

As-Drilled Survey Plan of (IEM Licence No. 9385)

# LEGACY et al PIERSON HZNTL 16 - 18 - 2 - 28

## Well Site

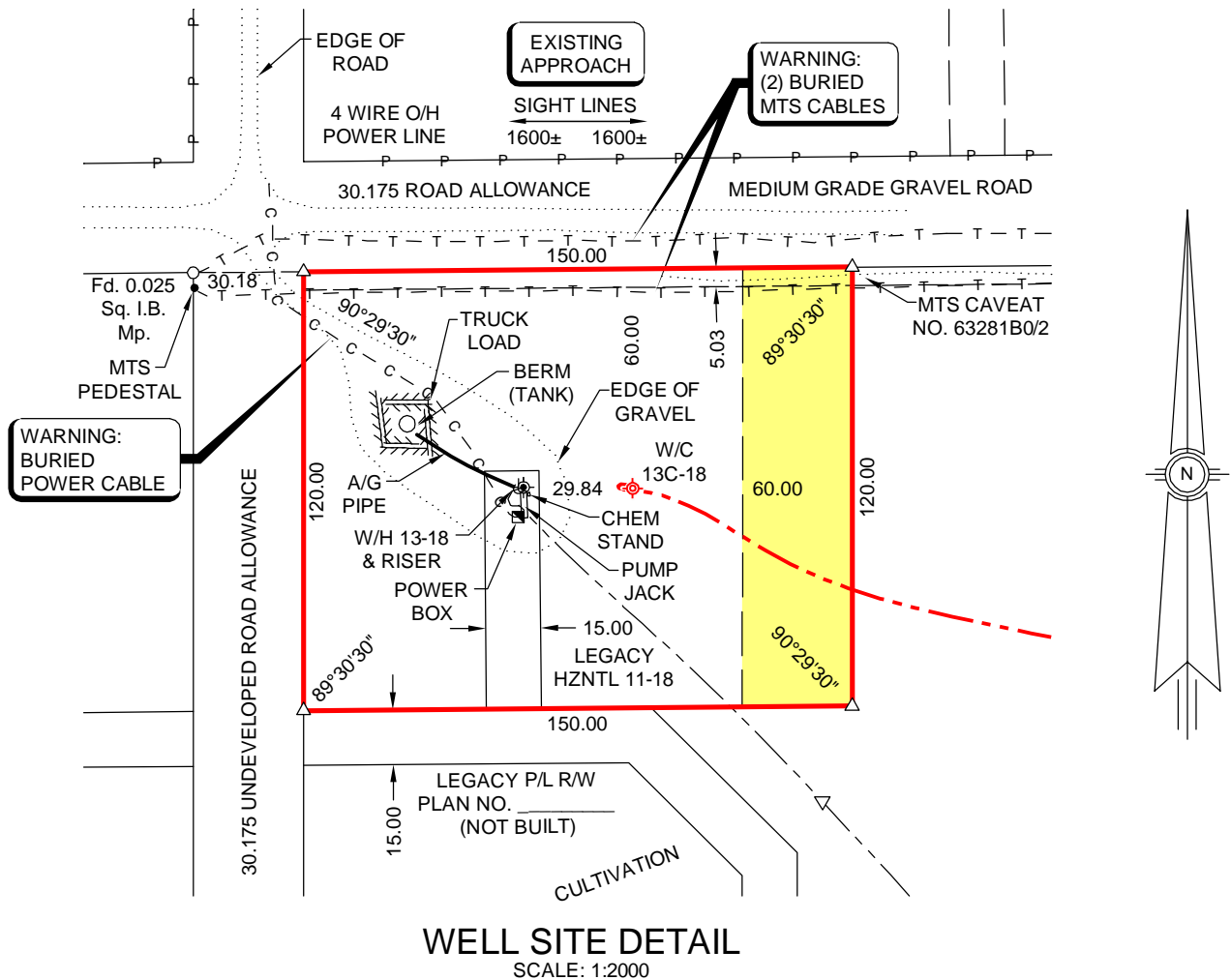
Horizontally Drilled From a Surface Location At

