

# ONTARIO OIL, GAS & SALT RESOURCES LIBRARY - WELL DATA DESCRIPTION

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*Note: all depth measurements are expressed in metres*

*Note: LIC\_NUM and LIC\_NUMBER refer to the same unique well identification number.*

*Note: KB means Kelly Bushing or rig floor.*

## **GAS TABLE**

LIC_NUM	unique well id (licence number)
TOP_INTERV *	top interval where gas encountered measured from KB
BOT_INTERV	bottom interval where gas encountered measured from KB
FLOW **	flow expressed in 1000 metres cubed per day
SIP	shut in pressure expressed in kilo Pascal at gauge

## **GEOLOGY TABLE**

LIC_NUM	unique well id (licence number)
SOURCE	source of formation top picks - MNR or Form 7 (operator)
GEO_FORMATION	geological formation name
TOP	depth to top of geological formation measured from KB
TVD	true vertical depth measured from KB
ELEV	elevation of top of formation measured from sea level
SEQ_NUM	stratigraphic sequence number assigned to each geological formation (see table below)

## **LOG TABLE**

LIC_NUM	unique well id (licence number)
TOP_INTERV	top interval logged with geophysical/mechanical tool measured from KB
BOT_INTERV	bottom interval logged with geophysical/mechanical tool measured from KB
TYPE	type of log (gamma ray, neutron, sonic etc.)
COMPANY	logging company
RECVD_DATE	date log received
REMARKS	remarks

## **OIL TABLE**

LIC_NUM	unique well id (licence number)
TOP_INTERV *	top interval where oil encountered measured from KB
BOT_INTERV	bottom interval where oil encountered measured from KB
FLOW **	flow expressed in metres cubed per day
API	American Petroleum Institute oil density

## **WATER TABLE**

LIC_NUM	unique well id (licence number)
TOP_INTERV	top interval where water encountered measured from KB
BOT_INTERV	bottom interval where water encountered measured from KB
LEV	static level (depth) to which water rose measured from KB
TYPE	type of water (salt, fresh, sulphur or other)

## **WELL INFORMATION TABLE**

LIC_NUMBER	unique well id (licence number)
FULL_NAME	official well name including township, lot and concession
CUR_STATUS	current well status (see explanation below)
OPERATOR	name of the operator of the well
CLASS	MNR classification (see explanation below)

TARGET	group of geological formations being targeted (see explanation below)
PURPOSE	purpose of drilling (oil, gas, salt, storage)
WELL_TYPE	well type (oil well, dry hole, gas show etc)
WELL_MODE	well mode (active, suspended, abandoned etc)
GRND_ELEV	ground elevation at well site measured from sea level
KB_ELEV	rig floor elevation measured from sea level
LOGGER_TD	total depth of the well measured by logger
TD	total drilled depth of well measured from KB
TVD	true vertical depth measured from KB
PBTD	plug back total depth measured from KB
TD_FORM	geological formation at total depth
TD_FRM_SEQ	stratigraphic sequence number assigned to geological formation at TD (see table below)
HORIZONTAL	horizontal well
DIRECTIONL	directional well
VERTICAL	vertical well
DEEPENING	deepening
RE_ENTRY	well re-entry (servicing)
ROTARY	well drilled by rotary rig
CABLE	well drilled by cable tool rig
COUNTY	county
TOWNSHIP	geographic township
TRACT	tract (subdivision of lot) as per O.Reg. 245/97
LOT	lot (subdivision of township)
CONC	concession (subdivision of township)
LE_BLOCK	lake erie crown land survey block id
LE_TRACT	lake erie crown land survey tract id
NS_BOUNDRY	north south distance to well head from lot boundaries
NS_LOC_IND	north south direction indicator (see example below - NS-EW Well Location)
EW_BOUNDRY	east west distance to well head from lot boundaries
EW_LOC_IND	east west direction indicator (see example below - NS-EW Well Location)
SUR_LAT27	surface latitude measurement at well head according to North American Datum 1927
SUR_LONG27	surface longitude measurement at well head according to North American Datum 1927
BOT_LAT27	bottom hole latitude measurement according to North American Datum 1927
BOT_LONG27	bottom hole longitude measurement according to North American Datum 1927
SUR_LAT83	surface latitude measurement at well head according to North American Datum 1983
SUR_LONG83	surface longitude measurement at well head according to North American Datum 1983
BOT_LAT83	bottom hole latitude measurement according to North American Datum 1983
BOT_LONG83	bottom hole longitude measurement according to North American Datum 1983
POOL	subsurface accumulation of oil and/or natural gas
SPCING_ORD ***	spacing order prescribed by MNR
PRIM_PROD	primary producing formation name
WELL_NAME	well name
GAS_VOLUME	gas volume expressed in 1000 metres cubed per day
OIL_VOLUME	oil volume expressed in metres cubed per day
PRESSURE	intial shut-in pressure of newly drilled well expressed in kilo Pascal
PERFORATED	indicator of cased well perforated casing completion
OPEN_HOLE	indicator of open hole well completion
APPL_DATE	application date
LIC_ISS_D	licence issue date
START_DATE	start date of drilling
TD_DATE	drilling total depth date
COMPL_DATE	date well completed for production
WORKOVER_D	workover date
PLUG_END_D	plug end date
SAMP_TRAY	drill cuttings sample tray number
PROD_FORM	producing formation
DST_DATE	drillstem test date
TD_NOTC_D	total depth notice date
SPUD_NOTC	spud notice date

