High Volume

Not Drilling

Hydraulic Fracturing

As Usual



Westerman Pad, Kalkaska County



Not Your Grandfather's Well Pad...

2010 State Pioneer Well Missaukee Co



Reasonable Doubt # 1:

Fed, State & Local Exemptions

Sloppy Operators

State Staffing and Budget Cuts



Uncapped water well on site. Shultz Well, Sanilac County



Shultz Well chemical containers left on site >>



Beacon Energy: One Sloppy Operator >>



State Richfield Site, Roscommon Co. 2/6/13 >>> Well was completed 11/25/12

devon Pro	oduction Company, L.P	
Lease:	Schick 1-7HD	
Well Name:	Schick 1-7HD	
County:	Clare	
Township:	60525	
MDEQ Permit #:		
API #:		
Location:	Lat: 44° 3' 23.687" N Long: -84° 42' 50.486" W	

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METAL FREE*

CRETE

PRODUCT NO: 652718

Teléphone (214) 631-6070 / Fax (214) 631-3047







Reasonable Doubt #2:

Record Breaking Water Withdrawals

Permanent Water Contamination

Permanent Removal from H2O Cycle

...Cherries



State Excelsior 3–25 HD–1 Kalkaska Co >>> Michigan's World Record Holder: 21.5 million gallons



Encana's Westerman Well Plan B: One million >> plus gallons of Kalkaska's municipal water at \$2/1000 gallons. 5/31/13



Westerman Well: 1.7 million gallons H20 >> Ready to Frac

Reasonable Doubt #3:

Unanswered Questions

Health & Safety

Cumulative Impacts



Airborne Silica Sand: Westerman Well, Kalkaska >>> Fracking in Progress, May 31, 2013



DEQ Permit Updates 10/1-5/12

694	699	DEN	VER C	DIL DE	VELOPMENT CO			Drilling Unit
API WELLNO:	21-073-006	594-00-0	0			TRUE VERTICAL DEPTH:		
WELL NAME:	ADAMS, R	t. 1				FORMATION:	DUNDEE	
WELL TYPE:	DRY HOL	E				CORRECTION DATE:	07/20/1999	
SURF OWNER:								
							FEET FROM	FEET FROM
LOCATION:	OT OT OT	SEC	т	R	TOWNSHIP	COUNTY	SECTION LINE	DRLG UNIT LINE
SL	SENESE	35	15N	3W	DENVER	ISABELLA	990 N 330 E	
COMMENTS:	WELL REA	MAINS	PLCBE	CAUS	CONTAMINATI	ION IS PRESENT AT SITE. BO	OND HAS BEEN CLAIMED	USER ID: IP
COMPLEXITS.	HELL NG					ON ISTRESENT AT SITE. DO	THU THE DELA CLAUDED	COLK ID: II
1281	2482	THO	OMPSO	NLG				Drilling Unit
API WELLNO:	21-129-012	181-00-0	0			TRUE VERTICAL DEPTH:		
WELL NAME:	PRICE 1					FORMATION:	DUNDEE	
WELL TYPE:	DRY HOL	E				CORRECTION DATE:	07/21/1999	
SURF OWNER:								
							FEET FROM	FEET FROM
LOCATION:	QT QT QT	SEC	т	R	TOWNSHIP	COUNTY	SECTION LINE	DRLG UNIT LINE
SL	NWSWNE	31	22N	38	CHURCHILL	OGEMAW	990 S 330 W	
COMMENTS:	WELL REY	MAINS	ON OW	LASC	ATEGORY III DU	TO POSSIBLE GROUNDW.	ATER CONTAMINATION.	USER ID: JP

