

WELL PERMIT

34-099-2-3127-00-00

FORM 51 REVISED 3/01

OWNER NAME, ADDRESS

D & L ENERGY INC (Owner #: 2851)  
2761 SALT SPRINGS RD  
YOUNGSTOWN

OH 44509

DATE ISSUED

4/22/2010

PERMIT EXPIRES

4/22/2011

TELEPHONE NUMBER

(330) 792-9524

IS HEREBY GRANTED PERMISSION TO:

Drill New Well

AND ABANDON NEW WELL

IF UNPRODUCTIVE

PURPOSE OF WELL: Oil & Gas

SUBSTANCE TO BE STORED OR COMPLETION DATE IF PERMIT TO PLUG:

Cmplt'd Dt:

DESIGNATION AND LOCATION:

LEASE NAME NORTH STAR  
WELL NUMBER 1  
COUNTY MAHONING  
CIVIL TOWNSHIP YOUNGSTOWN  
TRACT OR ALLOTMENT  
FOOTAGE LOCATION 337'NL & 408'EL OF TWP.

**CORRECTION**

SECTION

LOT

FRACTION

QUARTER TOWNSHIP

X: 2500532  
Y: 534715

TYPE OF TOOLS: Air Rotary/Fluid Rotary

PROPOSED TOTAL DEPTH 10000 FEET  
GROUND LEVEL ELEVATION 861 FEET

GEOLOGICAL FORMATION(S):

TRENTON THRU MT. SIMON

**SPECIAL PERMIT CONDITIONS:** Permit is subject to the attached terms and/or conditions  
Permit Conditions for all wells drilled through the Knox Unconformity  
Samples Requested, see attached letter  
Urbanized Area/Pre-Permitting Site Conditions

**CONDITIONALLY APPROVED CASING PROGRAM (SUBJECT TO APPROVAL OF THE OIL AND GAS WELL INSPECTOR):**

CONDUCTOR MINIMUM OF 60' (IF AIR)  
8 5/8" MINIMUM OF 1000' CEMENT CIRCULATED TO SURFACE  
5 1/2" PRODUCTION CASING CEMENTED IF PRODUCTIVE  
"BLOW OUT PREVENTOR REQUIRED" HAZARDOUS CONDITIONS MAY BE ENCOUNTERED  
ALL DUE PRECAUTIONS SHOULD BE TAKEN

This permit is NOT TRANSFERABLE and expires 365 days after issuance, unless drilling has commenced prior thereto. This permit, or an exact copy thereof, must be displayed in a conspicuous and easily accessible place at the well site before permitted activity commences and remain until the well is completed. Ample notification to inspector is necessary. All mudding, cementing, placing and removing casing, and plugging operations must be done under the supervision of:

**OIL AND GAS WELL INSPECTOR:**

ROBERTS CARL  
3506 CREEKVIEW DR,  
RAVENNA, OH 44268  
Inspector's #: (330) 451-8921  
District #: (330) 222-1527

WAYNE SCHALK - Supervisor  
(330) 284-7936

**FIRE AND EMERGENCY NUMBERS**

FIRE: ( ) - 911

MEDICAL SERVICE ( ) - 911

ADDED REQUEST FOR SAMPLES (4/30/2010)

**DEPUTY MINE INSPECTOR:** MUST BE NOTIFIED IF WELL IN A COAL-BEARING TOWNSHIP IS TO BE PLUGGED AND ABANDONED.

**John F. Husted**

CHIEF, DIVISION OF MINERAL RESOURCES  
MANAGEMENT

STATE OF OHIO  
DEPARTMENT OF NATURAL  
RESOURCES

DIVISION OF MINERAL  
RESOURCES MANAGEMENT  
WELL PERMIT

API WELL NUMBER  
34-099-2-3127-00-00

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**John F. Husted**

CHIEF, DIVISION OF MINERAL RESOURCES  
MANAGEMENT

STATE OF OHIO  
DEPARTMENT OF NATURAL  
RESOURCES

DIVISION OF MINERAL  
RESOURCES MANAGEMENT  
WELL PERMIT

API WELL NUMBER

34-099-2-3127-00-00

FORM 51 REVISED 3/01

D & L ENERGY INC  
2781 SALT SPRINGS RD  
YOUNGSTOWN, OH 44509

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Ohio Department of Natural Resources  
Division of Mineral Resources Management  
2045 Morse Rd. Bldg. H-3 - Columbus OH 43229-6693



### *Urbanized Area Permit Conditions*

<b>Application Number</b>	17894	<b>Permit Number</b>	2-3127	<b>Inspection Date</b>	4/19/10	<b>Modification Date (if applicable)</b>	
<b>Company</b>	D & L Energy Inc.		<b>Lease Name/Well #</b>	North Star #1			
<b>County</b>	Mahoning		<b>Township</b>	Youngstown			
<b>Section/Lot</b>			<b>Urban Area</b>	City of Youngstown			
<b>Inspected By</b>	Carl Roberts						
<b>Accompanied By</b>	Nick Paparodis VP of Land Operations, Surveyor Gary Taneri, Landowner Tim Marucci.						