### L.S.13C SEC.18 TWP.2 RGE.28 WPM

To End of Horizontal At

### L.S.16D SEC.18 TWP.2 RGE.28 WPM

R.M. OF EDWARD



**LICENCING INFORMATION:**

The proposed well centre:	YES	NO
Is at least 45m from any surveyed road	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is at least 75m from any surface improvement	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is at least 100m from any water covered area	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Is at least 200m from any residence	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**SURFACE CO-ORDINATES: 13C-18**

60.00 SOUTH of NORTH } SEC. 18  
 90.00 EAST of WEST

**CARTESIAN CO-ORDINATES:**

59.24 SOUTH } N.W. COR. SEC. 18  
 89.99 EAST

**GEOGRAPHIC CO-ORDINATES:**

LAT. = 49°07'54.134" } NAD 83  
 LONG. = 101°13'34.239" } (CSRS)

**UTM CO-ORDINATES:**

UTM = 5 444 483.13 N. } NAD 83  
 337 607.34 E. } GPS DERIVED  
 UTM = 5 444 261.58 N. } NAD 27  
 337 634.11 E. } GPS DERIVED

**ELEVATIONS: WELL CENTRE = 463.85**

N.W. = 463.46 N.E. = 463.80  
 S.W. = 464.37 S.E. = 463.91

DATUM: PROVINCE OF MANITOBA MON.  
 No. 82R737, ELEV.: 453.947

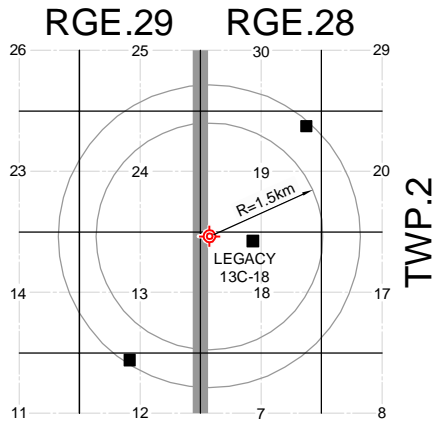
**AREAS: 1/4 HECTARES ACRES**

WELL SITE (NEW):	NW18	0.360	0.89
WELL SITE (EXISTING):	NW18	1.440	3.56
<b>TOTAL :</b>		<b>1.800</b>	<b>4.45</b>

OPERATOR:



LEGACY FILE NO.: S02671	BROKER FILE NO.: LGY 25	2
413-3334W01-R2.DWG	CALTECH JOB NO.: 413-3334	
DRN: GT	CKD: CR PC: JW	PAGE: 1 OF 4 REVISION



**PUBLIC FACILITY & DWELLING SKETCH**

SCALE: 1:100 000

**ONLY PUBLIC FACILITIES & DWELLINGS WITHIN 2km OF W/C ARE SHOWN**  
 OCCUPIED DWELLINGS SHOWN THUS: ■  
 UNOCCUPIED DWELLINGS SHOWN THUS: □  
 PUBLIC FACILITIES SHOWN THUS: ▲  
 NEAREST OCCUPIED DWELLING IS 0.6km± EAST OF WELL CENTRE  
 NEAREST URBAN MUNICIPALITY IS PIERSON 5.3km± N.W. OF WELL CENTRE

**WELL CENTRE CO-ORDS**

GIVEN = 60.00 S of N } SEC. 18  
 90.00 E of W }  
 SURVEYED = 60.00 S of N } SEC. 18  
 90.00 E of W }

**RECTANGULAR CO-ORDS**

SURFACE 0.00 SOUTH  
 13C-18 0.00 EAST  
 INT CASING 48.83 SOUTH  
 13D-18 288.52 EAST  
 END HZ 43.59 SOUTH  
 16D-18 1380.05 EAST  
 W/C 2.08 NORTH  
 HZNTL A8-18 245.00 EAST  
 PROPOSED ICP 45.67 SOUTH  
 HZNTL A8-18 509.51 EAST

**Warning:**

Prior to any construction on lease or access road, MTS Communications Inc., Manitoba Hydro and Manitoba Hydro-Gas must be contacted for location of any underground facilities that may exist. Underground facilities shown on this plan are those that could be found and located at time of survey. Other facilities may exist, of which we were unaware or unable to locate.

