

LATITUDE 39°15'00"

LONGITUDE 80°50'00"

7,080'

James B. Hyle
9/23/66

0.965
1.3330

R. WILLIAMS
58.38 AC.

M. WILLIAMS
21.09 AC.

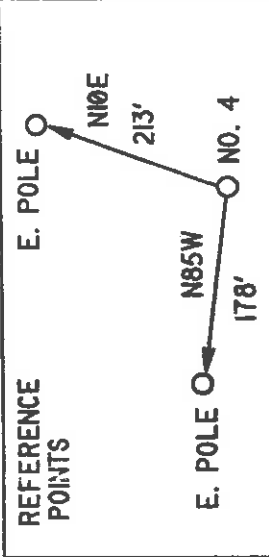
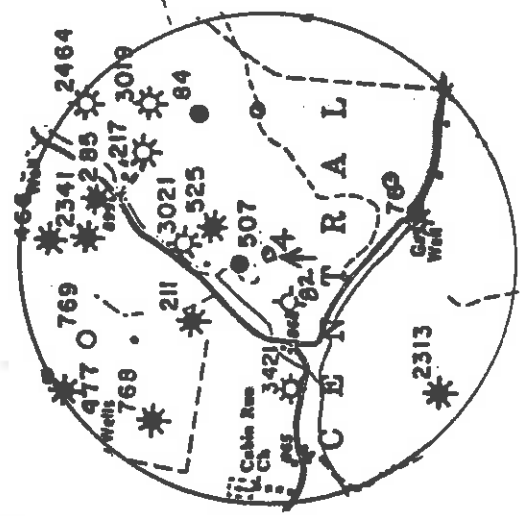
O. PRIMM
78 AC.

O. PRIMM
72 AC.

D. ADAMS
98.56 AC.

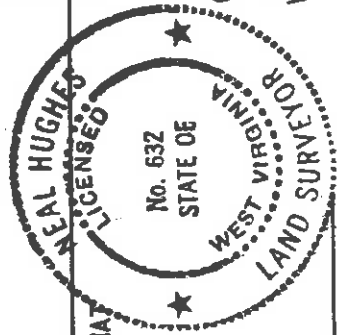
R. HILEY
35 AC.

L. PRIMM
94.77 AC.



I THE UNDERSIGNED, DO 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 ENERGY.

L.L.S. *Neal Hughes*
632



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
DATE AUGUST 16 19 96
OPERATORS WELL NO. LEGGETT 4

API WELL NO. 47-017 COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 96-68 STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY OIL AND GAS DIVISION
SCALE 1" = 500'
PROVEN SOURCE OF ELEVATION ROAD INTERSECTION 868'