<b>Directions to Location</b>	Take Salt Springs road south. Division Street east approx. 0.40 miles. Access is on the south side at the gate entrance of Youngstown Sinter Company.
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ITEM	LEASE ROAD, WELL SITE CONSTRUCTION	Comments:
1	<b>Tree/Brush Removal/Disposition</b>	There are no trees or brush to remove.
2	<b>Topsoil Removal/Stockpiles/Placement</b>	The topsoil will be placed on the west side of the drilling location.
3	<b>Erosion/Sediment Control (Silt Fence, Berms)</b>	A silt fence will be placed on the east side of the drilling location.
4	<b>Drainage Controls (Diversion Ditches, Culverts, Waterways, Crossings)</b>	A silt fence will be on the east side of the drilling location for drainage control.
5	<b>Signage</b>	The ID sign will be placed on Division Street.
6	<b>Apron/Culverts/Road Material</b>	Rocks will be used.
7	<b>Pull Off Area</b>	The pull off area is on the drilling location.
8	<b>Parking</b>	The parking is on the drilling location.
9	<b>GPS - Access Road</b>	41.11996 80.68475
10	<b>GPS - Well Stake</b>	41.12018 80.68304
11	<b>GPS - Tank Battery</b>	41.11991 80.68402

ITEM	DRILLING CONSIDERATIONS	Comments:
12	Noise Mitigation (Mufflers, Extra Frac Tanks, Tarps)	Hospital mufflers will be used on the drilling rig.
13	Rig Type	The rig will be an air, fluid rotary rig.
14	Is a Blow-out Preventor required? If No, explain:	X    Yes    No
15	Equipment Placement/ Orientation (Rig/ Frac Tanks/ etc.)	It is recommended that the drilling rig be placed north to south.
16	Drilling Pits (Placement/Orientation)	It is recommended that the drilling pits be on the west side of the rig, north to south.
17	Fencing (Pits/Entire Location)	The drilling pits will be fenced in.
18	Flood Plain	A possible flood plain.
19	Mine Voids	There are no known mines in the area.
20	Verify Water Wells Within 300'	There are no known water wells within the 300 feet.
21	Verify Structures Within 500'	There is 1 structure within the 500 feet area.
22	Verify Streams and Drainage	There are no known streams. The Mahoning river is to the east.

ITEM	RESTORATION	Comments:
23	Pit Closure - (Standard/ Solidification/ Off-Site Disposal - state time frame)	The drilling pits will be solidified 30 days after the drilling is complete.
24	Site Specific Time Frame For Restoration	The entire location will be restored within 9 months.
25	Erosion/Sediment Control	A silt fence will be placed on the east side of the drilling location.
26	Drainage Control	A silt fence will be placed on the east side of the drilling location.

ITEM	PRODUCTION	Comments:
27	Is the Access Road Gate required? If No, explain:	Yes    X    No The Youngstown Sinter area is totally fenced in and locked.
28	Landscaping/Screening (Wellhead, Tank Battery) (Waiver Attached if applicable)	A chain link fence with 3 strands of barbed wire on top will be place around the wellhead and the tank battery
29	Fencing (Wellhead, Tank Battery) (Waiver Attached if applicable)	A chain link fence with 3 strands of barbed wire on top will be place around the wellhead and the tank battery

WAIVERS	Comments:
Is the Company required to submit a waiver?	Yes    X    No
If yes, submit the following waiver requests:	

Is the Company required to submit revised drawings?    X    Yes    No

THE FOLLOWING ITEMS HAVE BEEN CHANGED FROM THE ORIGINAL APPLICATION:

**PERMIT CONDITIONS FOR ALL WELLS  
DRILLED THROUGH THE KNOX UNCONFORMITY**

**Alert** Owners should prepare to encounter large volumes of high-pressure natural gas when drilling through reservoirs below the Knox Unconformity. In accordance with Section 1501:9-9-02 of the Ohio Administrative Code, the owner, contractor and all persons in control of wells being drilled, shall use all reasonable means to safeguard against hazards to life, limb and property.