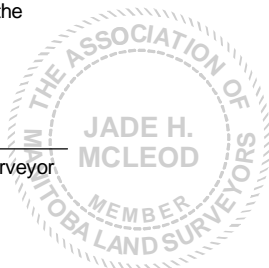
All buried facilities must be located by the respective authority prior to construction.  
 Manitoba Hydro: 1-888-624-9376  
 MTS: 1-800-837-6448  
 Flowlines: Individual Operator

R.M. Contact Info.:  
 R.M. of Edward  
 Pierson, MB  
 Ph. (204) 634-2231

I certify that the survey represented by this plan is correct and true to the best of my knowledge and was completed on the 6th day of February, 2013.

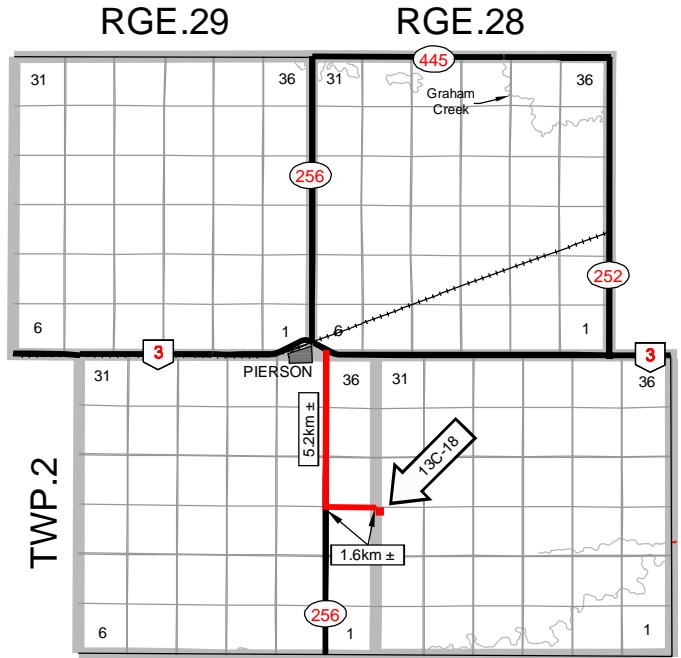
*Jade H. McLeod*  
 Jade H. McLeod  
 Manitoba Land Surveyor

*Gary Toope*  
 Gary Toope  
 Witness



**CALTECH**  
 SURVEYS (MB)  
 Regina (306) Ph: 775-1814 Fax: 775-1818  
 Virden (204) Ph: 748-1053 Fax: 748-1059

REV.	DATE	DESCRIPTION	BY	CK'D
1	2013.02.13	REVISED BROKER FILE NO. (413-0753)	GT	CR
2	2013.07.23	AS-DRILLED SURVEY PLAN	NH	JW



