

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

#### Well Operator's Report of Well Work

Farm name: PRIMM, OLIN Operator Well No.: LEGGETT #6 LOCATION: Elevation: 1,108.00 Quadrangle: OXFORD District: **CENTRAL** County: DODDRIDGE Latitude: 1130 Feet South of 39 Deg. 15 Min. 0 Sec. Longitude: 6260 Feet West of 80 Deg. 50 Min. 0 Sec. Casing Used Left Cement Company: **KEY OIL COMPANY** Fill Up & in 22 Garton Plaza In Tubing Drilling Well Cu. Ft. WESTON, WV 26452-0000 Size Agent: JAN E. CHAPMAN inspector: MIKE UNDERWOOD 11 3/4" 122.05' 122.05' 70 sks Permit Issued: 08/29/97 Tο Well Work Commenced: 09/23/97 Surface Well Work Completed: Verbal Plugging 8 5/8" 2120.70' 2120.70 625 sks Permission granted on: To Rotary X Cable Surface Total Depth ( feet ) Fresh water depths (ft) 109 4 1/2" 5418' 5418' 360 sks Salt water depths (ft) 1680 2 3/8" 5272' Is coal being mined in area (Y/N)? N Coal Depths (ft): NONE **OPEN FLOW DATA** Balltown 3866' - 4580' Rileys 4590' - 5000' Benson 5030' - 5040' Producing formation Alexander Pay zone depth (ft) 5276' - 5364' Initial open flow Show Final open flow 1,540 Gas: Show MCF / d Oil: Initial open flow Bbl / d MCF / d Oil: Final open flow show Bbl / d Time of open flow between initial and final tests\_ N/A Hours Static rock pressure 1675 psig (surface pressure) after

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.

REY OIL COMPANY

Commingled

\_ psig ( surface pressure ) after

MCF / d

MCF / d

For:

Time of open flow between initial and final tests

Second producing formation

Initial open flow\_

Final open flow

Gas:

Date: March 26, 1998

Pay zone depth (ft)

Oil: Initial open flow

Oil: Final open flow\_

PRESIDENT

MAY CU

Bbl / d

Bbl / d

Hours

Hours

DODD 4387

### Leggett #6 (47-017-04387) Four Stage Foam Frac - Halliburton

1 <sup>st</sup>	Stage:
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Alexander (14 holes) (5292' to 5352.25')

60 Quality Foam. 500 gal. 15% HCL. 60,000# 20/40 sand, 550,000 SCF N2,

813 bbls foam.

2<sup>nd</sup> Stage:

Benson (7 holes) (5033.25' to 5034.75')

Third Riley (5 holes) (4970' to 4971')

60 Quality Foam. 750 gal. 15% HCL. 40,000# 20/40 sand, 417,000 SCF N2,

618 bbls foam.

3<sup>rd</sup> Stage:

Riley (8 holes) (4635.75' to 4655.25')

Balltown (4 holes) (4537.50' to 4538.25')

60 Quality Foam. 750 gal 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand,

502,000 SCF N2, 745 bbls foam.

4th Stage:

Balltown (14 holes) (4023.75' to 4103.25')

60 Quality Foam. 750 gal 15% HCL. 5,000# 80/100 sand, 45,000# 20/40 sand,

502,000 SCF N2, 684 bbls foam.

#### WELL LOG

Fill and clay	0	14	
Sand & Shale	14	210	Hole damp @ 109'
Red Rock & Sand & Shale	210	280	
Sand	280	340	
Sand & Shale & Red Rock	340	795	
Sand & Shale	795	1836	1⁄2" H²O @ 1680'
Sand & Shale & Red Rock	1836	1923	
Shale	1923	1971	
Sand	1971	2061	
Little Lime	2061	2088	
Shale & Sand	2088	2100	
Big Lime	2100	2160	
Big Injun	2160	2239	GAS CHECKS
Shale	2239	2390	1790' - Show Oil
Weir	2390	2516	2505' - No Show
Shale	2516	2581	3003' - Slight Show
Berea	2581	2586	3718' - Show
Sand & Shale	2586	3465	4529' - Show
Warren	3465	3514	TD - Show
Shale	3514	3528	Collars - Show
Speechley	3528	3641	
Shale & Sand	3641	3866	
Balltown	3866	4580	
Shale	4580	4590	
Riley	4590	4670	
Sand & Shale	4670	4902	
Third Riley	4902	5000	
Shale	5000	5030	
Benson	5030	5040	
Sand & Shale	5040	5228	·
Upper Elk	5228	5240	
Shale	5240	5276	
Alexander	5276	5364	
Shale	5364	5492	
T.D.	5492		

