



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: <i>12/1/12</i>
	Permit #:	C:
	Project #:	

Top Hole Well is located on topo map 6652 feet south of latitude 41° 07' 30"
Bottom Hole Well is located on topo map 2038 feet south of latitude 41° 07' 30"

NOV 15 2012

ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

Surface Hole Coordinates

True Latitude: NORTH

41° 06' 24.27"

True Longitude: WEST

80° 01' 52.92"

Bottom Hole Coordinates

True Latitude: NORTH

41° 07' 09.86"

True Longitude: WEST

80° 02' 30.76"

TH

BH

Top Hole

Bottom Hole

(Slippery Rock sect 2)

Water Supply

1A
N/F
KELLOGG FAMILY
LTD PARTNERSHIP

4F07

N41° 03' 46"E
1209'

N/F
D KELLOGG

R300 WETLANDS BUFFER VERT BORE

N26° 40' 03"W
1113'

MERCER TWP

SLIPPERY ROCK TWP



D Michael Canada

Applicant / Well Operator Name:

SWEPI LP

DEP ID#:

284309

Well (Farm) Name:

HALTERLEIN

Well #:

2064-3HD

Address:

190 Thom Hill Road, Warrendale, PA 15086

County:

BUTLER

Municipality:

MERCER

Well Type:

Gas

911 Address of well site:

401 SHIELDS RD

USGS 7 1/2 Quadrangle Map Name:

SLIPPERY ROCK

Map Section:

3

Surface Elevation:

1320 ft

Surveyor: Pa. Lic. # SU029272 E

D. Michael Canada

Phone #:

716-379-7918

Dwg #:

20120412 B

Date:

OCT 15, 2012

Scale:

1" = 1000'

Tract Acreage:

391.88

Lat. & Long Metadata Method:

RTK GPS

Accuracy:

± 5 ft.

Datum:

NAD 83

Elevation Metadata Method:

GPS

Accuracy:

± 5 ft.

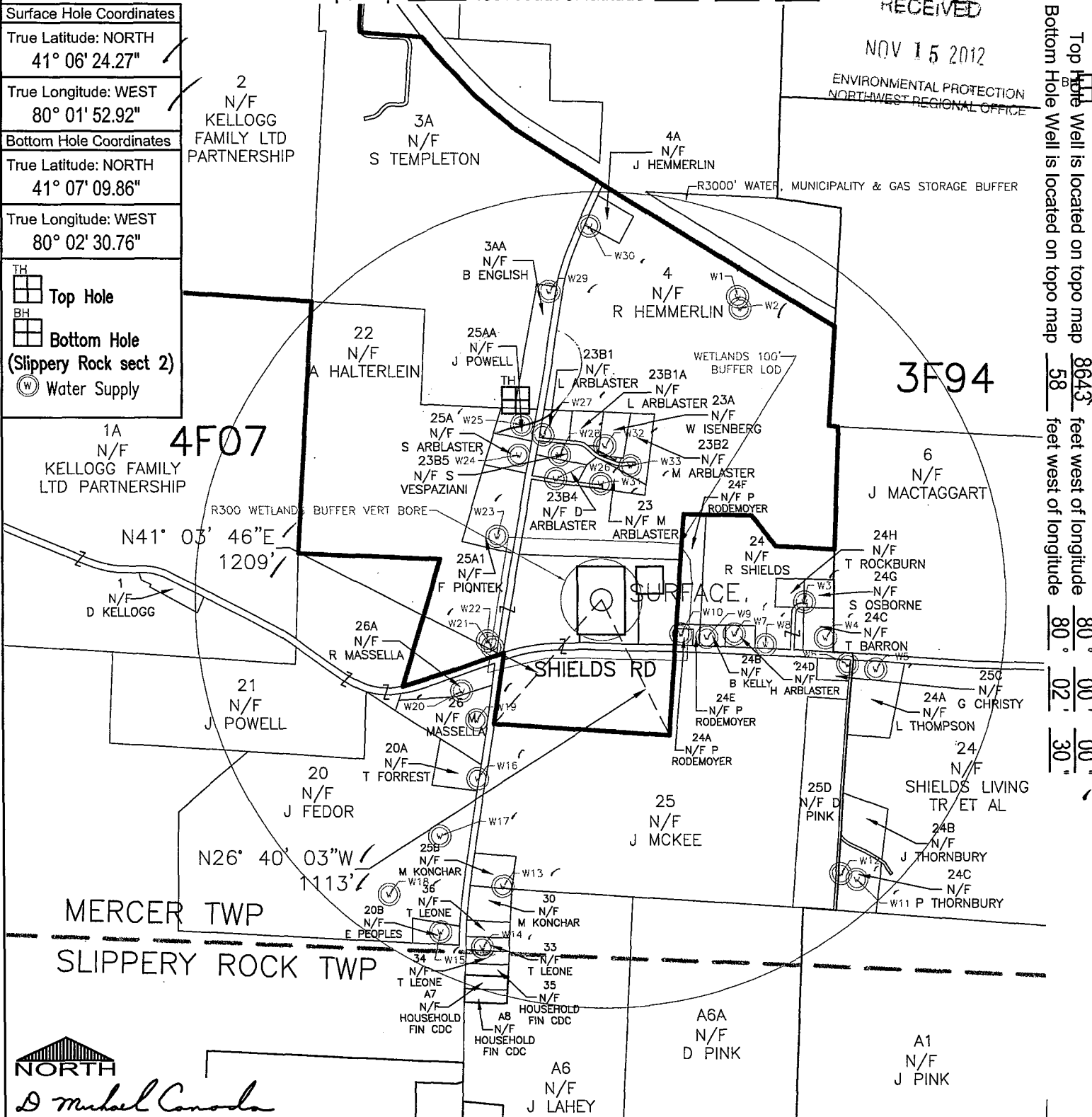
Datum:

NAD 83

Survey Date:

APRIL 12, 2012

Top Hole Well is located on topo map 8643 feet west of longitude 80° 02' 00"
Bottom Hole Well is located on topo map 58 feet west of longitude 80° 02' 30"



WELL LOCATION PLAT
Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-3HD
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): N30° 36' 22"W 5447'	Anticipated True Vertical Depth Feet (TVD): 8632.96	Anticipated Total Measured Depth Feet (TMD): 13780.54
Target Formation(s): Utica Shale	Deepest Formation to be penetrated: Utica Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 13780.54

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 45.69"	80D 01' 40.07"
220-04F07-0000024G-0000	OSBORNE SHERRI L	41D 06' 24.51"	80D 01' 33.24"
220-04F07-0000024C-0000	BARRON TERRY L & BEATRICE A	41D 06' 21.97"	80D 01' 31.14"
220-03F94-0000024A-0000	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-04F07-0000025C-0000	CHRISTY GERALD & ALICE	41D 06' 20.11"	80D 01' 28.00"
220-04F07-0000024D-0000	ARBLASTER HENRY E & JOAN	41D 06' 22.04"	80D 01' 39.97"
220-04F07-0000024-0000	SHIELDS RICHARD L JR & LARRY D	41D 06' 21.35"	80D 01' 36.91"
220-04F07-0000024B-0000	KELLY BURTON F & NEVADA D	41D 06' 21.75"	80D 01' 42.62"
220-04F07-0000024A-0000	RODEMOYER PATRICIA L	41D 06' 21.95"	80D 01' 45.14"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.89"	80D 01' 29.28"
220-04F07-0000025B-0000	KONCHAR MITCHELL & GRACE	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000033-0000	LEONE THOMAS C & SHARON R	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000020B-0000	PEOPLES ELAINE L & REESEMAN HEATHER A	41D 05' 59.84"	80D 02' 07.73"
220-04F07-0000020A-0000	FORREST THOMAS E & AMY B	41D 06' 11.05"	80D 02' 04.45"
220-04F07-0000020-0000	FEDOR JESSE N ET AL	41D 06' 02.46"	80D 02' 12.78"
220-04F07-0000020-0000	FEDOR JESSE N ET AL	41D 06' 06.80"	80D 02' 08.01"
220-04F07-0000026-0000	MASSELLA MARK A & JENNIFER L	41D 06' 15.32"	80D 02' 04.65"
220-04F07-0000026A-0000	MASSELLA ROBERT A & LYNISE S	41D 06' 17.37"	80D 02' 06.19"
220-04F07-0000022-0000	HALTERLEIN ANTHONY J	41D 06' 20.62"	80D 02' 03.27"
220-04F07-0000022-0000	HALTERLEIN ANTHONY J	41D 06' 21.07"	80D 02' 03.76"
220-04F07-000025A1-0000	PIONTEK FRANK L III & ANNE M	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025A-0000	ARBLASTER STEVEN R & LINDA A	41D 06' 34.60"	80D 02' 01.17"
220-04F07-000025AA-0000	POWELL JAMES R & JULIE E	41D 06' 36.81"	80D 02' 00.93"
220-04F07-000023B4-0000	ARBLASTER DAVID S & BARBARA	41D 06' 32.98"	80D 01' 57.55"
220-04F07-000023B1-0000	ARBLASTER LARRY E & ERIN L	41D 06' 36.12"	80D 01' 58.88"
220-04F07-000023B5-0000	VESPAZIANI STAR A & KEVIN	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000003AA-0000	ENGLISH BLAIR C & CAROL A	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000004A-0000	HEMMERLIN JOHN J & CATHERINE L	41D 06' 51.38"	80D 01' 54.86"
220-04F07-0000023-0000	ARBLASTER MARK D ET AL	41D 06' 32.69"	80D 01' 53.20"
220-04F07-0000023A-0000	ISENBERG WILLIAM J & SHIRLEY	41D 06' 35.45"	80D 01' 52.90"
220-04F07-000023B2-0000	ARBLASTER MARK D & CRYSTAL K	41D 06' 34.06"	80D 01' 50.39"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-3HD
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL

Water Well Number	Direction	Length
W1 /	N24° 40' 32.31"E	2450
W2 /	N25° 54' 49.85"E	2381
W3 /	S89° 24' 43.48"E	1507
W4 /	S80° 32' 19.32"E	1683
W5 /	S76° 00' 08.12"E	2091
W6 /	S75° 32' 51.80"E	1879
W7 /	S75° 40' 38.04"E	1017
W8 /	S74° 56' 48.88"E	1261
W9 /	S70° 36' 28.23"E	828
W10 /	S66° 59' 30.16"E	640
W11 /	S42° 29' 26.44"E	2778
W12 /	S41° 11' 14.65"E	2669
W13 /	S19° 18' 25.63"W	2230
W14 /	S19° 10' 32.55"W	2705
W15 /	S26° 08' 07.89"W	2720
W16 /	S34° 54' 49.66"W	1602
W17 /	S34° 39' 25.97"W	2112

BEARING/DISTANCE FROM TH TO WATER WELL

Water Well Number	Direction	Length
W18 /	S36° 04' 27.38"W	2680
W19 /	S46° 14' 27.98"W	1276
W20 /	S56° 59' 35.14"W	1232
W21 /	S66° 31' 32.28"W	874
W22 /	S70° 19' 27.47"W	895
W23 /	N58° 36' 01.74"W	896
W24 /	N29° 37' 45.85"W	1221
W25 /	N24° 15' 57.53"W	1409
W26 /	N20° 22' 18.19"W	950
W27 /	N19° 17' 35.67"W	1283
W28 /	N15° 51' 56.08"W	1108
W29 /	N9° 24' 43.06"W	2297
W30 /	N1° 34' 40.60"W	2748
W31 /	N0° 04' 45.44"E	853
W32 /	N1° 35' 08.31"E	1132
W33 /	N12° 30' 01.24"E	1013

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICEMunicipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN -	MERCER TWP-BUTLER CO	/
ADJACENT TO -	HARRISVILLE BORO-BUTLER CO	/
	IRWIN TWP- VENANGO CO	//
	MARION TWP-BUTLER CO	//
	CHERRY TWP-BUTLER CO	//
	SLIPPERY ROCK TWP-BUTLER CO	/
	LIBERTY TWP-MERCER CO	//
	PINE TWP- MERCER CO	//

Coal related parties

NONE

True Longitude: WEST
80° 02' 30.76"

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

4F05

22 N/F J PIZOR

22A N/F C & K COAL CO

22B N/F BESSEMER & LAKE ERIE RAILROAD

9 N/F B NEVEL

22C N/F T FEDOKOVITZ

22D N/F J PIZOR

22E N/F J PIZOR

24 N/F R MCCONNELL

52 N/F W SLOCUM

93 N/F J JORDAN

31 N/F J JORDAN

10 N/F R COYER

22F N/F J PIZOR

22G N/F J PIZOR

22H N/F J PIZOR

22I N/F J PIZOR

22J N/F J PIZOR

22K N/F J PIZOR

22L N/F J PIZOR

22M N/F J PIZOR

22N N/F J PIZOR

22O N/F J PIZOR

22P N/F J PIZOR

22Q N/F J PIZOR

22R N/F J PIZOR

22S N/F J PIZOR

22T N/F J PIZOR

22U N/F J PIZOR

22V N/F J PIZOR

22W N/F J PIZOR

22X N/F J PIZOR

22Y N/F J PIZOR

22Z N/F J PIZOR

23 N/F J PIZOR

23A N/F J PIZOR

23B N/F J PIZOR

23C N/F J PIZOR

23D N/F J PIZOR

23E N/F J PIZOR

23F N/F J PIZOR

23G N/F J PIZOR

23H N/F J PIZOR

23I N/F J PIZOR

23J N/F J PIZOR

23K N/F J PIZOR

23L N/F J PIZOR

23M N/F J PIZOR

23N N/F J PIZOR

23O N/F J PIZOR

23P N/F J PIZOR

23Q N/F J PIZOR

23R N/F J PIZOR

23S N/F J PIZOR

23T N/F J PIZOR

23U N/F J PIZOR

23V N/F J PIZOR

23W N/F J PIZOR

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24 N/F J PIZOR

24A N/F J PIZOR

24B N/F J PIZOR

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24L N/F J PIZOR

24M N/F J PIZOR

24N N/F J PIZOR

24O N/F J PIZOR

24P N/F J PIZOR

24Q N/F J PIZOR

24R N/F J PIZOR

24S N/F J PIZOR

24T N/F J PIZOR

24U N/F J PIZOR

24V N/F J PIZOR

24W N/F J PIZOR

24X N/F J PIZOR

24Y N/F J PIZOR

24Z N/F J PIZOR

25 N/F J PIZOR

25A N/F J PIZOR

25B N/F J PIZOR

25C N/F J PIZOR

25D N/F J PIZOR

25E N/F J PIZOR

25F N/F J PIZOR

25G N/F J PIZOR

25H N/F J PIZOR

25I N/F J PIZOR

25J N/F J PIZOR

25K N/F J PIZOR

25L N/F J PIZOR

25M N/F J PIZOR

25N N/F J PIZOR

25O N/F J PIZOR

25P N/F J PIZOR

25Q N/F J PIZOR

25R N/F J PIZOR

25S N/F J PIZOR

25T N/F J PIZOR

25U N/F J PIZOR

25V N/F J PIZOR

25W N/F J PIZOR

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26A N/F J PIZOR

26B N/F J PIZOR

26C N/F J PIZOR

26D N/F J PIZOR

26E N/F J PIZOR

26F N/F J PIZOR

26G N/F J PIZOR

26H N/F J PIZOR

26I N/F J PIZOR

26J N/F J PIZOR

26K N/F J PIZOR

26L N/F J PIZOR

26M N/F J PIZOR

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26P N/F J PIZOR

26Q N/F J PIZOR

26R N/F J PIZOR

26S N/F J PIZOR

26T N/F J PIZOR

26U N/F J PIZOR

26V N/F J PIZOR

26W N/F J PIZOR

26X N/F J PIZOR

26Y N/F J PIZOR

26Z N/F J PIZOR

27 N/F J PIZOR

27A N/F J PIZOR

27B N/F J PIZOR

27C N/F J PIZOR

27D N/F J PIZOR

27E N/F J PIZOR

27F N/F J PIZOR

27G N/F J PIZOR

27H N/F J PIZOR

27I N/F J PIZOR

27J N/F J PIZOR

27K N/F J PIZOR

27L N/F J PIZOR

27M N/F J PIZOR

27N N/F J PIZOR

27O N/F J PIZOR

27P N/F J PIZOR

27Q N/F J PIZOR

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27T N/F J PIZOR

27U N/F J PIZOR

27V N/F J PIZOR

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27X N/F J PIZOR

27Y N/F J PIZOR

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28 N/F J PIZOR

28A N/F J PIZOR

28B N/F J PIZOR

28C N/F J PIZOR

28D N/F J PIZOR

28E N/F J PIZOR

28F N/F J PIZOR

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28I N/F J PIZOR

28J N/F J PIZOR

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28L N/F J PIZOR

28M N/F J PIZOR

28N N/F J PIZOR

28O N/F J PIZOR

28P N/F J PIZOR

28Q N/F J PIZOR

28R N/F J PIZOR

28S N/F J PIZOR

28T N/F J PIZOR

28U N/F J PIZOR

28V N/F J PIZOR

28W N/F J PIZOR

28X N/F J PIZOR

28Y N/F J PIZOR

28Z N/F J PIZOR

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29A N/F J PIZOR

29B N/F J PIZOR

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29V N/F J PIZOR

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30F N/F J PIZOR

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30R N/F J PIZOR

30S N/F J PIZOR

30T N/F J PIZOR

30U N/F J PIZOR

30V N/F J PIZOR

30W N/F J PIZOR

30X N/F J PIZOR

30Y N/F J PIZOR

30Z N/F J PIZOR

31 N/F J PIZOR

31A N/F J PIZOR

31B N/F J PIZOR

31C N/F J PIZOR

31D N/F J PIZOR

31E N/F J PIZOR

31F N/F J PIZOR

31G N/F J PIZOR

31H N/F J PIZOR

31I N/F J PIZOR

3

391.88

WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: <u>SWEPI LP</u>	DEP ID#: <u>284309</u>	Well (Farm) Name: <u>HALTERLEIN</u>	Well #: <u>2064-3HD</u>
---	------------------------	-------------------------------------	-------------------------