18112	1311		CELAN		********			Drilling Unit
18112	1311				********			Drilling Unit
18112	1311				********			Drilling Unit
18112		LAR	GELANI		********			Drilling Unit
API WELLNO:	21-051-181	LAB	KELANI	D OIL (CORP	TRUE VERTICAL DEPTH:		Drilling Unit
API WELLNO: WELL NAME:	21-051-181 KOBETICI	LAB , 112-00-0 H, EDITI	KELANI	D OIL (CORP	FORMATION:	DUNDEE	Drilling Unit
API WELLNO: WELL NAME: WELL TYPE:	21-051-181	LAB , 112-00-0 H, EDITI	KELANI	D OIL (CORP		DUNDEE 09/09/2002	Drilling Unit
API WELLNO: WELL NAME:	21-051-181 KOBETICI	LAB , 112-00-0 H, EDITI	KELANI	D OIL (CORP	FORMATION:		Drilling Unit
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER:	21-051-18) KOBETICI OIL WELL	LA8 112-00-0 H, EDITI	KELANI 10 H ET A	DOIL(CORP 2	FORMATION: CORRECTION DATE:	09/09/2002 FEET FROM	FEET FROM
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION:	21-051-181 KOBETICI OIL WELL QT QT QT	LAB 112-00-0 H, EDITI SEC	KELANI 10 H ET A T	DOIL LL R	2 TOWNSHIP	FORMATION: CORRECTION DATE: COUNTY	09/09/2002 FEET FROM SECTION LINE	FEET FROM DRLG UNIT LINE
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER:	21-051-18) KOBETICI OIL WELL	LA8 112-00-0 H, EDITI	KELANI 10 H ET A	DOIL(CORP 2	FORMATION: CORRECTION DATE:	09/09/2002 FEET FROM	FEET FROM
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION:	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO	LA8 	KELANI 10 H ET A T 17N	L L R 2E	2 TOWNSHIP BENTLEY	FORMATION: CORRECTION DATE: COUNTY	09/09/2002 FEET FROM SECTION LINE 990 N 330 W	FEET FROM DRLG UNIT LINE 330 \$ 330 W
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL	21-051-18) KOBETICI OIL WELL QT QT QT SWNWNE	LA8 	KELANI 10 H ET A T 17N	L L R 2E	2 TOWNSHIP BENTLEY	FORMATION: CORRECTION DATE: COUNTY GLADWIN	09/09/2002 FEET FROM SECTION LINE 990 N 330 W	FEET FROM DRLG UNIT LINE 330 \$ 330 W
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS:	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO USER ID: 1	LAR 112-00-0 H, EDITI SEC 34 REMAI IP	(ELAN) 10 H ET A 17N N PLC 1	L L R 2E BECAU	2 TOWNSHIP BEINTLEY JSE OF HYDROC	FORMATION: CORRECTION DATE: COUNTY GLADWIN	09/09/2002 FEET FROM SECTION LINE 990 N 330 W	FEET FROM DRLG UNIT LINE 330 S 330 W II ORPHAN WELL LIST.
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO	LAR 112-00-0 H, EDITI SEC 34 REMAI IP	KELANI 10 H ET A T 17N	L L R 2E BECAU	2 TOWNSHIP BEINTLEY JSE OF HYDROC	FORMATION: CORRECTION DATE: COUNTY GLADWIN	09/09/2002 FEET FROM SECTION LINE 990 N 330 W	FEET FROM DRLG UNIT LINE 330 \$ 330 W
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API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS: 12767	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO USER ID: 1 1520	LAR 112-00-0 H, EDITI SEC 34 REMAI IP MAI	T 17N N PLC I CCALL	R R R BECAU	2 TOWNSHIP BENTLEY JSE OF HYDROC	FORMATION: CORRECTION DATE: COUNTY GLADWIN ARBON CONTAMINATION	09/09/2002 FEET FROM SECTION LINE 990 N 330 W	FEET FROM DRLG UNIT LINE 330 S 330 W II ORPHAN WELL LIST.
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS: 12767 API WELLNO:	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO USER ID: 1 1520 21-085-127	LAR 112-00-0 H, EDITI SEC 34 REMAI 19 MAI - - - - - - - - - - - - -	T 17N N PLC I CCALL	R R R BECAU	2 TOWNSHIP BENTLEY JSE OF HYDROC	FORMATION: CORRECTION DATE: COUNTY GLADWIN ARBON CONTAMINATION TRUE VERTICAL DEPTH:	09/09/2002 FEET FROM SECTION LINE 990 N 330 W WELL IS ON CATEGORY I	FEET FROM DRLG UNIT LINE 330 S 330 W II ORPHAN WELL LIST.