FORM WW-13 STATE OF WEST VIRGINIA DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS WELL WORK PERMIT APPLICATION (1) 526 Well Operator: KEY OIL COMPANY 75655 L) 3) Elevation: 1108' Operator's Well Number: LEGGETT #6 Issued 08/29/97 Well type: (a) Oil X / or Gas X / (b) If Gas: Production X / Underground Stbrage \_/ Deep\_\_/ Shallow X / Proposed Target Formation(s): ALEXANDER Proposed Total Depth: 5600 feet Approximate fresh water strata depths: 90' 7) 8) Approximate salt water depths: 1790' Approximate coal seam depths: N/A 9) Does land contain coal seams tributary to active, mine? Yes\_\_/ No\_X/ 10) Proposed Well Work: DRILL STIMULATE PRODUCE 11) 12) CASING AND TUBING PROGRAM CEMENT SPECIFICATIONS FOOTAGE INTERVALS TYPE Fill-up Weight For Left in per ft. drilling Size well Grade Conductor 132 TO SURFACE 42 132 Fresh Water 11 3/4 ERW Coal 610 SKS. 2090 23 2090 Intermediate 8 5/8 TO SURFACE ERW 490 SKS. 5500 Production 10.5 4 1/2 J-55 Tubing 1 5 Liners PACKERS: Kind Sizes Depths set For Office of Oil and Gas Use Only | Fee(s) paid: | | | | Well Work Permit | | | | Reclamation Fund | | | | WPCP

| Agent

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File Copy	

4)

1) 2)	Date: AUGUST 1 Operator's well nu			
-,	LEGGETT #6			
3)	API Well No: 47 -	017 -	4387	
	State	County	Permit	

Formillery
Cilico of Oil & Gas

3, 1 E.---

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

	NOTICE ANI	) APPLICATION	FOR A WELL	WORK PERMIT	
4)	Surface Owner(s) to be se	rved: 5) (a) Coa	al Operator:		
•,	(a) Name OLIN PRIMM	Na Na	me SAME	•	
	(a) Name OLIN PRIMM Address RT. 1 WEST UNION. WA (b) Name Address	Ad	ldress		
	WEST UNION. W	26456	0		
	(b) Name	(D)	) Coal Owner(	s) with Declaration	
	Address	No	dress		
	(c) Name			·	
	(c) Name Address	Na	ame		
		Ac	ddress	•	
6)	Inspector MIKE UNDERWOOD	(c	Coall esse	with Declaration	
0)	Address RT. 2 BOX 135	N.	ame	Will Declaration	
	SALEM, WV 2642	.6 A	ddress		
	Inspector MIKE UNDERWOOD Address RT. 2 BOX 135 SALEM, WV 2642 Telephone (304)- 782-7	043			
				KE NOTICE THAT:	
				•	sich I hold the
right	Included is the lease or to extract oil and gas OR	eases or other o	continuing cor	itract or contracts by wr	lich i hold the
X	Included is the information	required by Ch	apter 22. Artic	cle 6. Section 8(d) of the	Code of West
Virgi	nia (see page 2)				
_	I certify that as required	under Chapter 2	2 of the West	Virginia Code I have se	rved copies of
this	notice and application, a l	ocation plat, and	accompanyir	ng documents pages 1 ti	nrougn on
ine a	above named parties, by:  X Personal Service	(Affidavit attache	١٣)		
	Certified Mail (Po	stmarked postal i	receipt attach	ed)	
	Publication (Notice	e of Publication	attached)	,	
				D 44 40 and Lance to	the terms and
	I have read and unders	tand Chapter 22	estion	R 11-18, and I agree to	life terms and
CON	ditions of any permit issued	of law that I have	callori. ave nersonal	ly examined and am fa	amiliar with the
info	mation submitted on this :	application form :	and all attach	ments, and that based c	on my inquiry or
thos	se individuals immediately	responsible for o	btaining the ir	nformation, I believe that	the information
is tr	ue accurate and complete				
500	I am aware that there a	are significant pe	enaities for su	bmitting false informatio	ii, including the
Pos	sibility of fine and imprison	Well Operato	KEY O	IL COMPANY	
		By	Hamma		
			SIDENT		
		Address	22 GARTON PI		
		Telephone _	WESTON WV 3 304-269-710	26452 2	•
Su	oscribed and sworn before	me this 15THday		AUGUST 1997	
	4/	0 4			- Bubis
	Kar			CFFICIAL SEAN OF ST VIRGI	PI POD DEC
My	commission expires <u>MA</u>	RCH 24, 2003		KAREN COOK ROUTE 2, BOX 1	
				M, C. J. T. W. WY 1535	78 : 24, 2003
•	•			<b>L</b>	·~