DEP Use Only	Permit #
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WELL PLAN

Operator Name: SWEPI LPWell / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>7901.28</u>	TMD: <u>7901.28</u>	<u>41° 06' 24.27"</u>	<u>80° 01' 52.92"</u>
Landing Point:	TVD: <u>8632.96</u>	TMD: <u>9081.54</u>	<u>41° 06' 29.86"</u>	<u>80° 01' 59.60"</u>

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS



UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-3HD
Wellbore: HALTERLEIN #2064-3HD
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188, 2271]
Elevation: DFE @ 1341.00ft (TBD)
Northing 350794.23 Easting 1339873.80 Latitude 41° 6' 24.268 N Longitude 80° 1' 52.923 W

SECTION DETAILS

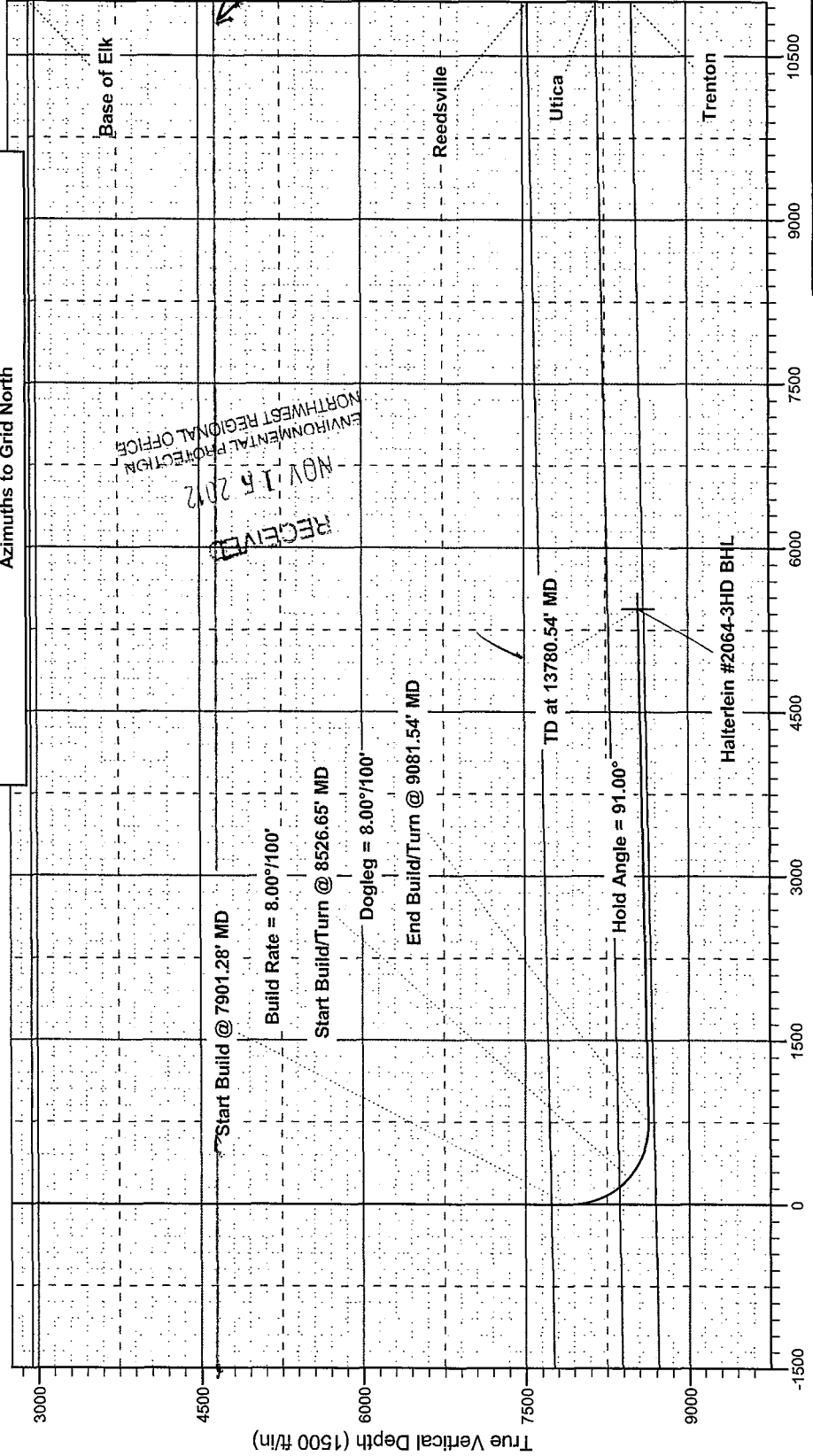
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7901.28	0.00	0.00	7901.28	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
8526.65	50.00	312.45	8450.24	172.77	-188.89	8.00	312.45	242.68	End Build/Turn
9081.54	91.00	331.00	8632.96	579.35	-495.70	8.00	27.06	747.02	TD
13780.54	91.00	331.00	8550.95	4688.56	-2773.47	0.00	0.00	5445.31	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-3HD BHL	8550.95	4688.56	-2773.47	355482.78	1337100.34	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
Azimuths to Grid North



Vertical Section at 331.00° (1500 ft/in)



UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-3HD
Wellbore: HALTERLEIN #2064-3HD
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188, 2271]
Elevation: DFE @ 1341.00ft (TBD)
Northing 350794.23 Easting 1339873.80 Latitude 41° 6' 24.268 N Longitude 80° 1' 52.923 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
Azimuths to Grid North

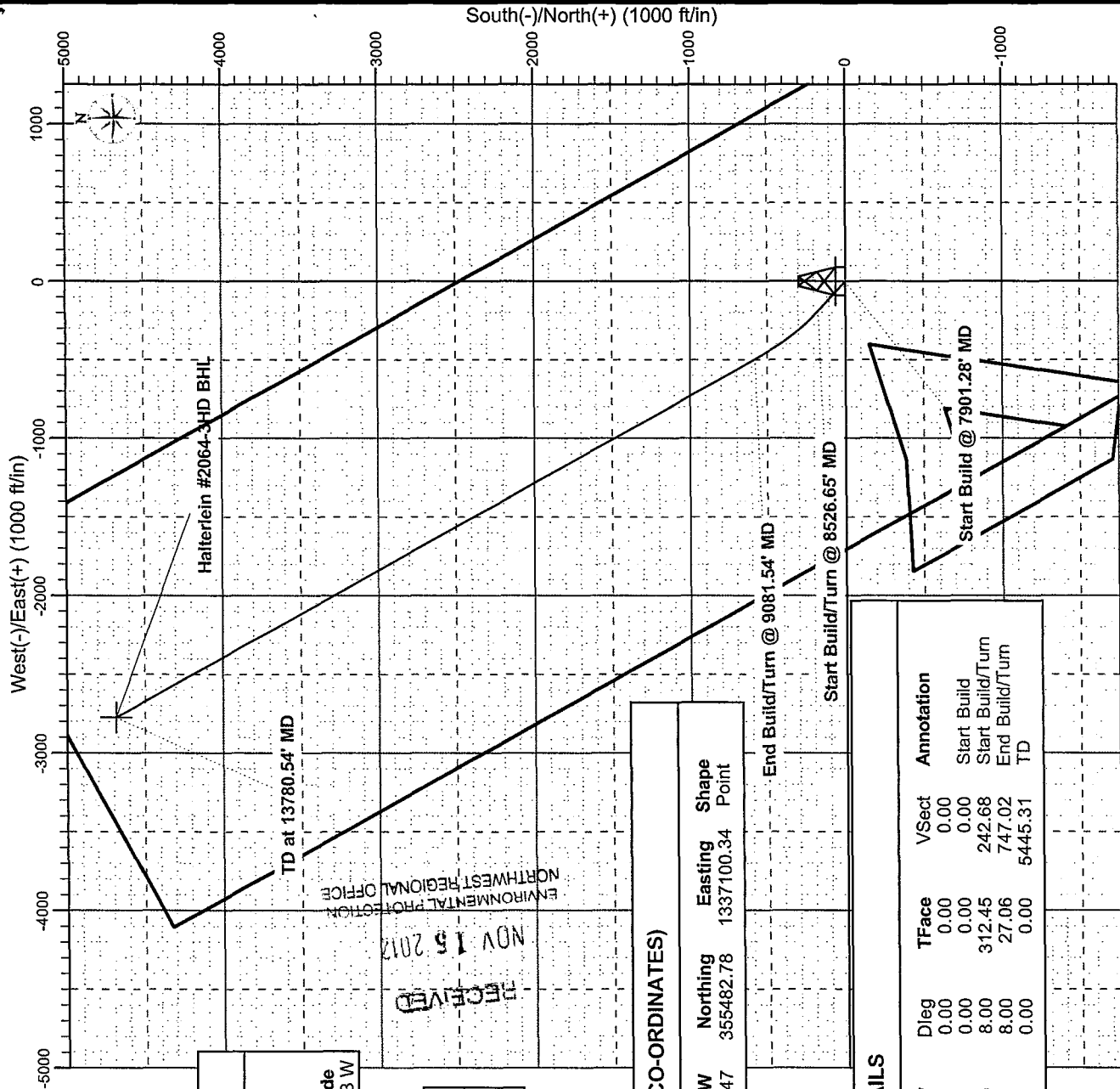
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
Halterlein #2064-3HD BHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build

End Build/Turn @ 9081.54' MD
Start Build/Turn @ 8526.65' MD

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7901.28	0.00	0.00	7901.28	0.00	0.00	0.00	0.00	0.00	Start Build
8526.65	50.00	312.45	8450.24	172.77	-188.89	8.00	312.45	242.68	Start Build/Turn
9081.54	91.00	331.00	8632.96	579.35	-495.70	8.00	27.06	747.02	End Build/Turn
13780.54	91.00	331.00	8550.95	4688.56	-2773.47	0.00	0.00	5445.31	TD





pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: 5GP 11/26/12
	Permit #:	019-21998
	Project #:	C:

Top Hole Well is located on topo map 6622 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 2306 feet south of latitude 41° 07' 30" tax map information

Surface Hole Coordinates

True Latitude: NORTH
41° 06' 24.56"

True Longitude: WEST
80° 01' 52.93"

Bottom Hole Coordinates

True Latitude: NORTH
41° 07' 07.21"

True Longitude: WEST
80° 02' 43.86"

TH

BH

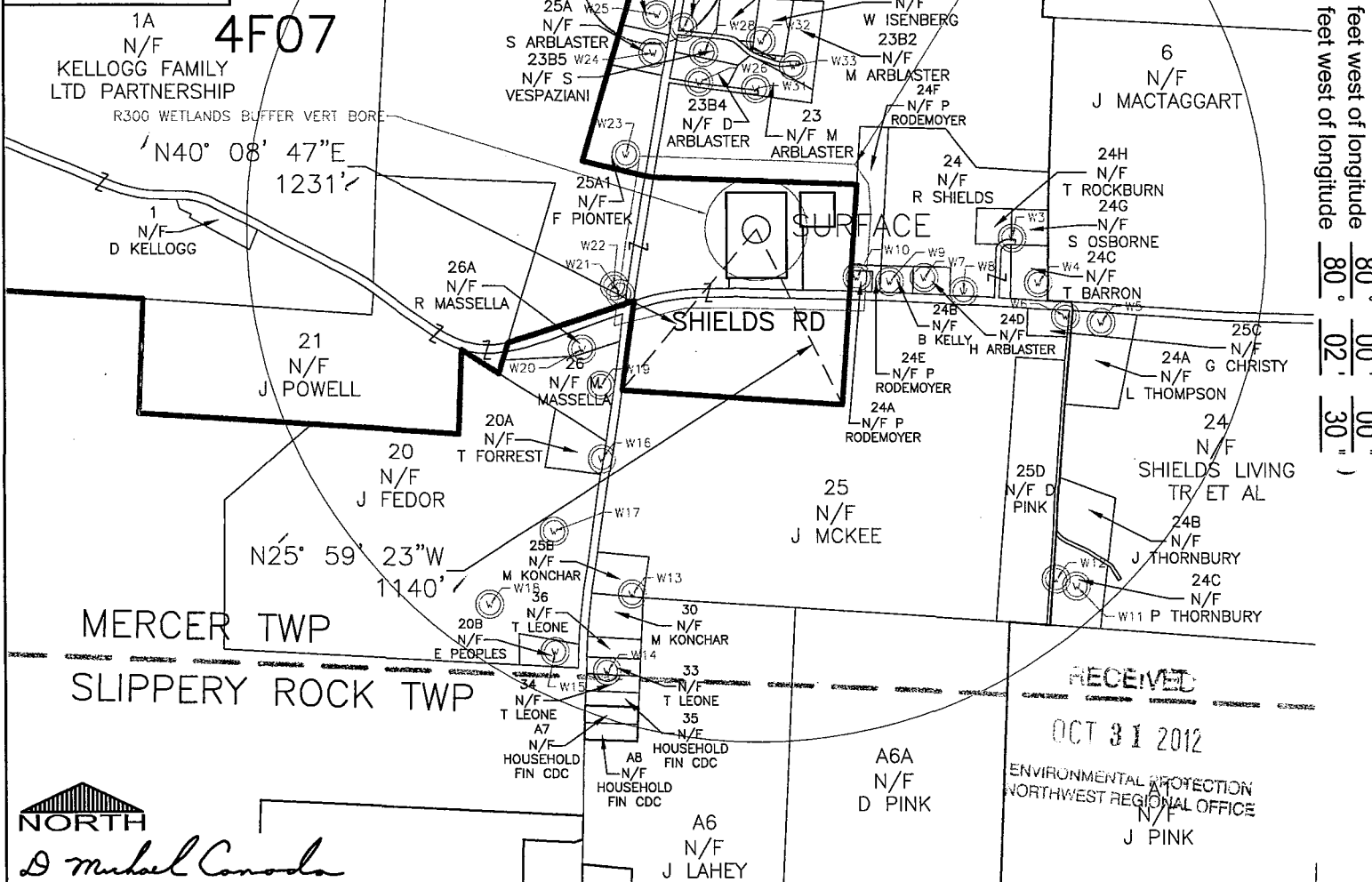
Top Hole

BH

Bottom Hole

(Slippery Rock sect 2)

Water Supply



NORTH

D Michael Canada

Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309	Well (Farm) Name: HALTERLEIN		Well #: 2064-1HS
Address: 190 Thorn Hill Road, Warrendale, PA 15086			County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: 401 SHIELDS RD			USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3 Surface Elevation: 1320 ft.
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada	Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPT 18, 2012	Scale: 1" = 1000'	Tract Acreage: 502.66
Lat. & Long Metadata Method: RTK GPS	Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.	Datum: NAD 83
Survey Date: APRIL 12, 2012					

WELL LOCATION PLAT
Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HS
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): N40° 34' 37"W 5815'	Anticipated True Vertical Depth Feet (TVD): 4409.86	Anticipated Total Measured Depth Feet (TMD): 10363.83
Target Formation(s): Burket Shale	Deepest Formation to be penetrated: Burket Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 10363.83