LAST_SUS_D	last suspended date
LAST_CHANG	last change date (record change date)
COMPL_NOTC	completion notice date
PLUG_NOTC	plug notice date
SPUD_DATE	spud date
ISSUE_DATE	issue_date
PROPD_DEPT	proposed depth

\* (In many cases only the top interval is recorded as it is hard to determine the thickness of the producing/flowing formation.)

\*\* (Flow of 1, -1, 0, -0 means flow was too small to measure)

\*\*\* (Surface area and the subsurface beneath the surface area, established for the purpose of drilling for or producing oil or gas.)

### CLASSIFICATION CODES

NPW	"New-Pool Wildcat Well" is a well located 750 metres or more, measured between the centers of the respective drilling spacing units, from a producing well or a well presently or formerly capable of production from the target horizon. Such a well is drilled in a geological environment where other pools have been found but where, in Ministry's opinion, the complexities in geological conditions are such that searching for a new pool has a high risk of failure. The objective of a new-pool wildcat well is the discovery of a new pool in an area known to contain oil or gas. Generally all exploratory wells permitted in southwestern Ontario will be classified as NPW's due to the close proximity of oil and gas fields in the region.
DPT	"Deeper Pool Test Well" is a well located within the established or expected limits of a pool or pools and drilled with the objective of searching for undiscovered oil or gas below the deepest such pool. Only the interval from the base of the deepest established pool to total depth constitutes exploratory meterage at a deeper pool test; the remainder of the drilled interval is regarded as development meterage.
DEV	"Development Well" is a well drilled within a distance of 750 metres from known production, as measured between the centers of the respective spacing units, and has the objective of further exploiting the known productive zone. Such a well may be inside the pool already outlined by wells, or it may be a relatively short distance outside these limits.

### TARGET

Chronostratigraphic system or lithostratigraphic group which include the rock unit which is the primary target of the well being drilled. Seven primary targets are recognized in Ontario.

1. Devonian DEV	Devonian
2. Silurian SIL	Unsubdivided
3. Silurian SAL	Targets within the Salina Group and Guelph Formation in particular, and the Rochester to Bass Islands Formations inclusive.
4. Silurian CLI	Targets within the Clinton and Cataract (or Medina) Groups (Whirlpool to Irondequoit Formations inclusive).
5. Ordovician ORD	Ordovician
6. Cambrian CAM	Cambrian

7. Precambrian PRE Precambrian (usually stratigraphic tests).

#### WELL STATUS - MODE

1. Active ACT A well which is in active operation in accordance with the purpose for which it is licensed.
2. Suspended SUS A well that failed to achieve or is no longer being used for its licensed purpose, and the well has not been plugged.
3. Abandoned ABD A well which is officially plugged and abandoned.
4. Abandoned & whipstocked ABW A well drilled and plugged back and another hole drilled and whipstocked out of the same well bore.
5. Capped CAP A well with proven productivity (by test or judgment) which has not been placed on production.
6. Potential POT A newly-drilled or recompleted well in which suitability for production, injection or storage is assumed but not proven. This mode is applicable for a maximum of 12 months after the TD date or recompletion date of the well.
7. Abandoned & junked (lost) LOS A well abandoned because of mechanical difficulties in the hole.
8. Not drilled NDR A location for which a well licence has been issued but a well has not yet been drilled.
9. Cancelled CAN A location for which a well licence was issued but the licence has been cancelled.
10. Unknown UNK A well for which there is no available information on mode in Ministry records.