**ACCESS ROUTE DETAIL**

SCALE: 1:250 000

**LANDOWNER INFORMATION**

LEGAL DESCRIPTION: N.W.1/4 SEC.18-2-28 WPM  
 LANDOWNER(S): RAYMOND GEORGE EIKANGER  
 TITLE NO: 2271115/2

SURFACE TO INT CASING:  
 305.87 ALONG DRILL PATH

INT CASING TO END HZ:  
 1091.95 ALONG DRILL PATH

**INTERMEDIATE CASING**

**POINT CO-ORDINATES: 13D-18**

111.29 SOUTH of NORTH } SEC. 18  
 378.52 EAST of WEST }

UTM = 5 444 425.86 N. } NAD 83  
 337 894.26 E. } GPS DERIVED

UTM = 5 444 204.31 N. } NAD 27  
 337 921.03 E. } GPS DERIVED

**END HORIZONTAL**

**CO-ORDINATES: 16D-18**

115.33 SOUTH of NORTH } SEC. 18  
 103.78 WEST of EAST }

UTM = 5 444 399.02 N. } NAD 83  
 338 985.29 E. } GPS DERIVED

UTM = 5 444 177.49 N. } NAD 27  
 339 012.07 E. } GPS DERIVED

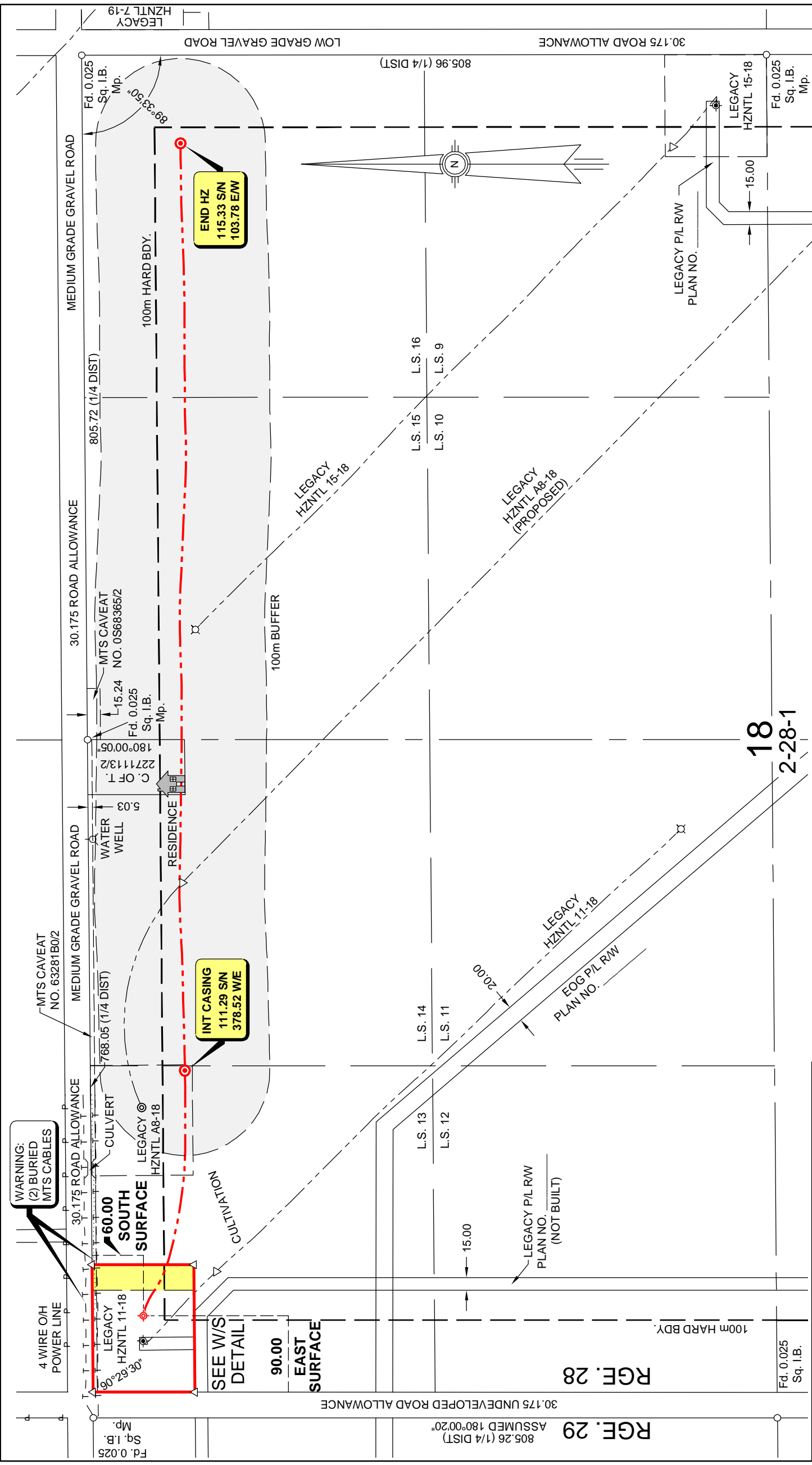
**LEGEND:**

- Proposed well centre shown thus
  - Proposed int casing, landing & target entry points shown thus
  - Proposed end horizontals shown thus
  - Proposed drilling locations
  - Existing well locations shown thus
  - Existing int casing, landing & target entry points shown thus
  - Existing end hz / bottom holes shown thus
  - Abandoned wells shown thus
  - Survey monuments found shown thus
  - Survey monuments planted shown thus