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 45.69"	80D 01' 40.07"
220-04F07-0000024G-0000	OSBORNE SHERRI L	41D 06' 24.51"	80D 01' 33.24"
220-04F07-0000024C-0000	BARRON TERRY L & BEATRICE A	41D 06' 21.97"	80D 01' 31.14"
220-03F94-0000024A-0000	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-04F07-0000025C-0000	CHRISTY GERALD & ALICE	41D 06' 20.11"	80D 01' 28100"
220-04F07-0000024D-0000	ARBLASTER HENRY E & JOAN	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024-0000	SHIELDS RICHARD L JR & LARRY D	41D 06' 21.35"	80D 01' 36.91"
220-04F07-0000024B-0000	KELLY BURTON F & NEVADA D	41D 06' 21.75"	80D 01' 42.62"
220-04F07-0000024A-0000	RODEMOYER PATRICIA L	41D 06' 21.95"	80D 01' 45.14"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.89"	80D 01' 29.28"
220-04F07-0000025B-0000	KONCHAR MITCHELL & GRACE	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000033-0000	LEONE THOMAS C & SHARON R	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000020B-0000	PEOPLES ELAINE L & REESEMAN HEATHER A	41D 05' 59.84"	80D 02' 07.73"
220-04F07-0000020A-0000	FORREST THOMAS E & AMY B	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020-0000	FEDOR JESSE N ET AL	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000020-0000	FEDOR JESSE N ET AL	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000026-0000	MASSELLA MARK A & JENNIFER L	41D 06' 15.32"	80D 02' 04.65"
220-04F07-0000026A-0000	MASSELLA ROBERT A & LYNISE S	41D 06' 17.37"	80D 02' 06.19"
220-04F07-00000022-0000	HALTERLEIN ANTHONY J	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	HALTERLEIN ANTHONY J	41D 06' 21.07"	80D 02' 03.76"
220-04F07-000025A1-0000	PIONTEK FRANK L III & ANNE M	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025A-0000	ARBLASTER STEVEN R & LINDA A	41D 06' 34.60"	80D 02' 01.17"
220-04F07-000025AA-0000	POWELL JAMES R & JULIE E	41D 06' 36.81"	80D 02' 00.93"
220-04F07-000023B4-0000	ARBLASTER DAVID S & BARBARA	41D 06' 32.98"	80D 01' 57.55"
220-04F07-000023B1-0000	ARBLASTER LARRY E & ERIN L	41D 06' 36.12"	80D 01' 58.88"
220-04F07-000023B5-0000	VESPAZIANI STAR A & KEVIN	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000003AA-0000	ENGLISH BLAIR C & CAROL A	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000004A-0000	HEMMERLIN JOHN J & CATHERINE L	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000023-0000	ARBLASTER MARK D ET AL	41D 06' 32.69"	80D 01' 53.20"
220-04F07-0000023A-0000	ISENBERG WILLIAM J & SHIRLEY	41D 06' 35.45"	80D 01' 52.90"
220-04F07-000023B2-0000	ARBLASTER MARK D & CRYSTAL K	41D 06' 34.06"	80D 01' 50.39"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HS
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1 /	N24° 58' 17.41"E	2423 /
W2 /	N26° 13' 57.48"E	2354 /
W3 /	S88° 16' 17.63"E	1507 /
W4 /	S79° 32' 04.12"E	1689 /
W5 /	S75° 12' 27.07"E	2099 /
W6 /	S74° 39' 55.57"E	1887 /
W7 /	S74° 03' 03.61"E	1024 /
W8 /	S73° 38' 19.26"E	1269 /
W9 /	S68° 40' 27.80"E	839 /
W10 /	S64° 33' 58.32"E	653 /
W11 /	S42° 04' 33.12"E	2801 /
W12 /	S40° 45' 59.61"E	2691 /
W13 /	S19° 03' 20.97"W	2258 /
W14 /	S18° 58' 10.13"W	2734 /
W15 /	S25° 51' 36.71"W	2747 /
W16 /	S34° 18' 34.68"W	1627 /
W17 /	S34° 12' 00.28"W	2137 /

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18 /	S35° 42' 00.88"W	2704 /
W19 /	S45° 17' 02.21"W	1296 /
W20 /	S55° 50' 20.93"W	1249 /
W21 /	S64° 44' 47.97"W	886 /
W22 /	S68° 32' 16.23"W	906 /
W23 /	N60° 16' 04.58"W	880 /
W24 /	N30° 20' 27.20"W	1195 /
W25 /	N24° 46' 40.14"W	1382 /
W26 /	N21° 01' 18.08"W	922 /
W27 /	N19° 44' 47.09"W	1255 /
W28 /	N16° 18' 07.07"W	1079 /
W29 /	N9° 32' 10.67"W	2268 /
W30 /	N1° 35' 44.47"W	2718 /
W31 /	N0° 04' 51.99"E	823 /
W32 /	N1° 37' 40.84"E	1102 /
W33 /	N12° 52' 39.11"E	984 /

Municipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN - / MERCER TWP-BUTLER CO /

ADJACENT TO - / HARRISVILLE BORO-BUTLER CO /

/ IRWIN TWP- VENANGO CO /

/ MARION TWP-BUTLER CO /

/ CHERRY TWP-BUTLER CO /

/ SLIPPERY ROCK TWP-BUTLER CO /

/ LIBERTY TWP-MERCER CO /

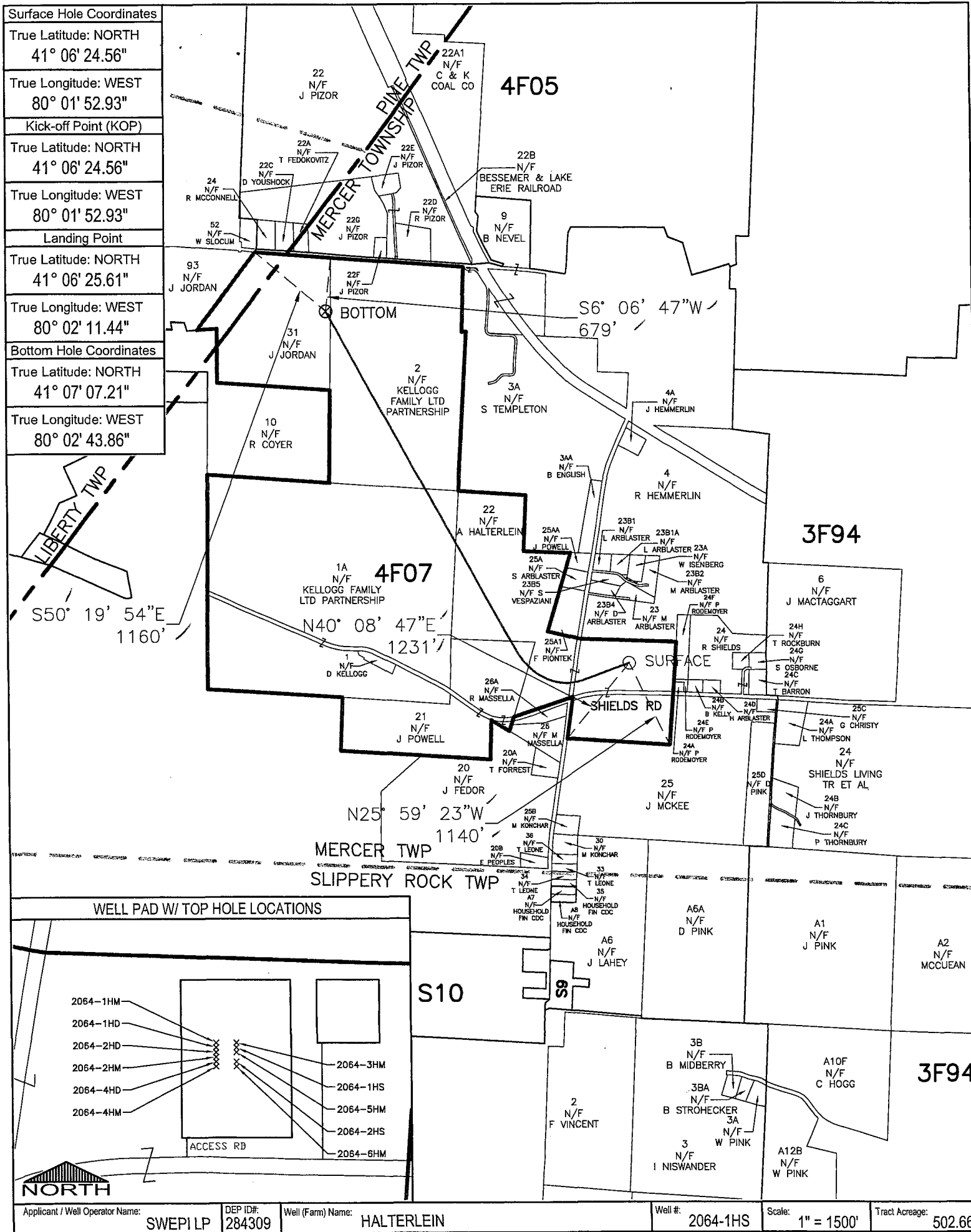
/ PINE TWP- MERCER CO /

Coal related parties

NONE

WELL LOCATION PLAT

Page 3 Plan View of Deviated Well Bore



WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: <u>SWEPI LP</u>	DEP ID#: <u>284309</u>	Well (Farm) Name: <u>HALTERLEIN</u>	Well #: <u>2064-1HS</u>
---	------------------------	-------------------------------------	-------------------------

DEP Use Only	Permit #
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WELL PLAN

Operator Name: SWEPI LP
Well / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3413.5</u>	TMD: <u>3413.5</u>	<u>41° 06' 24.56"</u>	<u>80° 01' 52.93"</u>
Landing Point:	TVD: <u>4409.86</u>	TMD: <u>5476.33</u>	<u>41° 06' 25.61"</u>	<u>80° 02' 11.44"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-1HS
Wellbore: HALTERLEIN #2064-1HS
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188, 2271]
Elevation: DFE @ 1341.00ft (TBD)
Northing 350824.23 Easting 1339873.81 Latitude 41° 6' 24.565 N Longitude 80° 1' 52.933 W

SECTION DETAILS

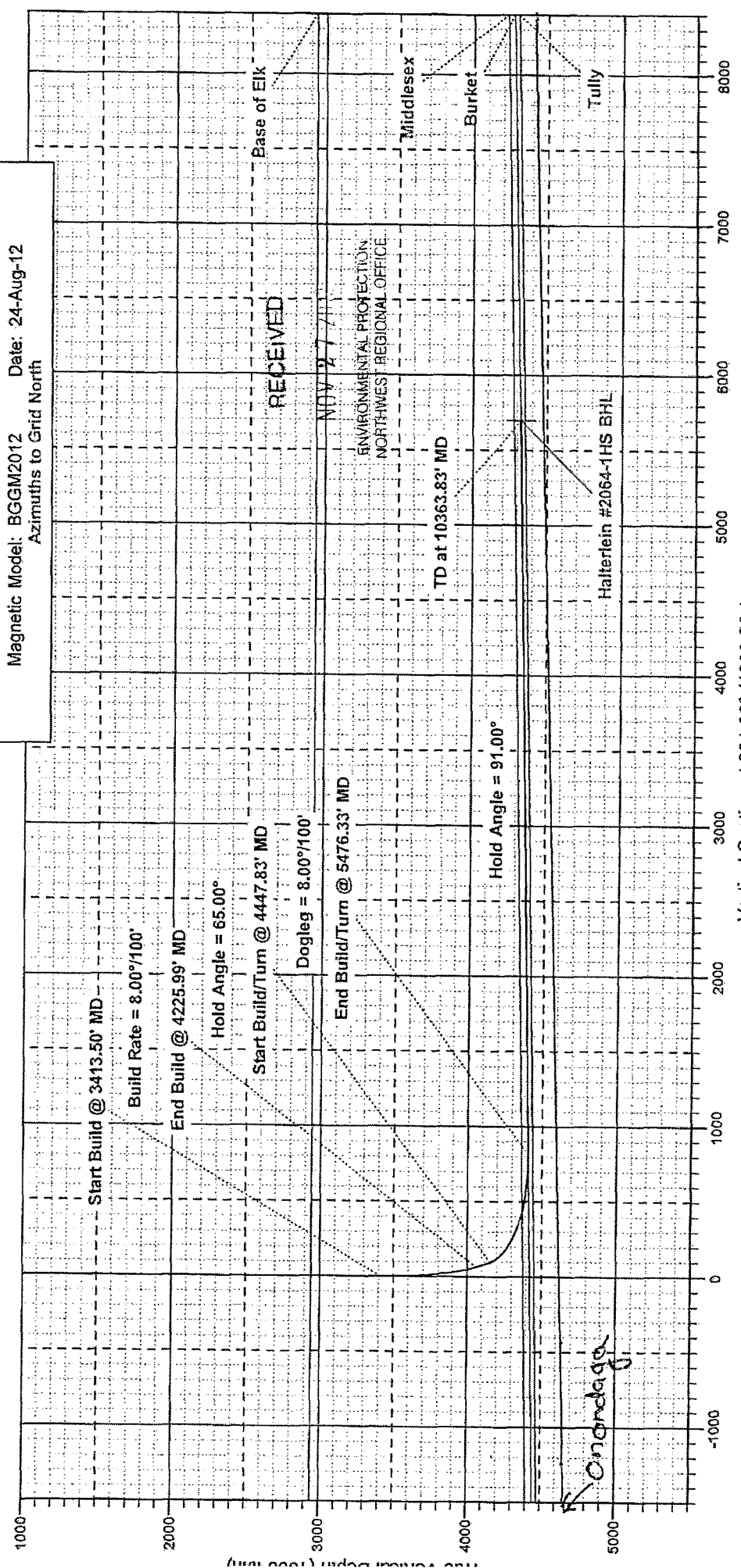
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3413.50	0.00	0.00	3413.50	0.00	0.00	0.00	0.00	0.00	Start Build
4225.99	65.00	250.00	4062.59	-141.45	-388.56	8.00	250.00	64.66	End Build
4447.83	65.00	250.00	4156.35	-210.23	-577.49	0.00	0.00	96.10	Start Build/Turn
5476.33	91.00	331.00	4409.86	142.94	-1413.60	8.00	85.26	810.34	End Build/Turn
10363.83	91.00	331.00	4324.56	4416.99	-3782.75	0.00	0.00	5697.10	TD a

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-1HS BHL	4324.56	4416.99	-3782.75	355241.21	1338091.07	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
Azimuths to Grid North



Vertical Section at 331.00° (1000 ft/in)

UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-1HS
Wellbore: HALTERLEIN #2064-1HS
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188_2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350824.23 Easting 1339873.81
 Longitude 80° 1' 52.933 W
 Latitude 41° 6' 24.565 N

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

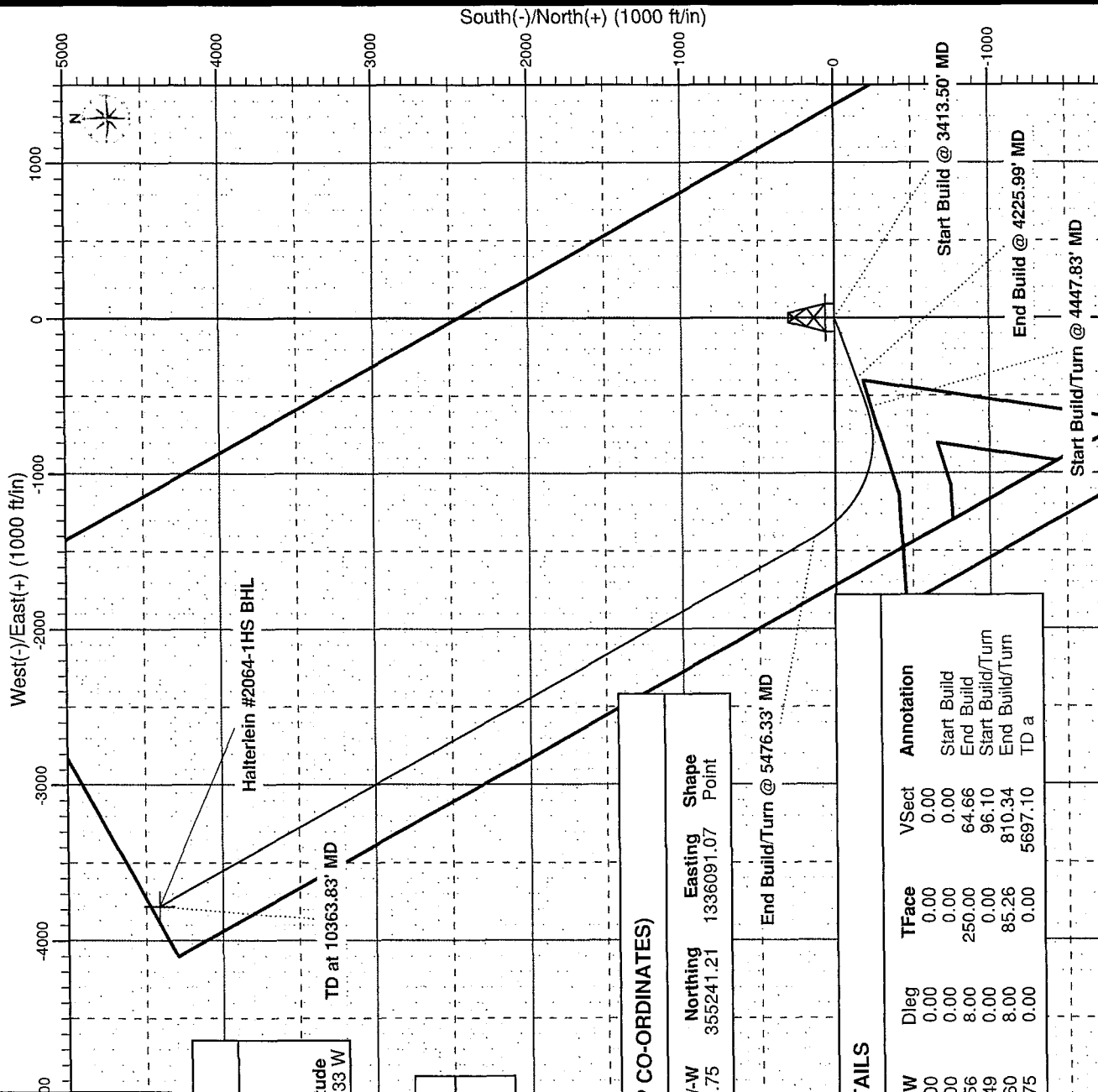
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	MD	Inc	Azi	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
Halterlein #2064-1HS BHL	0.00	0.00	0.00	0.00	0.00	0.00	355241.21	1336091.07	Point
	3413.50	0.00	0.00	3413.50	0.00	0.00			
	4225.99	65.00	250.00	4062.59	-141.45	-388.56			
	4447.83	65.00	250.00	4156.35	-210.23	-577.49			
	5476.33	91.00	331.00	4409.86	142.94	-1413.60			
	10363.83	91.00	331.00	4324.56	4416.99	-3782.75			