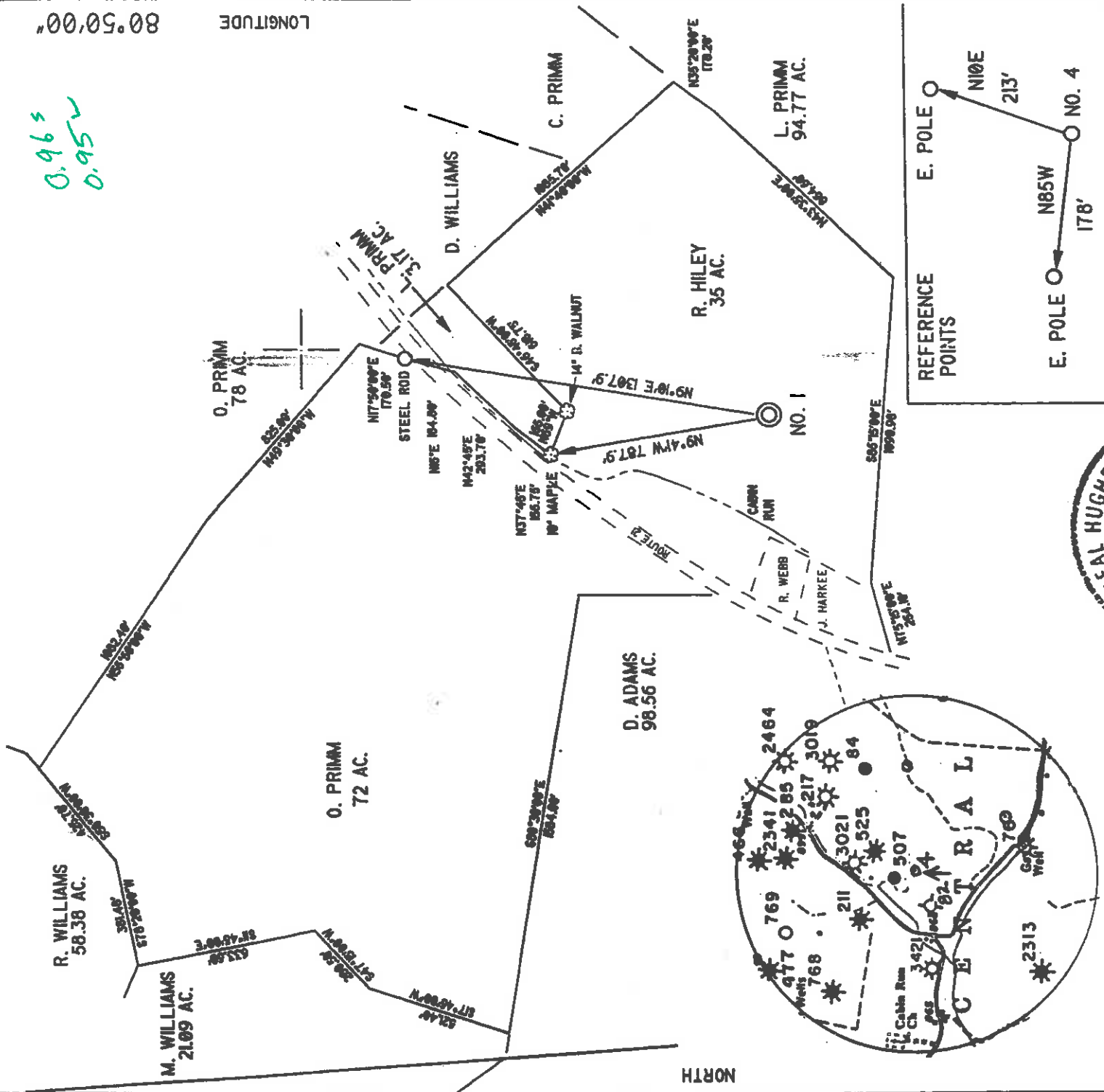
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL 'GAS' PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 980' WATERSHED CABIN RUN
DISTRICT CENTRAL COUNTY DODDRIDGE QUADRANGLE OXFORD
SURFACE OWNER ROGER HILEY ACREAGE 34.62
ROYALTY OWNER MARSHA LEGGETT LEASE ACREAGE 48
PROPOSED WORK:
DRILL CONVERT 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) _____ TARGET FORMATION ALEXANDER
ESTIMATED DEPTH 5600'

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

LATITUDE 39°15'00"

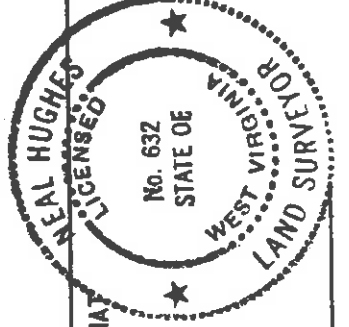
LONGITUDE 80°50'00"

0.963
0.952



I THE UNDERSIGNED, DO 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 ENERGY.

L.L.S. *Neal Hughes*
632



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

DATE AUGUST 16 19 96
OPERATORS WELL NO. LEGGETT 4
API WELL NO. 47-017 04300
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY	1/200	FILE NO.	96-68	STATE OF WEST VIRGINIA	
PROVEN SOURCE OF ELEVATION	ROAD INTERSECTION 868'	SCALE	1" = 500'	DEPARTMENT OF ENERGY	
WELL TYPE: OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> 'GAS' PRODUCTION <input checked="" type="checkbox"/> STORAGE <input type="checkbox"/> DEEP <input type="checkbox"/> SHALLOW <input type="checkbox"/>				OIL AND GAS DIVISION	
LOCATION: ELEVATION	980'	WATERSHED	CABIN RUN		
DISTRICT	CENTRAL	COUNTY	DODDRIDGE	QUADRANGLE	OXFORD
SURFACE OWNER	ROGER HILEY			ACREAGE	34.62
ROYALTY OWNER	MARSHA LEGGETT			LEASE ACREAGE	48
PROPOSED WORK:					
DRILL <input checked="" type="checkbox"/> CONVERT <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input checked="" type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> CLEAN OUT AND REPLUG <input type="checkbox"/> OTHER <input type="checkbox"/>					
PHYSICAL CHANGE IN WELL (SPECIFY)				TARGET FORMATION	ALEXANDER
				ESTIMATED DEPTH	5600'
WELL OPERATOR	KEY OIL COMPANY	DESIGNATED AGENT	JAN CHAPMAN	COUNTY NAME	PERMIT
ADDRESS	22 GARTON PLAZA WESTON, WV 26452	ADDRESS	22 GARTON PLAZA WESTON, WV 26452		



