ 1928' no show	
B. Lime	1965-2190	oil odor @ 2080'	
Injun	2190-2255		
Sd/Sh	2255-3310	oil odor @ 2263'	
Warren	3310-3360	gas check @ 3313' no show	
Sd/Sh	3360-3686		
Balltown	3686-3820	gas check @ 3719' odor	
Sd/Sh	3820-4470	gas check @ 4460' odor	
Riley	4470-4500		
Sd/Sh	4500-5324	gas check @ 5107' odor; gas check @ 5324' odor	
TID	5324		