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3413.50	0.00	0.00	3413.50	0.00	0.00	0.00	0.00	0.00	End Build
4225.99	65.00	250.00	4062.59	-141.45	-388.56	8.00	250.00	64.66	Start Build/Turn
4447.83	65.00	250.00	4156.35	-210.23	-577.49	0.00	0.00	96.10	End Build/Turn
5476.33	91.00	331.00	4409.86	142.94	-1413.60	8.00	85.26	810.34	End Build/Turn
10363.83	91.00	331.00	4324.56	4416.99	-3782.75	0.00	0.00	5697.10	TD a





pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: SGP 11/26/12
	Permit #:	019-21999
	Project #:	C:

Top Hole Well is located on topo map 6667 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 10865 feet south of latitude 41° 07' 30" tax map information

Surface Hole Coordinates

True Latitude: NORTH
41° 06' 24.12"

True Longitude: WEST
80° 01' 52.92"

Bottom Hole Coordinates

True Latitude: NORTH
41° 05' 42.64"

True Longitude: WEST
80° 01' 30.08"

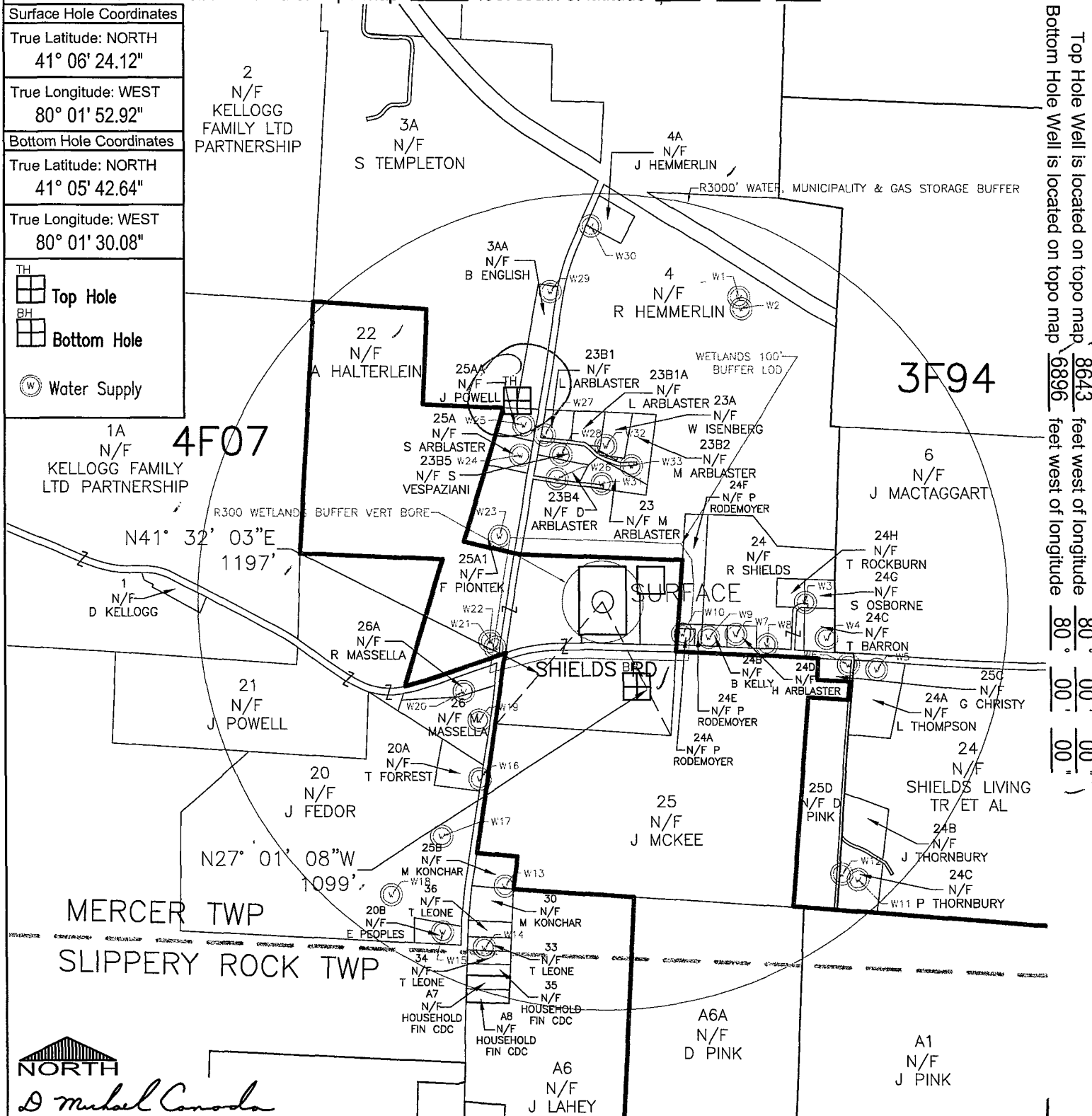


Top Hole



Bottom Hole

Water Supply



Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HS
Address: 190 Thom Hill Road, Warrendale, PA 15086		County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: 401 SHIELDS RD		USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3 Surface Elevation: 1320 ft.
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada	Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPT 12, 2012	Scale: 1" = 1000'
Lat. & Long Metadata Method: RTK GPS	Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.
			Datum: NAD 83	Tract Acreage: 341.07
				Survey Date: APRIL 12, 2012

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HS
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): S21° 06' 02"E 4547'	Anticipated True Vertical Depth Feet (TVD): 4502.62	Anticipated Total Measured Depth Feet (TMD): 8814.76
Target Formation(s): Burket Shale	Deepest Formation to be penetrated: Burket Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 8814.76

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL ✓	41D 06' 45.69"	80D 01' 40.07"
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220-04F07-0000024C-0000 ✓	BARRON TERRY L & BEATRICE A ✓	41D 06' 21.97"	80D 01' 31.14"
220-03F94-0000024A-0000 ✓	THOMPSON LEON E & NORMA L ✓	41D 06' 19.80"	80D 01' 26.25"
220-04F07-0000025C-0000 ✓	CHRISTY GERALD & ALICE ✓	41D 06' 20.11"	80D 01' 28100"
220-04F07-0000024D-0000 ✓	ARBLASTER HENRY E & JOAN ✓	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024-0000 ✓	SHIELDS RICHARD L JR & LARRY D ✓	41D 06' 21.35"	80D 01' 36.91"
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220-04F07-0000024A-0000 ✓	RODEMOYER PATRICIA L ✓	41D 06' 21.95"	80D 01' 45.14"
220-03F94-0000024C-0000 ✓	THORNBURY PATRICK D ✓	41D 06' 04.52"	80D 01' 27.71"
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220-04F07-0000025B-0000 ✓	KONCHAR MITCHELL & GRACE ✓	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000033-0000 ✓	LEONE THOMAS C & SHARON R ✓	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000020B-0000 ✓	PEOPLES ELAINE L & REESEMAN HEATHER A ✓	41D 05' 59.84"	80D 02' 07.73"
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220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL ✓	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL ✓	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000026-0000 ✓	MASSELLA MARK A & JENNIFER L ✓	41D 06' 15.32"	80D 02' 04.65"
220-04F07-0000026A-0000 ✓	MASSELLA ROBERT A & LYNISE S ✓	41D 06' 17.37"	80D 02' 06.19"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
220-04F07-000025A1-0000 ✓	PIONTEK FRANK L III & ANNE M ✓	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025A-0000 ✓	ARBLASTER STEVEN R & LINDA A ✓	41D 06' 34.60"	80D 02' 01.17"
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220-04F07-000023B1-0000 ✓	ARBLASTER LARRY E & ERIN L ✓	41D 06' 36.12"	80D 01' 58.88"
220-04F07-000023B5-0000 ✓	VESPAZIANI STAR A & KEVIN ✓	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000003AA-0000 ✓	ENGLISH BLAIR C & CAROL A ✓	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000004A-0000 ✓	HEMMERLIN JOHN J & CATHERINE L ✓	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000023-0000 ✓	ARBLASTER MARK D ET AL ✓	41D 06' 32.69"	80D 01' 53.20"
220-04F07-0000023A-0000 ✓	ISENBERG WILLIAM J & SHIRLEY ✓	41D 06' 35.45"	80D 01' 52.90"
220-04F07-000023B2-0000 ✓	ARBLASTER MARK D & CRYSTAL K ✓	41D 06' 34.06"	80D 01' 50.39"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HS
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1 ✓	N24° 31' 48.58"E	2464 ✓
W2 ✓	N25° 45' 25.71"E	2394 ✓
W3 ✓	S89° 58' 57.21"E	1506 ✓
W4 ✓	S81° 02' 34.98"E	1681 ✓
W5 ✓	S76° 24' 06.15"E	2088 ✓
W6 ✓	S75° 59' 29.50"E	1875 ✓
W7 ✓	S76° 29' 57.96"E	1013 ✓
W8 ✓	S75° 36' 25.85"E	1257 ✓
W9 ✓	S71° 35' 32.49"E	824 ✓
W10 ✓	S68° 14' 18.93"E	635 ✓
W11 ✓	S42° 42' 02.05"E	2767 ✓
W12 ✓	S41° 24' 01.81"E	2657 ✓
W13 ✓	S19° 26' 06.64"W	2216 ✓
W14 ✓	S19° 16' 49.64"W	2691 ✓
W15 ✓	S26° 16' 30.90"W	2707 ✓
W16 ✓	S35° 13' 22.45"W	1590 ✓
W17 ✓	S34° 53' 23.36"W	2100 ✓

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18 ✓	S36° 15' 49.83"W	2668 ✓
W19 ✓	S46° 43' 53.41"W	1265 ✓
W20 ✓	S57° 34' 54.11"W	1224 ✓
W21 ✓	S67° 26' 01.45"W	868 ✓
W22 ✓	S71° 13' 58.69"W	890 ✓
W23 ✓	N57° 47' 17.55"W	903 ✓
W24 ✓	N29° 17' 05.72"W	1235 ✓
W25 ✓	N24° 01' 02.79"W	1423 ✓
W26 ✓	N20° 03' 39.44"W	964 ✓
W27 ✓	N19° 04' 26.67"W	1297 ✓
W28 ✓	N15° 39' 20.91"W	1122 ✓
W29 ✓	N9° 21' 03.57"W	2312 ✓
W30 ✓	N1° 34' 09.20"W	2763 ✓
W31 ✓	N0° 04' 42.28"E	868 ✓
W32 ✓	N1° 33' 55.01"E	1147 ✓
W33 ✓	N12° 19' 11.28"E	1028 ✓

Municipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN - ✓ MERCER TWP-BUTLER CO ✓

ADJACENT TO - ✓ HARRISVILLE BORO-BUTLER CO ✓

✓ IRWIN TWP- VENANGO CO ✓

✓ MARION TWP-BUTLER CO ✓

✓ CHERRY TWP-BUTLER CO ✓

✓ SLIPPERY ROCK TWP-BUTLER CO ✓

✓ LIBERTY TWP-MERCER CO ✓

✓ PINE TWP- MERCER CO ✓

Coal related parties

NONE

Surface Hole Coordinates

True Latitude: NORTH 41° 06' 24.12"
True Longitude: WEST 80° 01' 52.92"
Kick-off Point (KOP)
True Latitude: NORTH 41° 06' 24.12"
True Longitude: WEST 80° 01' 52.92"
Landing Point
True Latitude: NORTH 41° 06' 14.42"
True Longitude: WEST 80° 01' 54.84"
Bottom Hole Coordinates
True Latitude: NORTH 41° 05' 42.64"
True Longitude: WEST 80° 01' 30.08"

WELL PAD W/ TOP HOLE LOCATIONS

2064-1HM
2064-1HD
2064-2HD
2064-2HM
2064-4HD
2064-4HM
2064-3HM
2064-1HS
2064-5HM
2064-2HS
2064-6HM

ACCESS RD

NORTH

Applicant / Well Operator Name: SWEPI LP
DEP ID#: 284309
Well (Farm) Name: HALTERLEIN
Well #: 2064-2HS
Scale: 1" = 1500'
Tract Acreage: 341.07

WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name:

SWEPI LP

DEP ID#:

284309

Well (Farm) Name:

HALTERLEIN

Well #:

2064-2HS

DEP
Use
Only

Permit #

WELL PLAN

Operator Name: SWEPI LPWell / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3534.5</u>	TMD: <u>3534.5</u>	<u>41° 06' 24.12"</u>	<u>80° 01' 52.92"</u>
Landing Point:	TVD: <u>4437.45</u>	TMD: <u>5080.76</u>	<u>41° 06' 14.42"</u>	<u>80° 01' 54.84"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

NOV 27 2012

RECEIVED



Project: SLIPPERY ROCK
 Site: HALTERLEIN #2064
 Well: HALTERLEIN #2064-2HS
 Wellbore: HALTERLEIN #2064-2HS
 Design: Design #1
 Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188.2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350779.23
 Easting 1339873.79
 Latitude 41° 6' 24.120 N
 Longitude 80° 1' 52.918 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3534.50	0.00	0.00	3534.50	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
4159.16	50.00	220.50	4082.83	-194.44	-166.07	8.00	220.50	89.55	End Build/Turn
5080.76	89.00	151.00	4437.45	-977.06	-172.94	8.00	-77.26	770.71	TD
8814.76	89.00	151.00	4502.62	-4242.40	1637.06	0.00	0.00	4504.15	

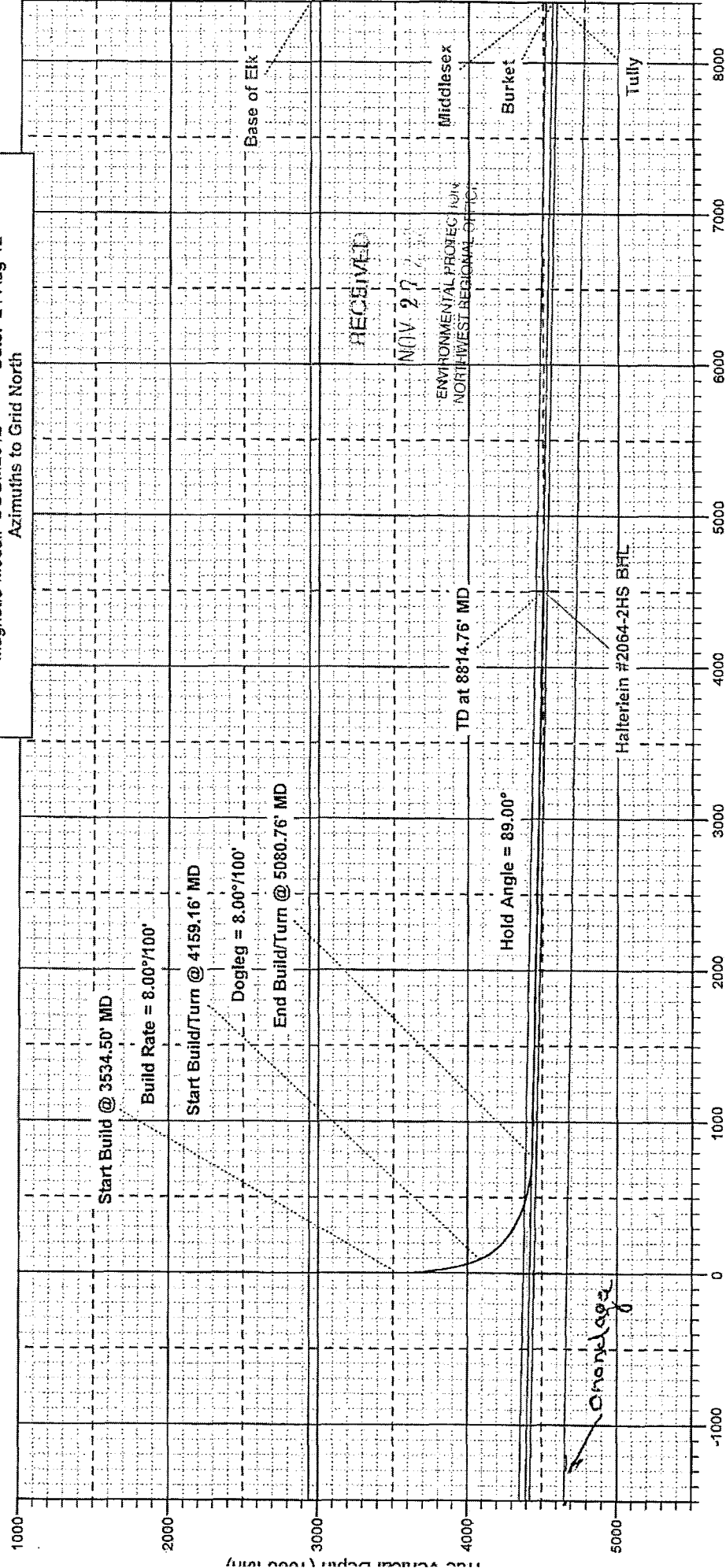
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-2HS BHL	4502.62	-4242.40	1637.06	346536.84	1341510.85	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12

Azimuths to Grid North



Vertical Section at 151.00° (1000 ft/in)

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-2HS
Wellbore: HALTERLEIN #2064-2HS
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350779.23 Easting 1339873.79 Latitude 41° 6' 24.120 N Longitude 80° 1' 52.918 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