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

APR 28 1997

Permitting
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: HILEY, ROGER & DANITA

Operator Well No.: LEGGETT #4

LOCATION: Elevation: 980.00

Quadrangle: OXFORD

District: CENTRAL
Latitude: 5025 Feet South of 39 Deg. 15 Min. 0 Sec.
Longitude: 5000 Feet West of 80 Deg. 50 Min. 0 Sec.

County: DODDRIDGE

Company: KEY OIL COMPANY
22 Garton Plaza
WESTON, WV 26452-0000

Agent: JAN E. CHAPMAN

Inspector: MIKE UNDERWOOD
Permit Issued: 09/16/96
Well Work Commenced: 09/24/96
Well Work Completed: 10/08/96

Verbal Plugging
Permission granted on: _____
Rotary X Cable _____ Rig
Total Depth (feet) _____ 5418'
Fresh water depths (ft) _____ None
Salt water depths (ft) _____ 380', 1350'

Is coal being mined in area (Y / N) ? N
Coal Depths (ft) : _____ None Reported

OPEN FLOW DATA

- Warren
- Speechley
- Balltown
- Rileys
- Benson

Producing formation Alexander
 Gas: Initial open flow 12 MCF / d Pay zone depth (ft) _____
 Final open flow 1,646 MCF / d Oil: Initial open flow _____ Bbl / d
 Time of open flow between initial and final tests _____ N/A _____ Hours
 Static rock pressure 1650 psig (surface pressure) after 96 _____ Hours

Second producing formation Commingle
 Gas: Initial open flow _____ MCF / d Pay zone depth (ft) _____
 Final open flow _____ MCF / d Oil: Initial open flow _____ Bbl / d
 Time of open flow between initial and final tests _____ _____ Hours
 Static rock pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: KEY OIL COMPANY

By:

PRESIDENT

Date: 3-26-97

APR 28 1997

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4"	125.9	125.9	70 sks To Surface
8 5/8"	1975.05	1975.05	575 sks To Surface
4 1/2"	5324	5324	460 sks
2 3/8"		5156	

- 3321' - 3393'
- 3402' - 3524'
- 3738' - 4454'
- 4470' - 4764'
- 4904' - 4914'
- 5148' - 5236'

Leggett #4 (47-017-04300)
Four Stage Foam Frac - Halliburton

1st Stage:	Alexander (10 holes) (5176.25' - 5221')	60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2, 809 bbis foam.
2nd Stage:	Benson (6 holes) (4909' - 4910.25') Second Riley (4 holes) (4757.75' - 4758.5')	60 Quality Foam. 750 gal 15% HCL. 35,000# 20/40 sand, 394,000 SCF N2, 566 bbis foam.
3rd Stage:	Riley (8 holes) (4509.5' - 4528.25') Balltown (5 holes) (4251.5' - 4417.5')	60 Quality Foam. 1000 gal 15% HCL. 10,000# 80/100 sand, 30,000# 20/40 sand, 508,000 SCF N2, 550 bbis foam.
4th Stage:	Balltown (7 holes) (3840.25' - 3904') Speechley (2 holes) (3511.25' - 3511.5') Warren (2 holes) (3369' - 3369.25')	60 Quality Foam, 1,000 gal 15% HCL. 5,000# 80/100 sand, 35,000# 20/40 sand, 390,000 SCF N2, 589 bbis foam.