  - Survey marks (Iron Spikes) planted shown thus
  - Survey marks (Hubs) planted shown thus
  - Survey marks (Iron Spikes) found shown thus
  - Temporary points shown thus
  - Portions referred to shown thus
- All bearings shown are True North and are derived from GPS measurements.  
 Distances are in metres.

LEGACY et al PIERSON HZNTL 16-18-2-28 (WPM)

CALTECH JOB NO.: 413-3334

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**WARNING:**  
(2) BURIED  
MTS CABLES

60.00  
**SOUTH SURFACE**

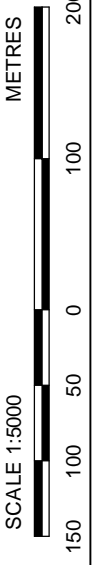
SEE W/S  
DETAIL

90.00  
**EAST SURFACE**

RGF. 28

18  
2-28-1

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LEGACY HZNTL 7-19  
LOW GRADE GRAVEL ROAD  
30.175 ROAD ALLOWANCE

Fd. 0.025 Sq. I.B. Mp.  
89.33.50  
END HZ  
115.33 S/N  
103.78 E/W

MEDIUM GRADE GRAVEL ROAD  
100m HARD BDY.  
100m BUFFER

30.175 ROAD ALLOWANCE  
805.72 (1/4 DIST)

LEGACY HZNTL 15-18  
LEGACY HZNTL A8-18 (PROPOSED)

L.S. 15 L.S. 16  
L.S. 10 L.S. 9

LEGACY P/L R/W PLAN NO. (NOT BUILT)

LEGACY HZNTL 11-18  
LEGACY P/L R/W PLAN NO.

L.S. 14 L.S. 11  
20:00

LEGACY HZNTL 15-18  
LEGACY P/L R/W PLAN NO.

L.S. 13 L.S. 12  
15.00

LEGACY HZNTL 11-18  
LEGACY P/L R/W PLAN NO.