**THESE STIPULATIONS MUST BE DISPLAYED WITH THE PERMIT IN A CONSPICUOUS PLACE AT THE WELL SITE IN ACCORDANCE WITH SECTION 1509.05 OF THE OHIO REVISED CODE.**

1. Surface casing shall be set to a depth which is at least 10 percent (10%) of the total depth (TD) of the well or 50 feet through the deepest underground source of drinking water (USDW), whichever depth is greater. In addition, sufficient surface casing shall be set to allow the blowout preventor to contain any formation pressures that may be encountered before deeper casing is set. The surface casing shall be cemented with sufficient excess cement circulated to surface.
2. A blowout preventor (BOP), equipped with a choke manifold of sufficient size and pressure rating to control normal hydrostatic pressures for the deepest pool to be penetrated, must be installed on the surface casing. The BOP shall be chained to the rig substructure in a manner which minimizes any potential jarring or damage to the surface casing and/or collar threads.
3. A BOP test shall be conducted before drilling resumes below the surface casing. The test shall require a minimum pressure of 250 PSI for at least fifteen minutes. It is recommended that the BOP be tested at 500 PSI or the maximum anticipated surface pressure for the deepest pool to be penetrated. The owner shall provide a minimum of 8 hours advance notice to the appropriate Division inspector, so that the inspector may be present to witness the BOP test. The inspector may authorize the test to proceed in his/her absence. If the inspector is not present at the scheduled time, the owner can conduct the BOP test.
4. For air rotary operations, a rotating air-head in good working condition must be installed on the surface casing. Stripper rubbers should be inspected and replaced, if necessary, prior to drilling into formations where natural gas is anticipated.
5. For air rotary operations, a staked and chained steel blow (discharge) line must be vented not less than 80 feet from the well into a pit. For fluid rotary operations, a staked and chained blow line, at least 40 feet long, should be directed into a pit. Whether, drilling on air or fluid, the blow line shall be directed away from all inhabited structures and traveled roads that could be affected if high-pressure natural gas is encountered. All line fittings must be of high-pressure grade. The owner shall also install a kill line(s) for control of gas and/or oil shows.
6. To control high-pressured gas and/or oil that may be encountered below the Knox Unconformity, the operator may drill on a fluid system or maintain a smudge from a depth of 400 feet above the expected top of the producing formation to total depth. When a smudge is maintained, the local fire department should be notified of the potential controlled flare prior to drilling into the producing formation. When a fluid system is used the density of the fluid shall be sufficient to control all gas and/or oil shows encountered.
7. The owner shall maintain a sufficient supply of brine and/or mud at the well site for possible well control emergencies.
8. **THE DIVISION OF MINERAL RESOURCES MANAGEMENT MUST GRANT PRIOR APPROVAL BEFORE ANY MODIFICATION OF THESE CONDITIONS.**

SO/lc:

Updated 12-15-04/KNX1

WELL COMPLETION RECORD (Form 8)

DEC 2 2010

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Ohio Department of Natural Resources  
 Division of Mineral Resources Management  
 2045 Morse Road, Bldg. H-3, Columbus, OH 43229-6693  
 Telephone: 614-265-6633 Fax: 614-265-7998

This report is due in duplicate 60 days after completion of the well. If the permit has expired and the well was not drilled, check the box below, sign on reverse side (Back), and return to our office within 30 days after expiration.