WELL LOG

Clay	0	4	
Red Rock	4	17	
Sand & Shale	17	157	
Sand & Shale & Red Rock	157	456	Damp @ 380'
Sand & Shale	586	704	
Sand	704	718	
Shale & Red Rock	718	928	
Sand & Shale	928	1232	
Lime	1232	1246	
Sand & Shale	1246	1515	
White Sand	1515	1552	
Sand & Shale	1552	1905	
Maxton	1905	1923	
Sand & Shale	1923	1941	
Little Lime	1941	1964	
Sand & Shale	1964	1978	
Big Lime	1978	2030	
Big Injun	2030	2094	
Shale	2094	2262	
Weir	2262	2393	
Shale	2393	2454	
Berea	2454	2459	
Sand & Shale	2459	3321	
Warren	3321	3393	
Shale	3393	3402	
Speechley	3402	3524	
Shale	3524	3738	
Balltown	3738	4454	
Shale & Sand	4454	4470	
Riley	4470	4541	
Shale	4541	4730	
2 nd Riley	4730	4764	
Sand & Shale	4764	4826	
3 rd Riley	4826	4861	
Shale	4861	4904	
Benson	4904	4914	
Sand & Shale	4914	5148	
Alexander	5148	5236	
Sand & Shale	5236	5418	
T.D.	5418		

1/2" H²O @ 1350'

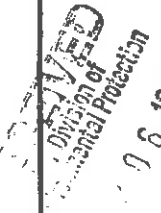
Gas Checks
2509' No Show
3034' No Show
3623' No Show
4361' 16/10ths 1/2" w/H²O
4710' 16/10ths 1/2" w/H²O
5348' 46/10ths 1/2" w/H²O
TD 33/10ths 1/2" w/H²O
Collars 12/10ths 1/2" w/H²O

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
 WELL WORK PERMIT APPLICATION

017 4300

475
 25688 ① 526

- 1) Well Operator: KEY OIL COMPANY LEGGETT #4 3) Elevation: 980'
 Operator's Well Number: LEGGETT #4
 Well type: (a) Oil X / or Gas X / Shaded 09/16/96
 (b) If Gas: Production X / Underground Storage Shallow X / Expired 09/16/98
 Deep /
- 22547 Proposed Target Formation(s): ALEXANDER 439
 Proposed Total Depth: 5500 feet
 7) Approximate fresh water strata depths: 80'
 8) Approximate salt water depths: 1521'
 9) Approximate coal seam depths: N/A
 10) Does land contain coal seams tributary to active mine? Yes / No X /
 11) Proposed Well Work: DRILL, STIMULATE, PRODUCE
 12) Approved



CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS	FOOTAGE INTERVALS	CEMENT		
	Size	Grade	Weight per ft. drilling	Left in well	Fill-up (cu. ft.)
Conductor					<u>390 SPA 11.3</u>
Fresh Water	11 3/4	ERW	42	132	70 SKS. TO SURFACE
Coal					<u>390 SPA 11.2.2</u>
Intermediate	8 5/8	ERW	23	1945	525 SKS. TO SURFACE
Production	4 1/2	J-55	10.5	5400	400 SKS.
Tubing	1.5				<u>390 SPA 11.1</u>
Liners					

PACKERS : Kind _____
 Sizes _____
 Depths set _____

3/15/98 Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Agent
 (Type)

061533

1) Date: SEPTEMBER 3, 1996
2) Operator's well number
LEGETT #4
3) API Well No: 47 - 017 - 4300
State County Permit

Permitting
**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS**

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served: 5) (a) Coal Operator:
- (a) Name ROGER & DANITA HILEY Name NONE
Address RT. 1 BOX 223 Address _____
WEST UNION, WV 26456
- (b) Name _____ (b) Coal Owner(s) with Declaration
Address _____ Name _____
Address _____
- (c) Name _____ Name _____
Address _____ Address _____
- 6) Inspector MIKE UNDERWOOD (c) Coal Lessee with Declaration
Address RT. 2 BOX 135 Name _____
SALEM, WV 26426 Address _____
Telephone (304)- 782-1043

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties, by:

Personal Service (Affidavit attached)

Certified Mail (Postmarked postal receipt attached)

Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator KEY OIL COMPANY
By: _____
Its: PRESIDENT
Address 22 GARTON PLAZA
WESTON, WV 26452
Telephone 304-269-7102

Subscribed and sworn before me this 3RD day of SEPTEMBER 19 96

My commission expires MARCH 24, 2003 _____ Public