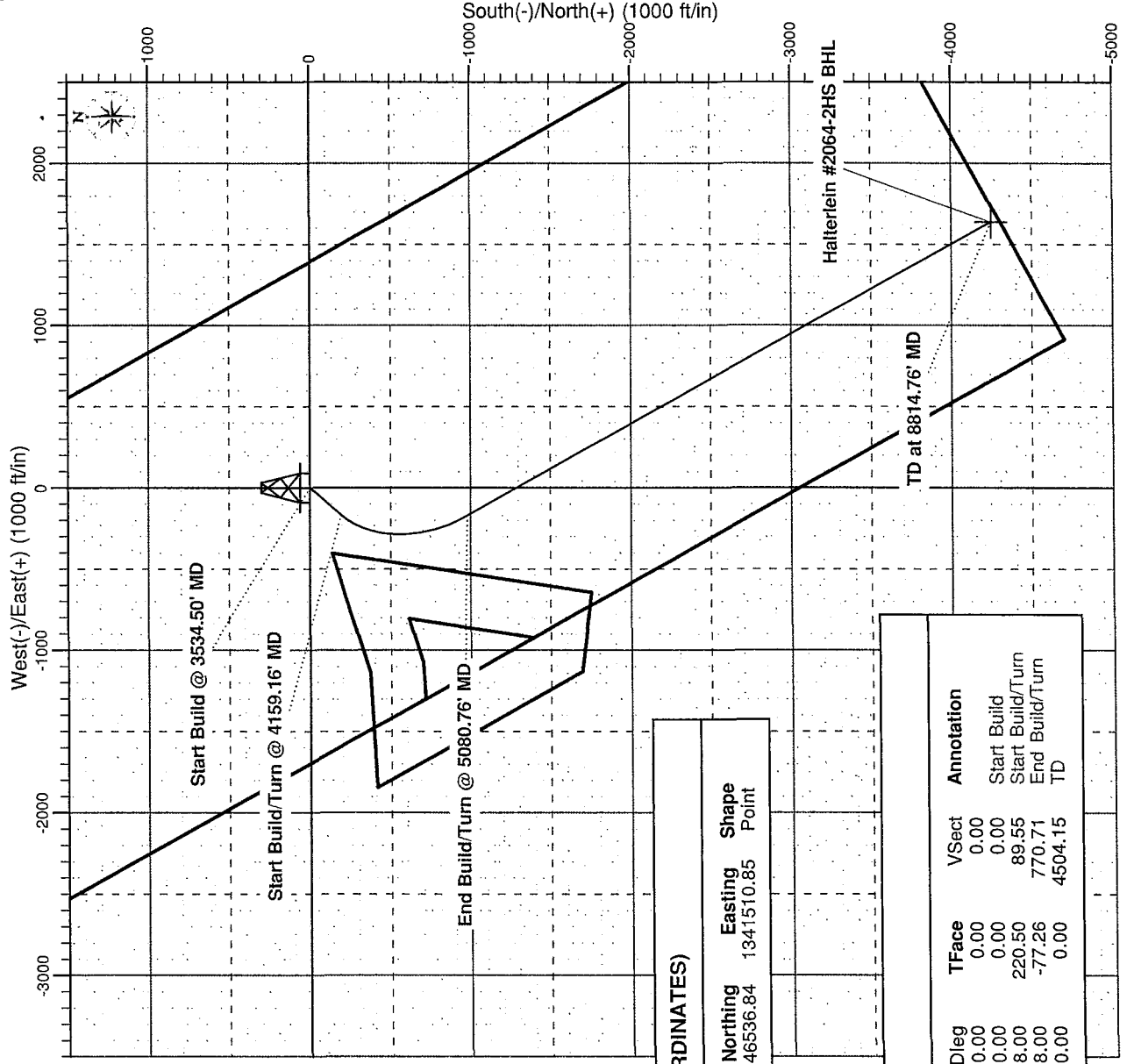
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
Halterlein #2064-2HS BHL	4502.62	-4242.40	1637.06	346536.84	1341510.85	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3534.50	0.00	0.00	3534.50	0.00	0.00	0.00	0.00	0.00	Start Build
4159.16	50.00	220.50	4082.83	-194.44	-166.07	8.00	220.50	89.55	Start Build/Turn
5080.76	89.00	151.00	4437.45	-977.06	-172.94	8.00	-77.26	770.71	End Build/Turn
8814.76	89.00	151.00	4502.62	-4242.40	1637.06	0.00	0.00	4504.15	TD





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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Oil and Gas Management Program

WELL LOCATION PLAT

Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: SGP
	Permit #: 019-22006	11/26/12
	Project #:	C:

Top Hole Well is located on topo map 6607 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 1797 feet south of latitude 41° 07' 30" tax map information

Surface Hole Coordinates

True Latitude: NORTH
41° 06' 24.71"

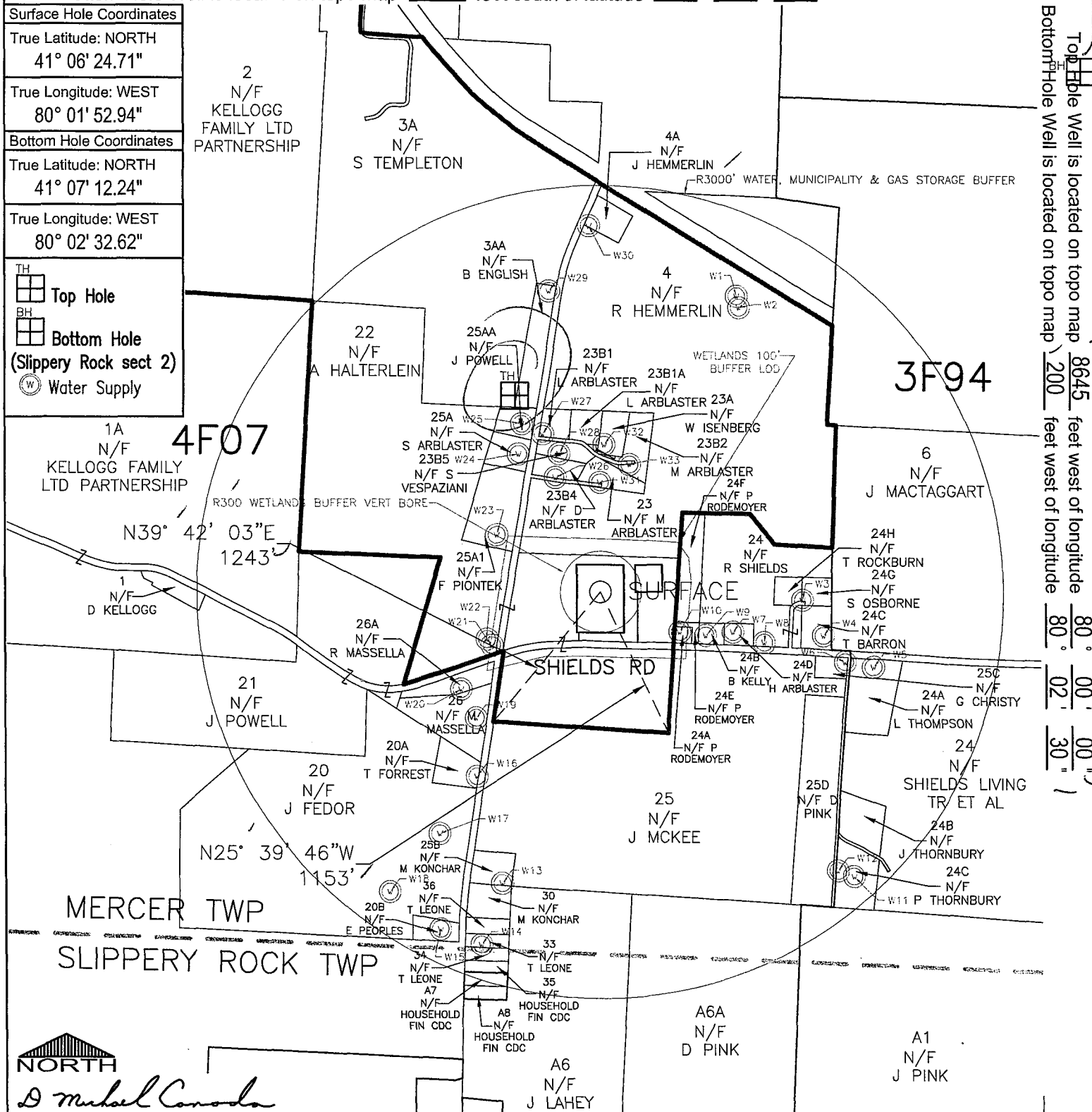
True Longitude: WEST
80° 01' 52.94"

Bottom Hole Coordinates

True Latitude: NORTH
41° 07' 12.24"

True Longitude: WEST
80° 02' 32.62"

TH ☐ Top Hole
BH ☐ Bottom Hole
(Slippery Rock sect 2)
W ☐ Water Supply



D. Michael Canada

Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309		Well (Farm) Name: HALTERLEIN		Well #: 2064-3HM	
Address: 190 Thorn Hill Road, Warrendale, PA 15086				County: BUTLER		Municipality: MERCER	
911 Address of well site: 401 SHIELDS RD				USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3	
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada		Phone #: 716-379-7918		Dwg #: 20120412 B		Date: SEPT 18, 2012	
Lat. & Long Metadata Method: RTK GPS		Accuracy: ± 5 ft.		Datum: NAD 83		Elevation Metadata Method: GPS	
Accuracy: ± 5 ft.		Datum: NAD 83		Accuracy: ± 5 ft.		Datum: NAD 83	
Scale: 1" = 1000'						Tract Acreage: 384.4	
Survey Date: APRIL 12, 2012							

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-3HM
Surface Landowner: ✓ HALTERLEIN ANTHONY J ✓	Angle & Course of Deviation (Drilling): N30° 45' 22"W 5689' ✓	Anticipated True Vertical Depth Feet (TVD): 4658.1 ✓	Anticipated Total Measured Depth Feet (TMD): 10049.54 ✓
Target Formation(s): Marcellus Shale	Deepest Formation to be penetrated: Marcellus Shale	Number of Laterals: 1 ✓	Total footage to be drilled - all laterals: 10049.54 ✓

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 45.69"	80D 01' 40.07"
220-04F07-0000024G-0000	✓ OSBORNE SHERRI L ✓	41D 06' 24.51"	80D 01' 33.24"
220-04F07-0000024C-0000	✓ BARRON TERRY L & BEATRICE A ✓	41D 06' 21.97"	80D 01' 31.14"
220-03F94-0000024A-0000	✓ THOMPSON LEON E & NORMA L ✓	41D 06' 19.80"	80D 01' 26.25"
220-04F07-0000025C-0000	✓ CHRISTY GERALD & ALICE	41D 06' 20.11"	80D 01' 28100"
220-04F07-0000024D-0000	✓ ARBLASTER HENRY E & JOAN ✓	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024-0000	✓ SHIELDS RICHARD L JR & LARRY D ✓	41D 06' 21.35"	80D 01' 36.91"
220-04F07-0000024B-0000	✓ KELLY BURTON F & NEVADA D ✓	41D 06' 21.75"	80D 01' 42.62"
220-04F07-0000024A-0000	✓ RODEMOYER PATRICIA L ✓	41D 06' 21.95"	80D 01' 45.14"
220-03F94-0000024C-0000	✓ THORNBURY PATRICK D ✓	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	✓ THORNBURY PATRICK D ✓	41D 06' 04.89"	80D 01' 29.28"
220-04F07-0000025B-0000	✓ KONCHAR MITCHELL & GRACE ✓	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000033-0000	✓ LEONE THOMAS C & SHARON R ✓	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000020B-0000	✓ PEOPLES ELAINE L & REESEMAN HEATHER A ✓	41D 05' 59.84"	80D 02' 07.73"
220-04F07-0000020A-0000	✓ FORREST THOMAS E & AMY B ✓	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020-0000	✓ FEDOR JESSE N ET AL ✓	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000020-0000	✓ FEDOR JESSE N ET AL ✓	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000026-0000	✓ MASSELLA MARK A & JENNIFER L ✓	41D 06' 15.32"	80D 02' 04.65"
220-04F07-0000026A-0000	✓ MASSELLA ROBERT A & LYNISE S ✓	41D 06' 17.37"	80D 02' 06.19"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
220-04F07-000025A1-0000	✓ PIONTEK FRANK L III & ANNE M ✓	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025A-0000	✓ ARBLASTER STEVEN R & LINDA A ✓	41D 06' 34.60"	80D 02' 01.17"
220-04F07-000025AA-0000	✓ POWELL JAMES R & JULIE E ✓	41D 06' 36.81"	80D 02' 00.93"
220-04F07-000023B4-0000	✓ ARBLASTER DAVID S & BARBARA ✓	41D 06' 32.98"	80D 01' 57.55"
220-04F07-000023B1-0000	✓ ARBLASTER LARRY E & ERIN L ✓	41D 06' 36.12"	80D 01' 58.88"
220-04F07-000023B5-0000	✓ VESPAZIANI STAR A & KEVIN ✓	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000003AA-0000	✓ ENGLISH BLAIR C & CAROL A ✓	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000004A-0000	✓ HEMMERLIN JOHN J & CATHERINE L ✓	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000023-0000	✓ ARBLASTER MARK D ET AL ✓	41D 06' 32.69"	80D 01' 53.20"
220-04F07-0000023A-0000	✓ ISENBERG WILLIAM J & SHIRLEY ✓	41D 06' 35.45"	80D 01' 52.90"
220-04F07-000023B2-0000	✓ ARBLASTER MARK D & CRYSTAL K ✓	41D 06' 34.06"	80D 01' 50.39"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-3HM
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N25° 07' 18.99"E	2409
W2	N26° 23' 41.21"E	2340
W3	S87° 42' 06.31"E	1508
W4	S79° 02' 05.10"E	1691
W5	S74° 48' 44.28"E	2103
W6	S74° 13' 37.33"E	1891
W7	S73° 14' 50.93"E	1029
W8	S72° 59' 27.55"E	1273
W9	S67° 43' 33.96"E	844
W10	S63° 23' 18.35"E	659
W11	S41° 52' 15.32"E	2812
W12	S40° 33' 31.63"E	2703
W13	S18° 55' 57.10"W	2272
W14	S18° 52' 04.66"W	2748
W15	S25° 43' 28.39"W	2761
W16	S34° 00' 51.82"W	1640
W17	S33° 58' 31.67"W	2149

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S35° 30' 56.67"W	2716
W19	S44° 49' 00.96"W	1307
W20	S55° 16' 25.38"W	1257
W21	S63° 52' 33.99"W	893
W22	S67° 39' 38.00"W	912
W23	N61° 07' 23.30"W	873
W24	N30° 42' 29.96"W	1183
W25	N25° 02' 28.97"W	1368
W26	N21° 21' 42.17"W	908
W27	N19° 58' 50.64"W	1241
W28	N16° 31' 44.43"W	1064
W29	N9° 35' 58.88"W	2253
W30	N1° 36' 16.92"W	2703
W31	N0° 04' 55.47"E	808
W32	N1° 39' 00.27"E	1087
W33	N13° 04' 28.79"E	969

Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet
DRILLED IN - ☒ MERCER TWP-BUTLER CO
ADJACENT TO ☒ HARRISVILLE BORO-BUTLER CO
☒ IRWIN TWP- VENANGO CO
☒ MARION TWP-BUTLER CO
☒ CHERRY TWP-BUTLER CO
☒ SLIPPERY ROCK TWP-BUTLER CO
☒ LIBERTY TWP-MERCER CO
☒ PINE TWP- MERCER CO

Coal related parties
NONE

Map Details:

- Sections:** 4F05, 4F07, 3F94, 3F9.
- Townships:** MERCER TWP, SLIPPERY ROCK TWP.
- Owners and Parcels:**
 - 22A1 N/F C & K COAL CO
 - 22 N/F J PIZOR
 - 22A N/F T FEDOKOVITZ
 - 22C N/F D YOUSHOCK
 - 24 N/F R MCCONNELL
 - 52 N/F W SLOCUM
 - 93 N/F J JORDAN
 - 31 N/F J JORDAN
 - 10 N/F R COYER
 - 2 N/F KELLOGG FAMILY LTD PARTNERSHIP
 - 1A N/F KELLOGG FAMILY LTD PARTNERSHIP
 - 1 N/F D KELLOGG
 - 22 N/F J HALTERLEIN
 - 25A N/F S ARBLASTER
 - 23B1 N/F L ARBLASTER
 - 23B1A N/F L ARBLASTER
 - 23A N/F W ISENBURG
 - 23B2 N/F M ARBLASTER
 - 23B4 N/F D ARBLASTER
 - 23 N/F M ARBLASTER
 - 25A1 N/F F PIONTEK
 - 26A N/F R MASSELLA
 - 26 N/F M MASSELLA
 - 20A N/F T FORREST
 - 20 N/F J FEDOR
 - 25B N/F M KONCHAR
 - 36 N/F T LEONE
 - 20B N/F T LEONE
 - 34 N/F T LEONE
 - 35 N/F HOUSEHOLD FIN CDC
 - 30 N/F M KONCHAR
 - 33 N/F T LEONE
 - 35 N/F HOUSEHOLD FIN CDC
 - 48 N/F HOUSEHOLD FIN CDC
 - 46 N/F HOUSEHOLD FIN CDC
 - 56 N/F J LAHEY
 - 2 N/F F VINCENT
 - 3B N/F B MIDBERRY
 - 3BA N/F B STROHECKER
 - 3A N/F W PINK
 - 3 N/F I NISWANDER
 - 4A N/F J HEMMERLIN
 - 4 N/F R HEMMERLIN
 - 24H N/F T ROCKBURN
 - 24G N/F S OSBORNE
 - 24C N/F T BARRON
 - 25C N/F G CHRISTY
 - 24A N/F L THOMPSON
 - 24 N/F SHIELDS LIVING TR ET AL
 - 24B N/F J THORNBURY
 - 24C N/F P THORNBURY
 - 25D N/F D PINK
 - 25 N/F J MCKEE
 - 6 N/F J MACTAGGART
 - 6A N/F D PINK
 - A1 N/F J PINK
 - A2 N/F MCCUEAN
 - A10F N/F C HOGG
 - A12B N/F W PINK
- Measurements:**
 - S85° 51' 35"W 862'
 - S76° 45' 18"E 823'
 - N39° 42' 03"E 1243'
 - N25° 39' 46"W 1153'
- Other Features:**
 - BESSEMER & LAKE ERIE RAILROAD
 - SHIELDS RD
 - SURFACE
 - W/ TOP HOLE LOCATIONS
 - ACCESS RD