L.S. 14 L.S. 11  
20:00

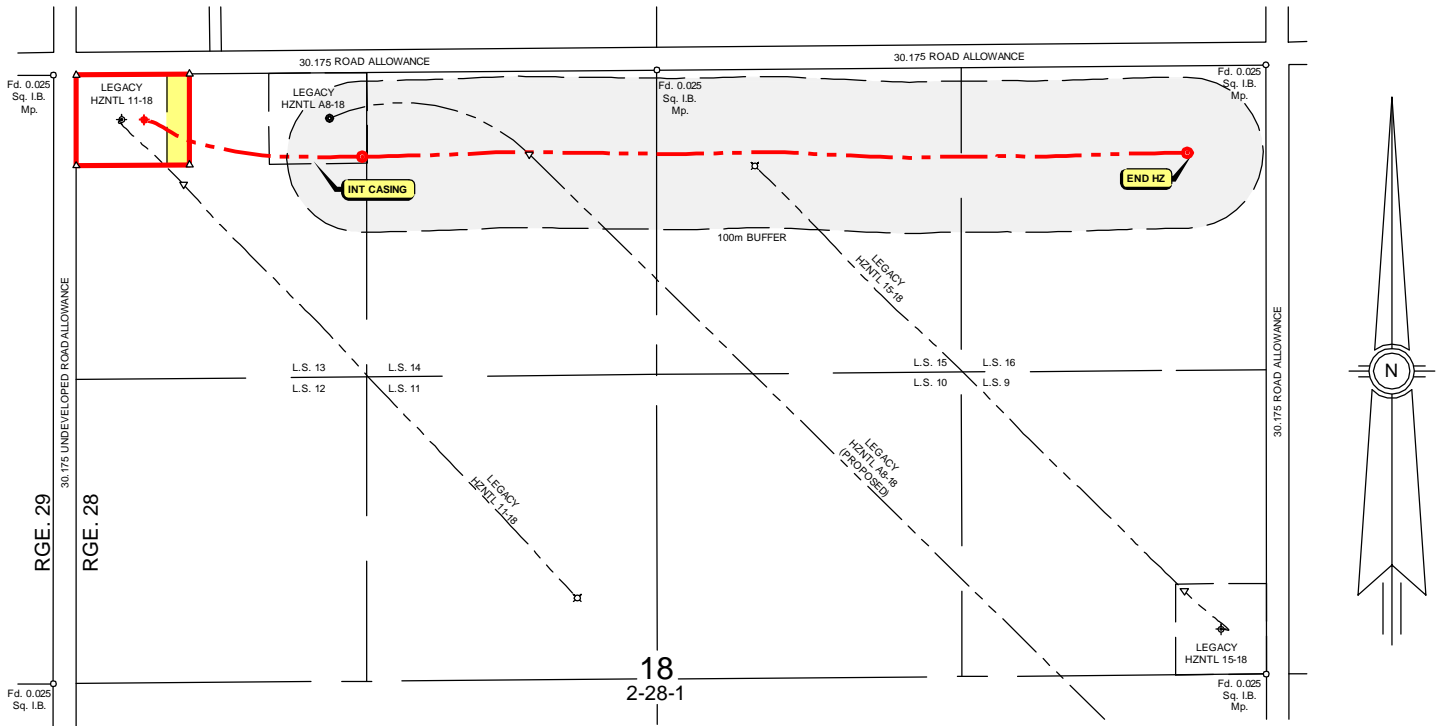
LEGACY HZNTL 15-18  
LEGACY P/L R/W PLAN NO.

L.S. 15 L.S. 16  
L.S. 10 L.S. 9

LEGACY HZNTL 11-18  
LEGACY P/L R/W PLAN NO.

L.S. 14 L.S. 11  
20:00  
LEGACY HZNTL 15-18  
LEGACY P/L R/W PLAN NO.

Fd. 0.025 Sq. I.B. Mp.  
805.26 (1/4 DIST)  
ASSUMED 180°00'20"



**PRODUCTION ALLOCATION PLAN**  
SCALE: 1:10 000

PRODUCTION ALLOCATION TABLE (100m BUFFER)		
LOCATION	AREA	PERCENTAGE
L.S.13 SEC.18-2-28 WPM	1.681 ha (4.15 ac.)	6.7293834
L.S.14 SEC.18-2-28 WPM	7.683 ha (18.99 ac.)	30.7566053
L.S.15 SEC.18-2-28 WPM	8.062 ha (19.92 ac.)	32.2738191
L.S.16 SEC.18-2-28 WPM	7.554 ha (18.67 ac.)	30.2401922
<b>TOTAL</b>	<b>24.980 ha (61.73 ac.)</b>	<b>100.0000000</b>

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