1. Owner #: 2651		3. API #: 34-099-2-3127-00-00	
2. Owner name, address and telephone numbers: D & L ENERGY, INC. 2761 SALT SPRINGS ROAD YOUNGSTOWN, OH 44509 Phone: 330-792-9524		4. Type of Permit: CONVERT	
		5. County: MAHONING	
		6. Civil Township: YOUNGSTOWN	
		7. Footage: 3372'NL & 4080'EL OF TWP.	
8. Type of Well: Water Injection - Disposal			
9. X: 2500532 Y: 534715		21. Date drilling commenced: 4/27/2010	
10. Quad: YOUNGSTOWN		22. Date drilling completed: 5/13/2010	
11. Section: 12. Lot:		23. Date put into production: N/A	
13. Fraction: 14. Qtr.Twp:		24. Date plugged if dry: N/A	
15. Tract:		25. Producing formation: INJECTION KNOX THRU MT. SIMON	
16. Allot:		26. Deepest formation: PRECAMBRIAN BASEMENT	
17. Well #: 1		27. Driller's total depth: 9192'	
18. Lease Name: NORTH STAR (SWIW #10)		28. Logger's total depth: 9184'	
19. PTD: 9184 20. Drilling Unit: 41.763		29. Lost hole at _____ feet.	
30. Type of tools: <input type="checkbox"/> Cable <input checked="" type="checkbox"/> Air Rotary <input type="checkbox"/> Fluid Rotary <input type="checkbox"/> Air/Fluid Rotary <input type="checkbox"/> Cable/Air Rotary <input type="checkbox"/> Service Rig <input type="checkbox"/> Cable/Fluid Rotary <input type="checkbox"/> Cable/Air Rotary/Fluid Rotary		31. Type of completion <input checked="" type="checkbox"/> Open Hole <input type="checkbox"/> Through Casing <input type="checkbox"/> Slotted Liner	
		32. Elevation: Ground Level 861 Derrick Floor 876 Kelly Bushing 877	
33. Perforated intervals and number of shots:		OPEN HOLE (injection test results previously submitted)	
34. Name of Frac Company:		WELL NOT FRACED (injection test by Appalachian Well Services)	
35. Method of shot, acid, or fracture treatments, production tests, pressures, etc.:			
SHOT: Lbs. _____ Qts. _____ Type _____		ACID: 1500 Gals. Type HCL Percent 28%	
		FRAC FLUIDS: Water (gals) N/A Water (bbt) N/A CO2 (tons) N/A N2 (mscf) N/A	
		SAND: _____ Lbs. _____ Sks.	
		PRESSURES (psi): Breakdown N/A ATP _____ ISIP 1575# 5 min. SIP 1250# Avg. Rate 5	
METHOD OF FLUID CONTAINMENT			
FLUIDS: Swab <input checked="" type="checkbox"/> Flowback <input checked="" type="checkbox"/>		PIT: <input type="checkbox"/> FRAC TANK: <input type="checkbox"/>	
		DATE TREATED: 6/4/2010	
36. Amount of initial production per day:			
Natural: Gas NONE		(MCF.)	
After Treatment: Gas N/A		(Bbls.)	
SERC Data: Number of Tanks: N/A		(Bbls.)	
		Oil NONE Brine NONE	
		Oil N/A Brine N/A	
		Maximum Storage Capacity of all Tanks (bbls) N/A	
37. Casing and tubing record: Please indicate which is used (cement or mudding)			
Type	Size	Feet Used in Drilling	Amount of Cement or Mud
Conductor/Drive Pipe:	11 3/4"	72	driven pipe
Surface:	8 5/8"	1010	400 sx. 38 bbl return
Intermediate:			
Production:	5 1/2"	8215'	19.9 bbl @ 14.3#/gal
Tubing:	2 4/8"	8137'	Lockset Packer @ 8137'
Comments:	Production CSG Hung & Cemented with Weatherford CAP & Diverting Tool		
38. Name of drilling contractor: UNION DRILLING COMPANY			
39. Type of electrical and/or radioactivity logs run: (all logs must be submitted) GR-CN-ZDL-CAL, GR-XMAC-CAL, SPECTRALOG, FLEX-MREX, STARC-CBIL			
40. Name of logging company: BAKER HUGHES			

**DIVISION USE ONLY**

Log Submitted:  Y  N  
 Confidential:  Y  N

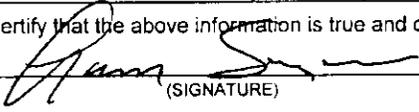
FRAC DATA SUBMITTED:  
 Pressure/Rate Graph   
 Record   
 Invoice

Well Class: SWIW

*12 months*

FORMATION	TOP	BASE	Shows of oil, gas, fresh water, or brine; indicate depth or interval	REMARKS
Freshwater Strata				
Glacial Deposits				
Coal Seams				
1st Cow Run				
Buell Run				
2nd Cow Run				
Salt Sand				
Maxton Sand				
Keener Sand				
Big Injun Sand				
Squaw Sand				
Mississippian Shale				
Weir Sand				
Berea Sand				
Bedford Shale				
2nd Berea				
Ohio Shale	2290			
Gantz				
Thirty Foot				
Gordon				
Cinnamon				
Marcellus	3036			
Big Lime				
Sylvania				NO SHOWS
Oriskany	3132			
Bass Island				
Salina	3678			
Salt Section				
Newburg				
Lockport	4764			ROCHESTER SH
Little Lime				
Packer Shell	4832			
Stray Clinton				
Red Clinton	4903			
White Clinton	4940			
Medina	5032			
Queenston	5050			
Utica	6615			
Trenton	6820			
Black River	7078			
Gull River	7545			
Glenwood Shale				
Knox Unconformity	7690			
Beekmantown				
Rose Run	7846			
Trempealeau/Copper Ridge	7953			
"B" Zone	8134			
Krysik				
Kerbel				
Conasauga				
Rome				
Mt. Simon	8783			
Granite Wash				
Middle Run				
Granite	8988			

I certify that the above information is true and correct, to the best of my knowledge:



(SIGNATURE)

Larry Smyers

(NAME typed or printed)

11/23/10

(DATE)

Exploration Manager

(TITLE)

D & L Energy, Inc.

(REPRESENTING)