Tract Acreage: 384.4

WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-3HM
---	------------------------	-------------------------------------	-------------------------

DEP Use Only	Permit #
--------------------	----------

WELL PLAN

Operator Name: SWEPI LP
Well / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3926.83</u>	TMD: <u>3926.83</u>	<u>41° 06' 24.71"</u>	<u>80° 01' 52.94"</u>
Landing Point:	TVD: <u>4658.1</u>	TMD: <u>5121.54</u>	<u>41° 06' 30.30"</u>	<u>80° 01' 59.93"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

NOV 27 2012

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UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-3HM
Wellbore: HALTERLEIN #2064-3HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188.2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Easting 1339873.82 Latitude 41° 6' 24.713 N Longitude 80° 1' 52.938 W

SECTION DETAILS

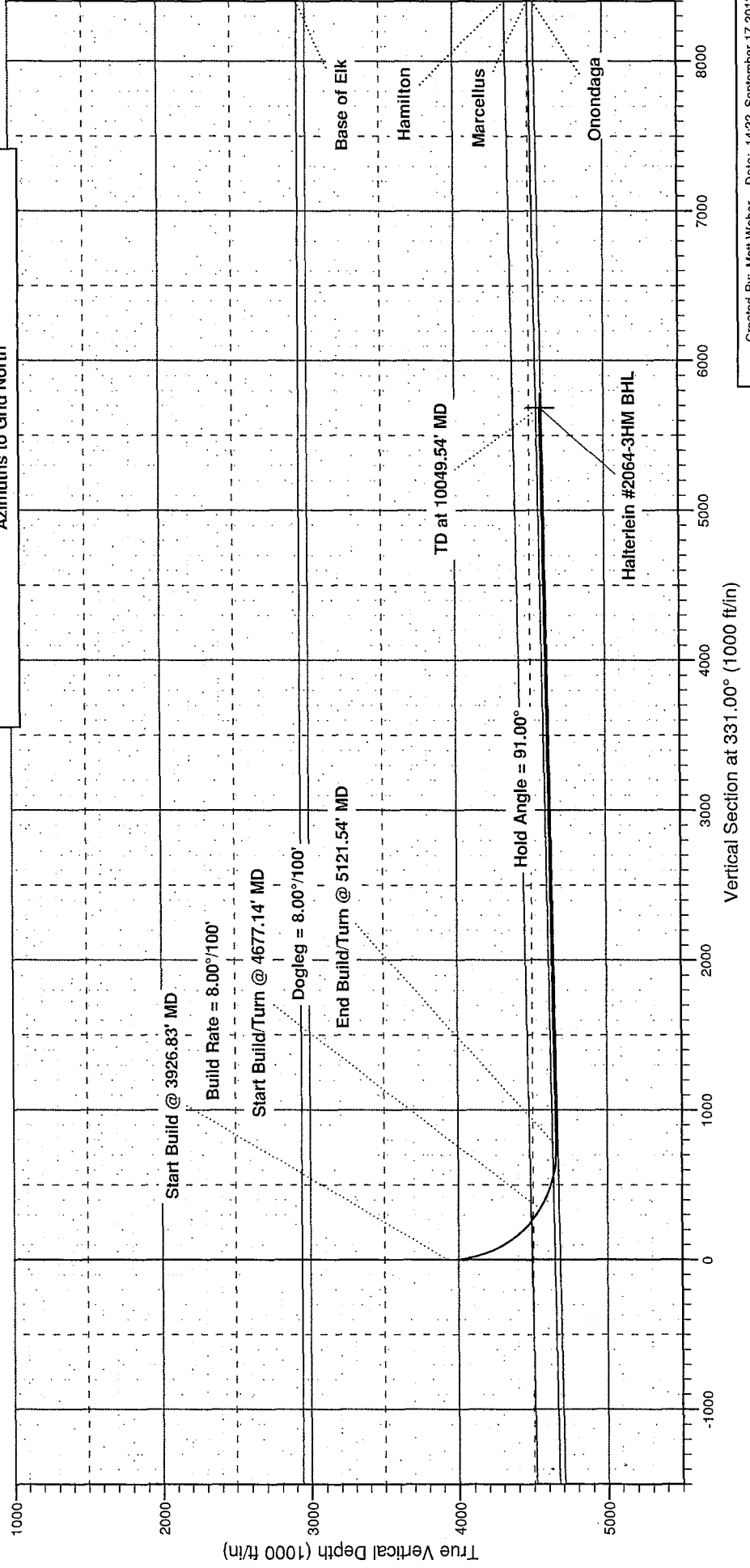
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3926.83	0.00	0.00	3926.83	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
4677.14	60.00	312.76	4547.31	243.26	-263.03	8.00	312.76	340.27	End Build/Turn
5121.54	91.00	331.00	4658.10	579.06	-520.32	8.00	32.57	758.71	TD
10049.54	91.00	331.00	4572.09	4888.53	-2909.09	0.00	0.00	5685.96	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-3HM BHL	4572.09	4888.53	-2909.09	355727.75	1336964.73	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North



UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-3HM
Wellbore: HALTERLEIN #2064-3HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North (1188, 2271)
 Elevation: DFE @ 1341.00ft (TBD)
 Northing Easting Latitude Longitude
 350839.23 1339873.82 41° 6' 24.713 N 80° 1' 52.938 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

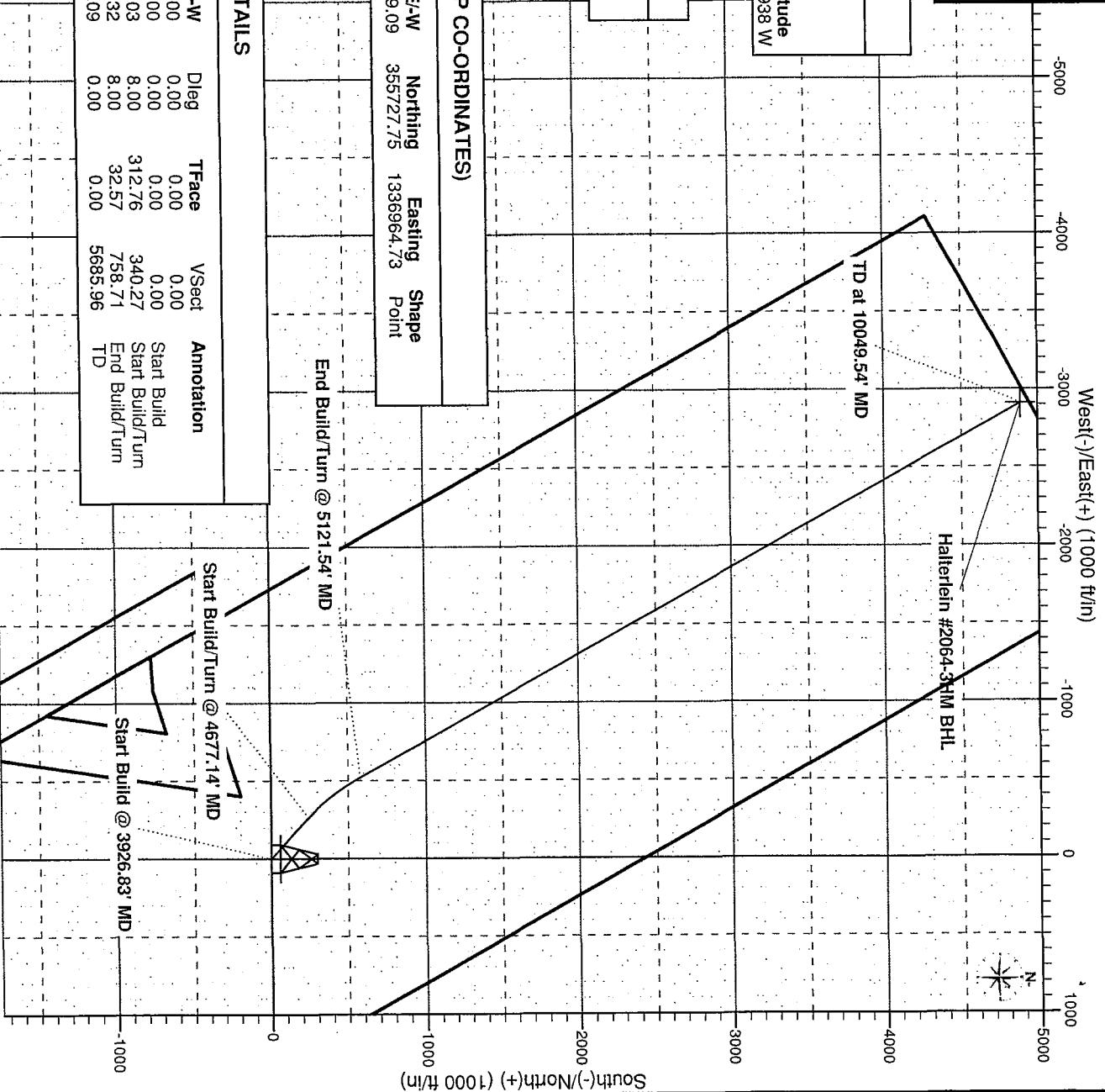
Magnetic Model: BGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-3HM BHL	4572.09	4888.53	-2909.09	355727.75	1336964.73	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3926.83	0.00	0.00	3926.83	0.00	0.00	0.00	0.00	0.00	Start Build
4677.14	60.00	312.76	4547.31	243.26	-263.03	8.00	312.76	340.27	Start Build/Turn
5121.54	91.00	331.00	4658.10	579.06	-520.32	8.00	32.57	758.71	End Build/Turn
10049.54	91.00	331.00	4572.09	4888.53	-2909.09	0.00	0.00	5685.96	TD





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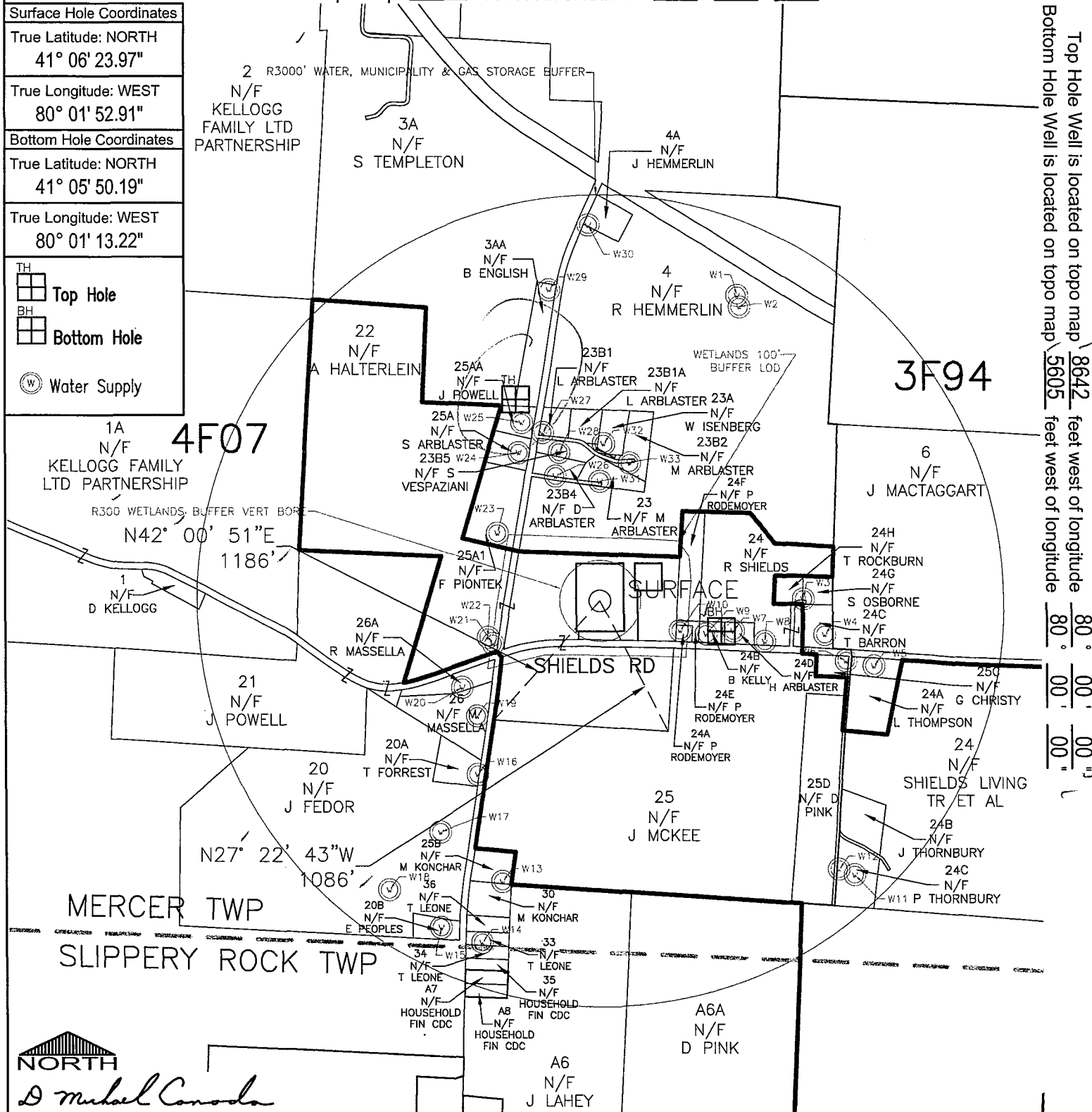
Oil and Gas Management Program

WELL LOCATION PLAT

Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: SGP
	Permit #: 019-22002	11/27/12
	Project #:	C:

Top Hole Well is located on topo map 6682 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 10101 feet south of latitude 41° 07' 30" tax map information



Applicant / Well Operator Name: SWEPI LP		DEP ID #: 284309	Well (Farm) Name: HALTERLEIN		Well #: 2064-6HM
Address: 190 Thorn Hill Road, Warrendale, PA 15086			County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: 401 Shields Road, Slippery Rock, PA 16057			USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3 / Surface Elevation: 1320 ft.
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada	Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPT 19, 2012	Scale: 1" = 1000'	Tract Acreage: 415.07
Lat. & Long Metadata Method: RTK GPS	Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.	Datum: NAD 83
Survey Date: APRIL 12, 2012					

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-6HM
Surface Landowner: ✓ HALTERLEIN ANTHONY J ✓	Angle & Course of Deviation (Drilling): S40° 07' 20"E 4574' ✓	Anticipated True Vertical Depth Feet (TVD): 4749.68 ✓	Anticipated Total Measured Depth Feet (TMD): 9243.53 ✓
Target Formation(s): Marcellus Shale	Deepest Formation to be penetrated: Marcellus Shale	Number of Laterals: 1 ✓	Total footage to be drilled - all laterals: 9243.53 ✓