#### WELL STATUS - TYPE

1. Oil OP A well presently or formerly used to produce oil from a reservoir.
2. Natural gas GP A well presently or formerly used to produce natural gas from a reservoir.
3. Oil and gas well OPGP A well presently or formerly used to produce both oil and gas from a reservoir.
4. Injection INJ A well used primarily to inject fluid into a formation as part of a secondary recovery operation approved by the Ministry.
5. Natural gas storage NGS A well used for injection or withdrawal of natural gas to or from storage in a reservoir.
6. Cavern storage LPG A well used for injection or withdrawal of fluids (hydrocarbons or brine) in a solution-mined storage cavern.
7. Disposal BD A well used for the disposal of oil field fluid into an underground formation.
8. Observation OBS A well used to monitor performance in a natural gas storage reservoir, oil or gas pool, aquifer, hydrocarbon storage cavern, or solution mining cavern.
9. Solution mining SM A well used for injection or withdrawal of fluids (fresh water or brine) into a subsurface salt formation for the purpose of mining salt.
10. Brine BW A well used to produce naturally occurring salty or mineralized formation water (not fresh water).
11. Stratigraphic test STR A well drilled for the purpose of geological evaluation or testing.
12. Dry hole DH A well classed as exploratory or development in which no hydrocarbons have been encountered.
13. Oil show OS A well classed as exploratory or development in which oil has been encountered but has not been proven or judged to be productive.
14. Gas show GS A well classed as exploratory or development in which gas has been encountered but has not been proven or judged to be productive.
15. Oil & gas show OSGS A well classed as exploratory or development in which oil and gas have been encountered but has not been proven or judged to be productive.
16. Private gas PGP A well used by the land and mineral rights owner to produce gas from a reservoir for private, non-commercial use.
17. Historical oil HOP A well used to produce oil from a reservoir designated as a "historical oil field".
18. Location LOC A location for which Ministry records indicate a well has been drilled but for which no status information is available.
19. Source well SW A well used to produce water for injection into a reservoir as part of a secondary recovery project approved by the Ministry.

20. Licensed LIC

A location for which a well licence has been issued but no well has been drilled.

### NS-EW WELL LOCATION

Example: 255mE, 150mS describes a well located 255 metres East from the West lot line and 150 metres South of the North lot line.

<b>FORMATION</b>	<b>SEQUENCE NUMBER</b>
Drift	001
Top of Bedrock	002
Mattagami	101
Mistuskwia Beds	200
Kettle Point	301
Long Rapids	302
Hamilton Group	303
Williams Island	304
Marcellus	305
Dundee	306
Murray Island	307
Columbus	308
Lucas	309
Moose River	310
Amherstburg	311
Sylvania	312
Bois Blanc	314
Stooping River	316
Bass Islands/Bertie	400
G Unit	401
F Unit	402
F Salt	403
E Unit	404
D Unit	405
C Unit	406
B Unit	407
B Salt	409
B Anhydrite	410
A-2 Carbonate	411
A-2 Salt	413
A-2 Anhydrite	414
A-1 Carbonate	415
A-1 Evaporite	416
Kenogami River	417
Guelph	418
Eramosa	420
Goat Island	421
Gasport	422
Warton/Colpoy Bay (Amabel)	423
Lions Head	424
Ekwan River	426
Rochester	428
Irondequoit	429
Reynales/Fossil Hill	430
Thorold	433
Wingfield	435
Dyer Bay	436
Severn River	437
Grimsby	439
Cabot Head	440
Manitoulin	441
Whirlpool	442

Queenston	500
Georgian Bay/Blue Mtn	502
Billings	504
Churchill River Group	506
Collingwood	507
Trenton Group	510
Cobourg	511
Lindsay	512
Sherman Fall	515
Verulam	516
Kirkfield	517
Black River Group	518
Coboconk	519
Gull River	522
Shadow Lake	523
Cambrian	600
Trempeleau/Little Falls	601
Eau Claire/Theresa	602
Precambrian	700

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