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS: 12767 API WELLNO: WELL NAME:	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO USER ID: 1 1520 21-085-121 LAKE COU	LAR 112-00-0 H, EDITI SEC 34 REMAI 19 MAI - - - - - - - - - - - - -	T 17N N PLC I CCALL	R R R BECAU	2 TOWNSHIP BENTLEY JSE OF HYDROC	FORMATION: CORRECTION DATE: COUNTY GLADWIN ARBON CONTAMINATION TRUE VERTICAL DEPTH: FORMATION:	09/09/2002 FEET FROM SECTION LINE 990 N 330 W WELL IS ON CATEGORY I	FEET FROM DRLG UNIT LINE 330 S 330 W II ORPHAN WELL LIST.
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API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS: 12767 API WELLNO: WELL NAME: WELL NAME: SURF OWNER:	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO USER ID: 1 1520 21-085-127 LAKE COU DRY HOLI	LAB , 112-00-0 H, EDITI SEC 34 REMAD 19 167-00-0 UNTY F. E	KELANI 0 H ET A 17N N PLC 1 CCALL 0 ARM	R R R BECAU	2 TOWNSHIP BENTLEY ISE OF HYDROC	FORMATION: CORRECTION DATE: COUNTY GLADWIN ARBON CONTAMINATION TRUE VERTICAL DEPTH: FORMATION: CORRECTION DATE:	09/09/2002 FEET FROM SECTION LINE 990 N 330 W WELL IS ON CATEGORY I	FEET FROM DRLG UNIT LINE 330 S 330 W II ORPHAN WELL LIST.
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS: 12767 API WELLNO: WELL NAME: WELL NAME: WELL TYPE: SURF OWNER: LOCATION:	21-051-181 KOBETICI OIL WELL QT QT QT SWNWNE WELL TO USER ID: 1 1520 21-085-127 LAKE COU DRY HOLI QT QT QT	LAR , 112-00-0 SEC 34 MAU , 767-00-0 INTY F E SEC	KELANI 10 H ET A 17N N PLC I CCALL 10 ARM T	R D OIL C	2 TOWNSHIP BENTLEY JSE OF HYDROC (RON	FORMATION: CORRECTION DATE: COUNTY GLADWIN ARBON CONTAMINATION TRUE VERTICAL DEPTH: FORMATION: CORRECTION DATE: COUNTY	09/09/2002 FEET FROM SECTION LINE 990 N 330 W WELL IS ON CATEGORY I MONROE 01/01/2006 FEET FROM SECTION LINE	FEET FROM DRLG UNIT LINE 330 S 330 W II ORPHAN WELL LIST. Drilling Unit
API WELLNO: WELL NAME: WELL TYPE: SURF OWNER: LOCATION: SL COMMENTS: 12767 API WELLNO: WELL NAME: WELL NAME: SURF OWNER:	21-051-181 KOBETICI OIL WELL OIL WELL SWNWNE WELL TO USER ID: 1 1520 21-085-127 LAKE COU DRY HOLJ QT QT QT SWSWNE	LAR 112-00-0 SEC 34 REMAID REMAID MAU 767-00-0 INTY F E SEC 10	T 17N N PLC1 CCALL 0 ARM T 17N	R R R R R R R R	2 TOWNSHIP BENTLEY JSE OF HYDROC (RON TOWNSHIP CHASE	FORMATION: CORRECTION DATE: COUNTY GLADWIN ARBON CONTAMINATION TRUE VERTICAL DEPTH: FORMATION: CORRECTION DATE:	09/09/2002 FEET FROM SECTION LINE 990 N 330 W WELL IS ON CATEGORY I MONROE 01/01/2006 FEET FROM SECTION LINE 370 S 430 W	FEET FROM DRIG UNIT LINE 330 S 330 W II ORPHAN WELL LIST. Drilling Unit

Reasonable Doubt #4:

Waste Generation & Disposal



Michigan's Unique Geology



Fracking Flowback as Dust Control >>> Sunset Trail, Kalkaska



Seely 5 Injection Well, Crawford County > Leaked 135,000 Cubic Feet of H2S on 12/24/11



Two Valves Failed; Leaked For More Than 4 Hrs

Reasonable Doubt # 5:

MNDR/MDEQ "Neutrality"

Oil and Gas Rules, Section 2, Part 615

Amended 2006:

"...it is accordingly the declared policy of the state...to foster the development of the industry along the most favorable conditions and with a view to the ultimate recovery of the maximum production of these natural products."

Michigan's Regs: Up to the Task?

Flowback containment Baseline Water Testing WWAT: paper tiger? "Instructions" aren't binding

Nationwide Insurance:

"From an underwriting standpoint, we do not have a comfort level with the unique risks associated with the fracking process to provide coverage at a reasonable price."



Christensen Well, Ionia County: > Southwest Michigan's Future?



You can't frac in a vacuum