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 45.69"	80D 01' 40.07"
220-04F07-0000024G-0000	✓ OSBORNE SHERRI L ✓	41D 06' 24.51"	80D 01' 33.24"
220-04F07-0000024C-0000	✓ BARRON TERRY L & BEATRICE A ✓	41D 06' 21.97"	80D 01' 31.14"
220-03F94-0000024A-0000	✓ THOMPSON LEON E & NORMA L ✓	41D 06' 19.80"	80D 01' 26.25"
220-04F07-0000025C-0000	✓ CHRISTY GERALD & ALICE ✓	41D 06' 20.11"	80D 01' 28.100"
220-04F07-0000024D-0000	✓ ARBLASTER HENRY E & JOAN ✓	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024-0000	✓ SHIELDS RICHARD L JR & LARRY D ✓	41D 06' 21.35"	80D 01' 36.91"
220-04F07-0000024B-0000	✓ KELLY BURTON F & NEVADA D ✓	41D 06' 21.75"	80D 01' 42.62"
220-04F07-0000024A-0000	✓ RODEMOYER PATRICIA L ✓	41D 06' 21.95"	80D 01' 45.14"
220-03F94-0000024C-0000	✓ THORNBURY PATRICK D ✓	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	✓ THORNBURY PATRICK D ✓	41D 06' 04.89"	80D 01' 29.28"
220-04F07-0000025B-0000	✓ KONCHAR MITCHELL & GRACE ✓	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000033-0000	✓ LEONE THOMAS C & SHARON R ✓	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000020B-0000	✓ PEOPLES ELAINE L & REESEMAN HEATHER A ✓	41D 05' 59.84"	80D 02' 07.73"
220-04F07-0000020A-0000	✓ FORREST THOMAS E & AMY B ✓	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020-0000	✓ FEDOR JESSE N ET AL ✓	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000020-0000	✓ FEDOR JESSE N ET AL ✓	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000026-0000	✓ MASSELLA MARK A & JENNIFER L ✓	41D 06' 15.32"	80D 02' 04.65"
220-04F07-0000026A-0000	✓ MASSELLA ROBERT A & LYNISE S ✓	41D 06' 17.37"	80D 02' 06.19"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
220-04F07-000025A1-0000	✓ PIONTEK FRANK L III & ANNE M ✓	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025A-0000	✓ ARBLASTER STEVEN R & LINDA A ✓	41D 06' 34.60"	80D 02' 01.17"
220-04F07-000025AA-0000	✓ POWELL JAMES R & JULIE E ✓	41D 06' 36.81"	80D 02' 00.93"
220-04F07-000023B4-0000	✓ ARBLASTER DAVID S & BARBARA ✓	41D 06' 32.98"	80D 01' 57.55"
220-04F07-000023B1-0000	✓ ARBLASTER LARRY E & ERIN L ✓	41D 06' 36.12"	80D 01' 58.88"
220-04F07-000023B5-0000	✓ VESPAZIANI STAR A & KEVIN ✓	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000003AA-0000	✓ ENGLISH BLAIR C & CAROL A ✓	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000004A-0000	✓ HEMMERLIN JOHN J & CATHERINE L ✓	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000023-0000	✓ ARBLASTER MARK D ET AL ✓	41D 06' 32.69"	80D 01' 53.20"
220-04F07-0000023A-0000	✓ ISENBERG WILLIAM J & SHIRLEY ✓	41D 06' 35.45"	80D 01' 52.90"
220-04F07-000023B2-0000	✓ ARBLASTER MARK D & CRYSTAL K ✓	41D 06' 34.06"	80D 01' 50.39"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-6HM
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N24° 23' 10.63"E	2477
W2	N25° 36' 07.92"E	2408
W3	N89° 26' 49.06"E	1507
W4	S81° 32' 55.69"E	1679
W5	S76° 48' 09.04"E	2084
W6	S76° 26' 13.39"E	1872
W7	S77° 19' 38.37"E	1010
W8	S76° 16' 16.92"E	1254
W9	S72° 35' 17.69"E	819
W10	S69° 30' 26.95"E	629
W11	S42° 54' 43.71"E	2756
W12	S41° 36' 55.51"E	2646
W13	S19° 33' 53.58"W	2202
W14	S19° 23' 10.71"W	2677
W15	S26° 24' 58.92"W	2693
W16	S35° 32' 12.51"W	1578
W17	S35° 07' 30.62"W	2087

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S36° 27' 18.50"W	2656
W19	S47° 13' 47.77"W	1255
W20	S58° 10' 41.11"W	1216
W21	S68° 21' 14.30"W	862
W22	S72° 09' 05.59"W	886
W23	N56° 59' 24.60"W	911
W24	N28° 56' 51.57"W	1248
W25	N23° 46' 25.09"W	1436
W26	N19° 45' 32.89"W	978
W27	N18° 51' 34.70"W	1312
W28	N15° 27' 04.91"W	1136
W29	N9° 17' 26.86"W	2327
W30	N1° 33' 38.13"W	2778
W31	N0° 04' 39.26"E	883
W32	N1° 32' 43.62"E	1162
W33	N12° 08' 39.61"E	1043

Municipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN - ☒ MERCER TWP-BUTLER CO ☒

ADJACENT TO - ☒ HARRISVILLE BORO-BUTLER CO ☒

☒ IRWIN TWP- VENANGO CO ☒

☒ MARION TWP-BUTLER CO ☒

☒ CHERRY TWP-BUTLER CO ☒

☒ SLIPPERY ROCK TWP-BUTLER CO ☒

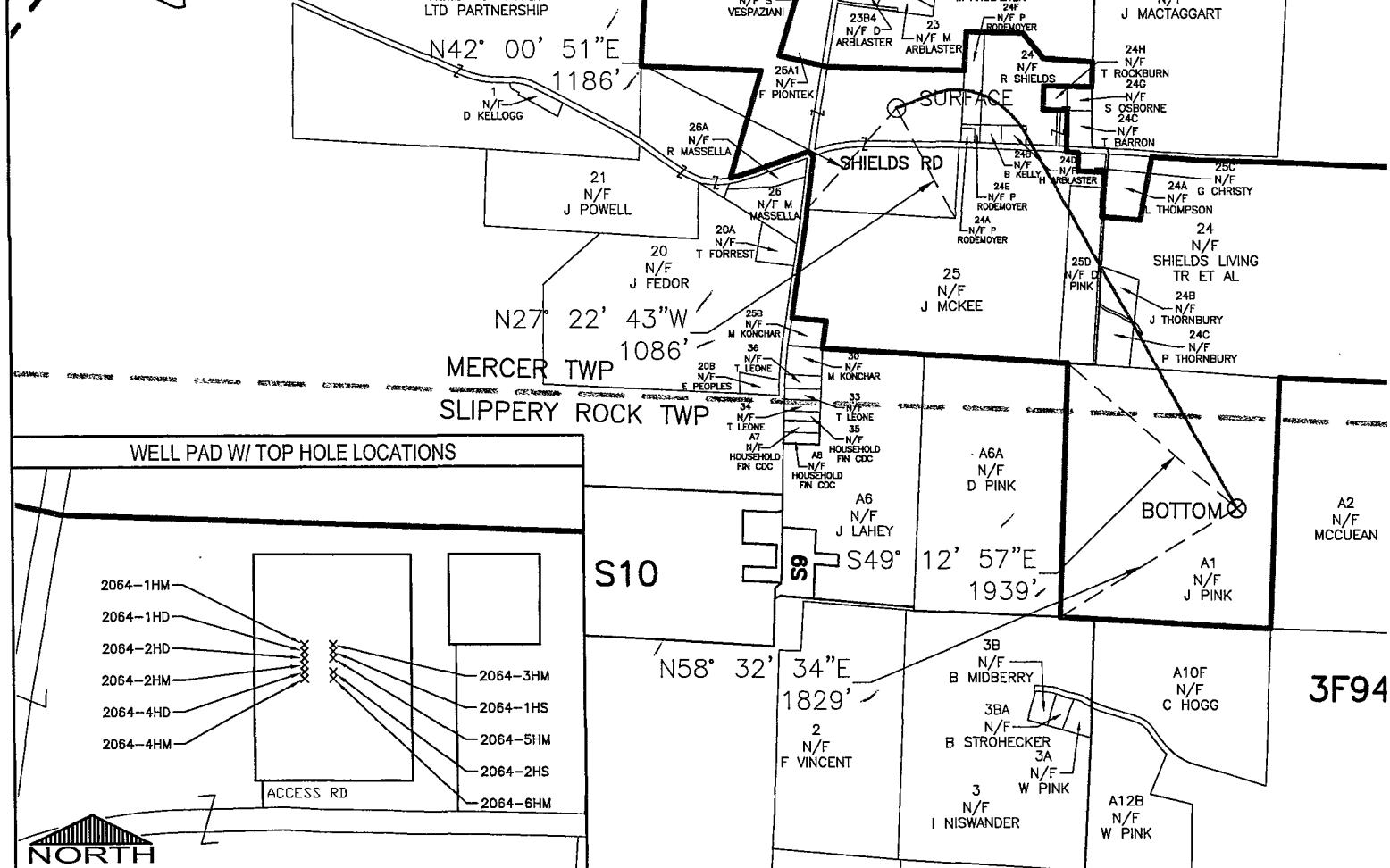
☒ LIBERTY TWP-MERCER CO ☒

☒ PINE TWP- MERCER CO ☒

Coal related parties

NONE

A map of Liberty Township, Michigan, showing the location of the proposed project area. The map includes the township boundary, major roads, and the project area highlighted in yellow. The project area is located in the central part of the township, near the intersection of the main road and a smaller road.



WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: <u>SWEPI LP</u>	DEP ID#: <u>284309</u>	Well (Farm) Name: <u>HALTERLEIN</u>	Well #: <u>2064-6HM</u>
---	------------------------	-------------------------------------	-------------------------

DEP Use Only	Permit #
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WELL PLAN

Operator Name: SWEPI LPWell / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3744.5</u>	TMD: <u>3744.5</u>	<u>41° 06' 23.97"</u>	<u>80° 01' 52.91"</u>
Landing Point:	TVD: <u>4684.6</u>	TMD: <u>5514.53</u>	<u>41° 06' 21.93"</u>	<u>80° 01' 37.94"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-6HM
Wellbore: HALTERLEIN #2064-6HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188, 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Easting 1339873.78
 Latitude 41° 6' 23.972 N
 Longitude 80° 1' 52.913 W

SECTION DETAILS

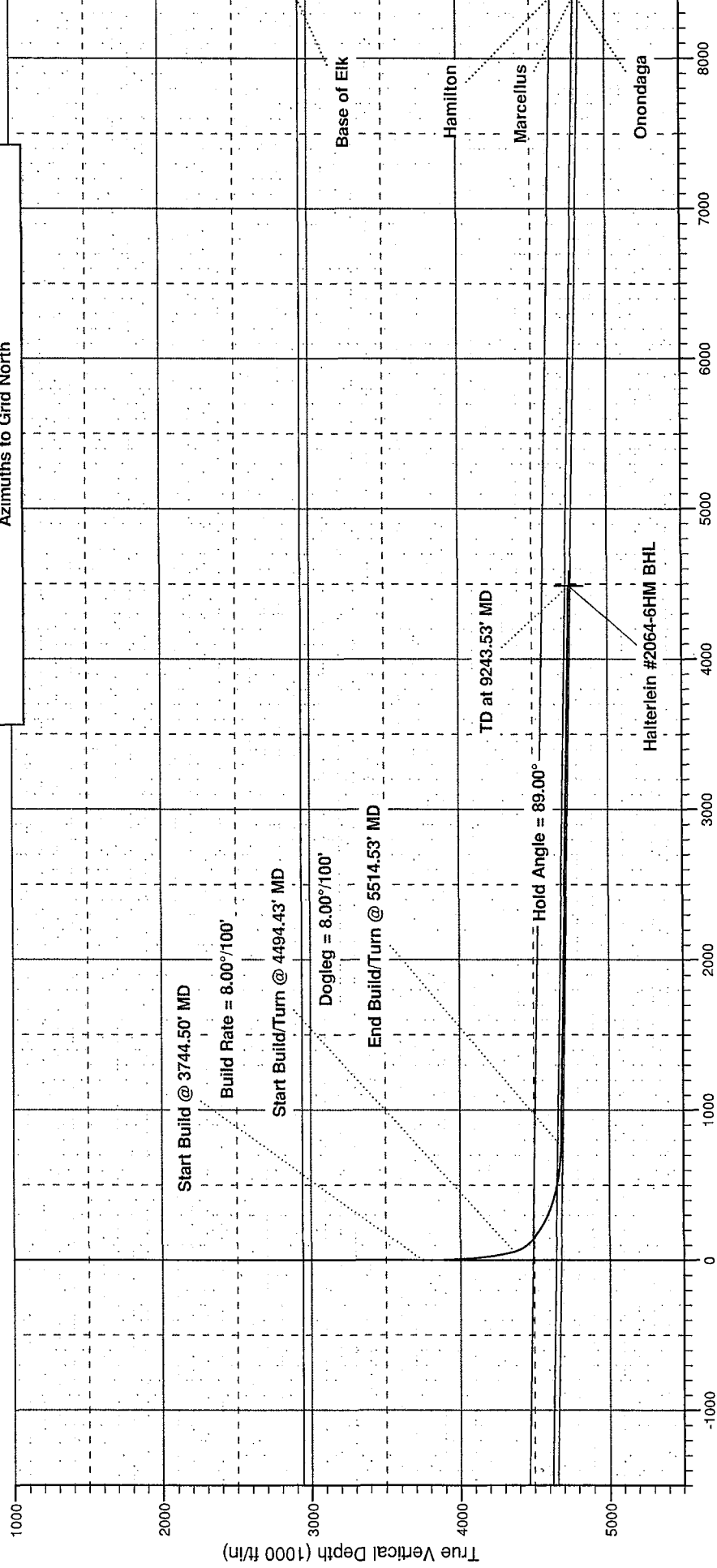
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3744.50	0.00	0.00	3744.50	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
4494.43	60.00	70.10	4364.67	121.86	336.71	8.00	70.10	56.66	End Build/Turn
5514.53	89.00	151.00	4684.60	-236.62	1139.98	8.00	86.29	759.63	TD
9243.53	89.00	151.00	4749.68	-3497.58	2947.56	0.00	0.00	4488.06	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-6HM BHL	4749.68	-3497.58	2947.56	347266.65	1342821.33	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North



Vertical Section at 151.00° (1000 ft/in)

UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-6HM
Wellbore: HALTERLEIN #2064-6HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83			
NAD83 / Pennsylvania North [1188_2271]			
Elevation: DFE @ 1341.00ft (TBD)			
North	Easting	Latitude	Longitude
350764.23	1339873.78	41° 6' 23.972 N	80° 1' 52.913 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

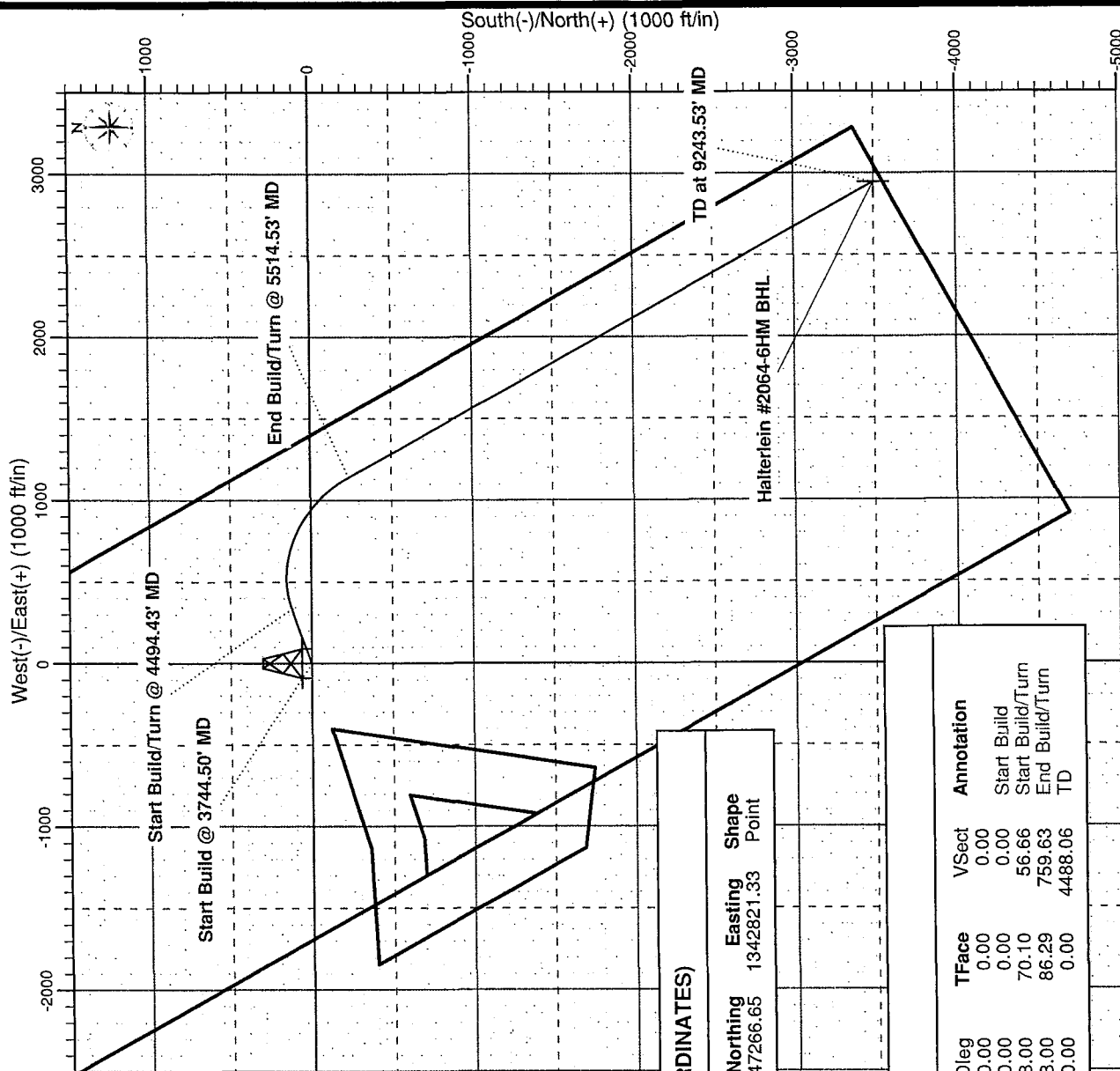
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-6HM BHL	4749.68	-3497.58	2947.56	347266.65	1342821.33	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3744.50	0.00	0.00	3744.50	0.00	0.00	0.00	0.00	0.00	Start Build
4494.43	60.00	70.10	4364.67	121.86	336.71	8.00	70.10	56.66	Start Build/Turn
5514.53	89.00	151.00	4684.60	-236.62	1139.98	8.00	86.29	759.63	End Build/Turn
9243.53	89.00	151.00	4749.68	-3497.58	2947.56	0.00	0.00	4488.06	TD





pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: SGP
	Permit #: 019-22001	11/26/12
	Project #:	C:

Top Hole Well is located on topo map 6636 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 1288 feet south of latitude 41° 07' 30" tax map information

Surface Hole Coordinates

True Latitude: NORTH
41° 06' 24.42"

True Longitude: WEST
80° 01' 52.93"

Bottom Hole Coordinates

True Latitude: NORTH
41° 07' 17.27"

True Longitude: WEST
80° 02' 21.37"

TH

Top Hole

BH

Bottom Hole

Water Supply

1A
N/F
KELLOGG FAMILY
LTD PARTNERSHIP

4F07

N40° 36' 01"E
1220'

D KELLOGG

21
N/F
J POWELL

20
N/F
J FEDOR

N26° 19' 29"W
1126'

MERCER TWP

SLIPPERY ROCK TWP

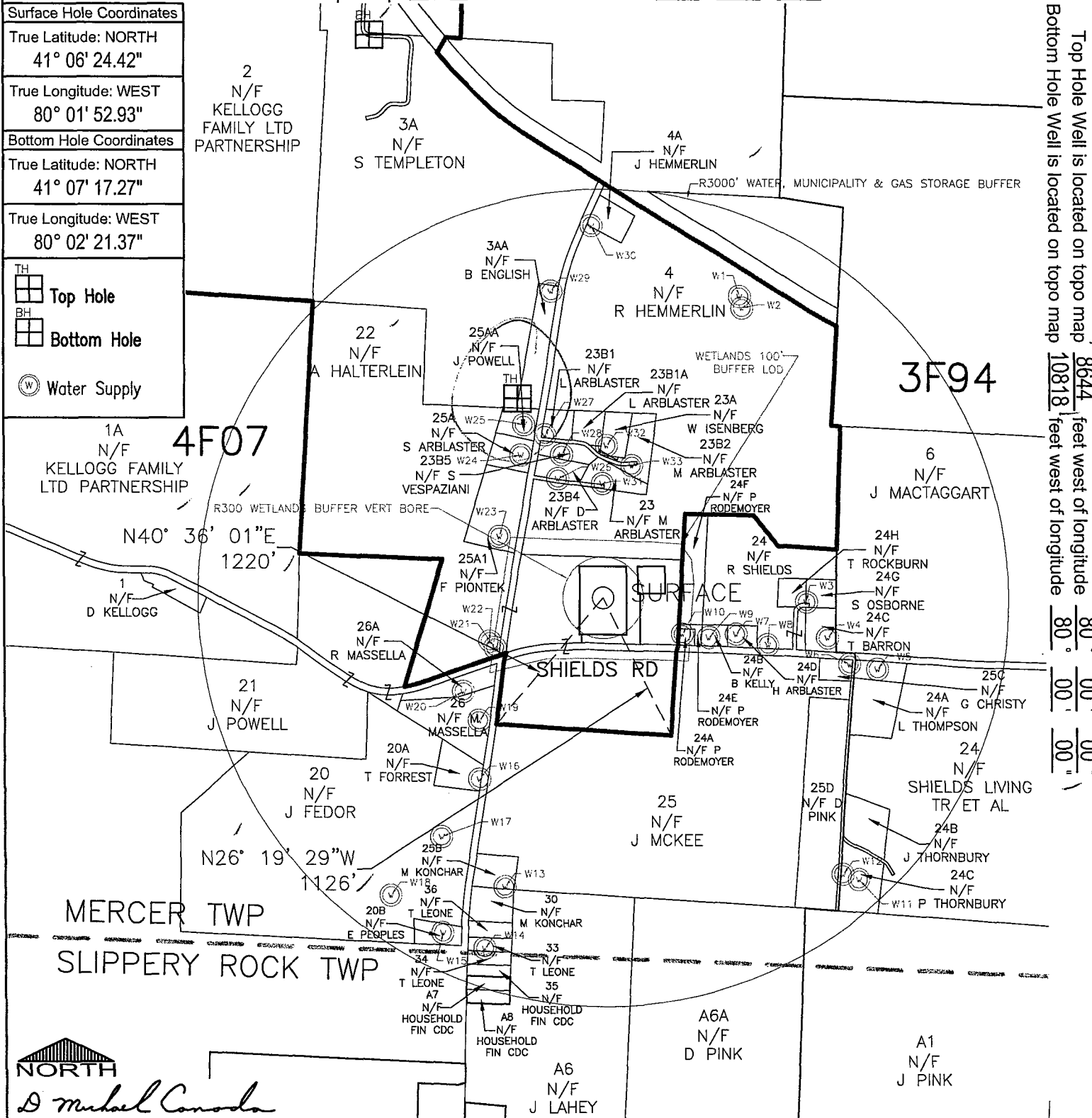
NORTH

D Michael Canada

Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309	Well (Farm) Name: HALTERLEIN		Well #: 2064-5HM
Address: 190 Thorn Hill Road, Warrendale, PA 15086			County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: PENDING			USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3 Surface Elevation: 1320 ft.
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada	Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPT 18, 2012	Scale: 1" = 1000'	Tract Acreage: 297.11
Lat. & Long Metadata Method: RTK GPS	Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.	Datum: NAD 83
Survey Date: APRIL 12, 2012					

Top Hole Well is located on topo map 8644 feet west of longitude
Bottom Hole Well is located on topo map 10818 feet west of longitude

80° 00' 00"
80° 00' 00"



WELL LOCATION PLAT
Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-5HM
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): N20° 38' 07"W 5776'	Anticipated True Vertical Depth Feet (TVD): 4656.91	Anticipated Total Measured Depth Feet (TMD): 10404.22
Target Formation(s): Marcellus Shale	Deepest Formation to be penetrated: Marcellus Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 10404.22

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
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220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
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WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

WELL LOCATION PLAT

Page 2A Notifications

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Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-5HM
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N24° 49' 21.88"E	2436
W2	N26° 04' 20.39"E	2367
W3	S88° 50' 30.15"E	1507
W4	S80° 02' 08.95"E	1686
W5	S75° 36' 15.05"E	2095
W6	S75° 06' 20.44"E	1883
W7	S74° 51' 39.61"E	1020
W8	S74° 17' 26.53"E	1265
W9	S69° 38' 06.25"E	834
W10	S65° 46' 02.71"E	646
W11	S42° 16' 56.81"E	2789
W12	S40° 58' 33.92"E	2680
W13	S19° 10' 50.45"W	2244
W14	S19° 04' 19.41"W	2719
W15	S25° 59' 49.86"W	2734
W16	S34° 36' 33.86"W	1615
W17	S34° 25' 38.34"W	2124

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S35° 53' 11.09"W	2692
W19	S45° 45' 31.07"W	1286
W20	S56° 24' 44.13"W	1240
W21	S65° 37' 47.59"W	880
W22	S69° 25' 33.01"W	901
W23	N59° 25' 37.40"W	888
W24	N29° 58' 52.77"W	1208
W25	N24° 31' 09.83"W	1395
W26	N20° 41' 30.61"W	936
W27	N19° 31' 02.31"W	1269
W28	N16° 04' 51.23"W	1093
W29	N9° 28' 25.42"W	2283
W30	N1° 35' 12.36"W	2733
W31	N0° 04' 48.64"E	838
W32	N1° 36' 23.54"E	1117
W33	N12° 41' 10.21"E	999

Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet

DRILLED IN - ☒ MERCER TWP-BUTLER CO ☒

ADJACENT TO - ☒ HARRISVILLE BORO-BUTLER CO ☒

☒ IRWIN TWP- VENANGO CO ☒

☒ MARION TWP-BUTLER CO ☒

☒ CHERRY TWP-BUTLER CO ☒

☒ SLIPPERY ROCK TWP-BUTLER CO ☒

☒ LIBERTY TWP-MERCER CO ☒

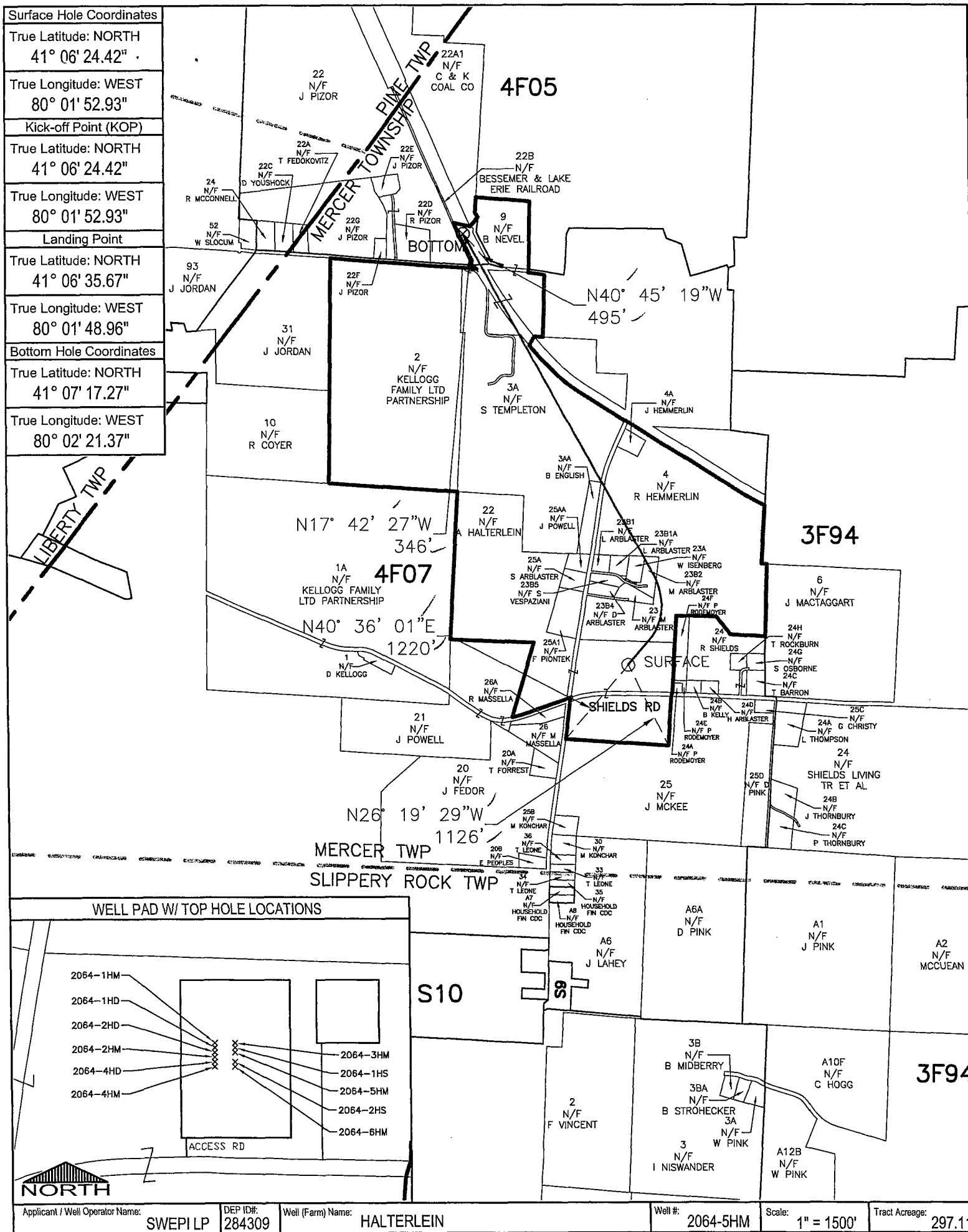
☒ PINE TWP- MERCER CO ☒

Coal related parties

NONE

WELL LOCATION PLAT

Page 3 Plan View of Deviated Well Bore



WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name:

SWEPI LP

DEP ID#:

284309

Well (Farm) Name:

HALTERLEIN

Well #:

2064-5HM

DEP
Use
Only

Permit #

WELL PLAN

Operator Name: SWEPI LPWell / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3793.7</u>	TMD: <u>3793.7</u>	<u>41° 06' 24.42"</u>	<u>80° 01' 52.93"</u>
Landing Point:	TVD: <u>4656.91</u>	TMD: <u>5516.22</u>	<u>41° 06' 35.67"</u>	<u>80° 01' 48.96"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-5HM
Wellbore: HALTERLEIN #2064-5HM
Design: Design #1
Rig: TBD

SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VFace	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3793.70	0.00	0.00	3793.70	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
4606.55	65.00	41.39	4443.08	310.34	273.54	8.00	41.39	138.82	End Build/Turn
5516.22	91.00	331.00	4656.91	1130.58	333.97	8.00	-80.50	826.92	TD
10404.22	91.00	331.00	4571.60	5405.07	-2035.42	0.00	0.00	5714.17	TD

Surface Location:

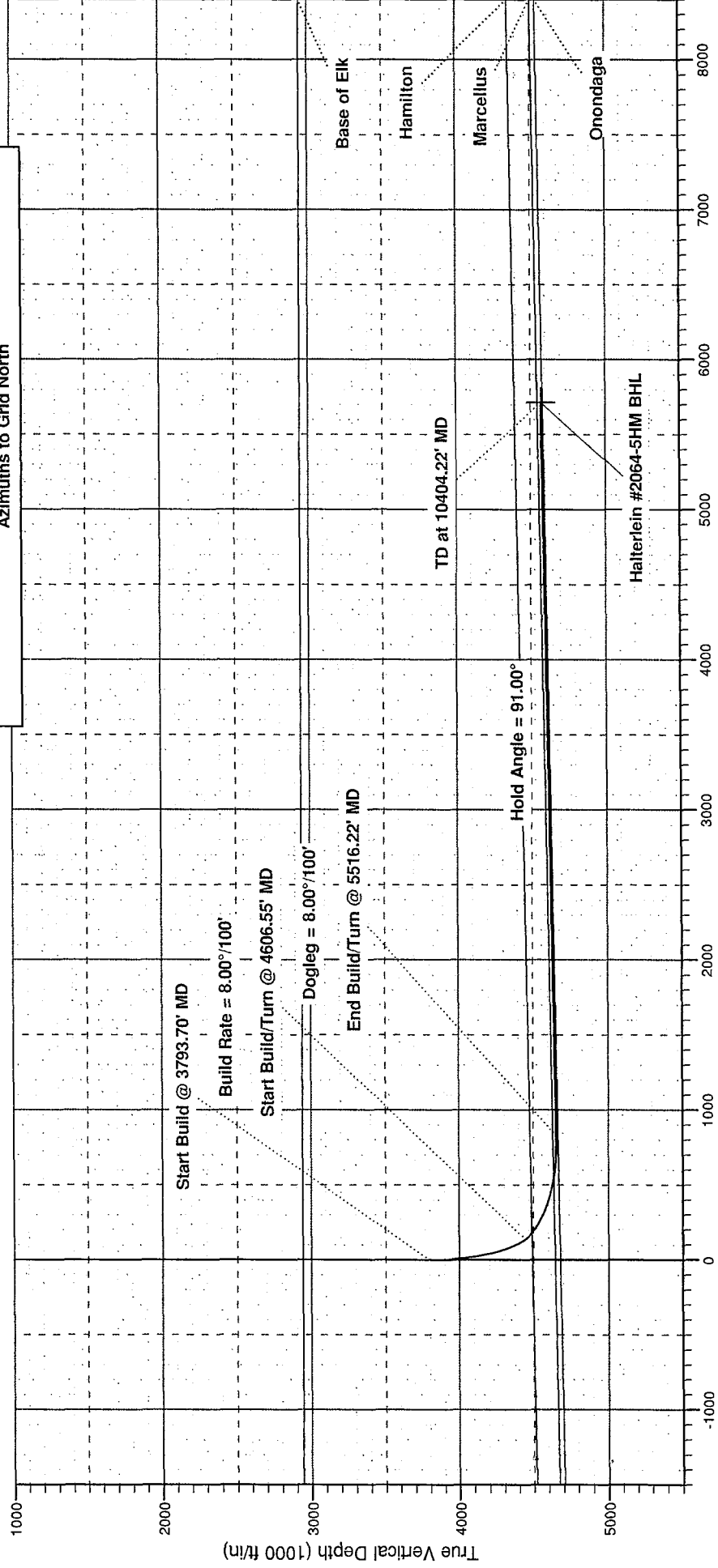
EPW NAD83
 NAD83 / Pennsylvania North [1188, 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350809.23
 Easting 1339873.81
 Longitude 80° 1' 52.928 W
 Latitude 41° 6' 24.417 N

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name Halterlein #2064-5HM BHL
 TVD 4571.60
 +N-S 5405.072035.42
 +E-W 1337838.39
 Northing 356214.29
 Easting 1337838.39
 Shape Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012
 Azimuths to Grid North
 Date: 24-Aug-12



Vertical Section at 331.00° (1000 ft/in)

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-5HM
Wellbore: HALTERLEIN #2064-5HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188_2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350809.23 Easting 1339873.81
 Longitude 41° 6' 24.417 N 80° 1' 52.928 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

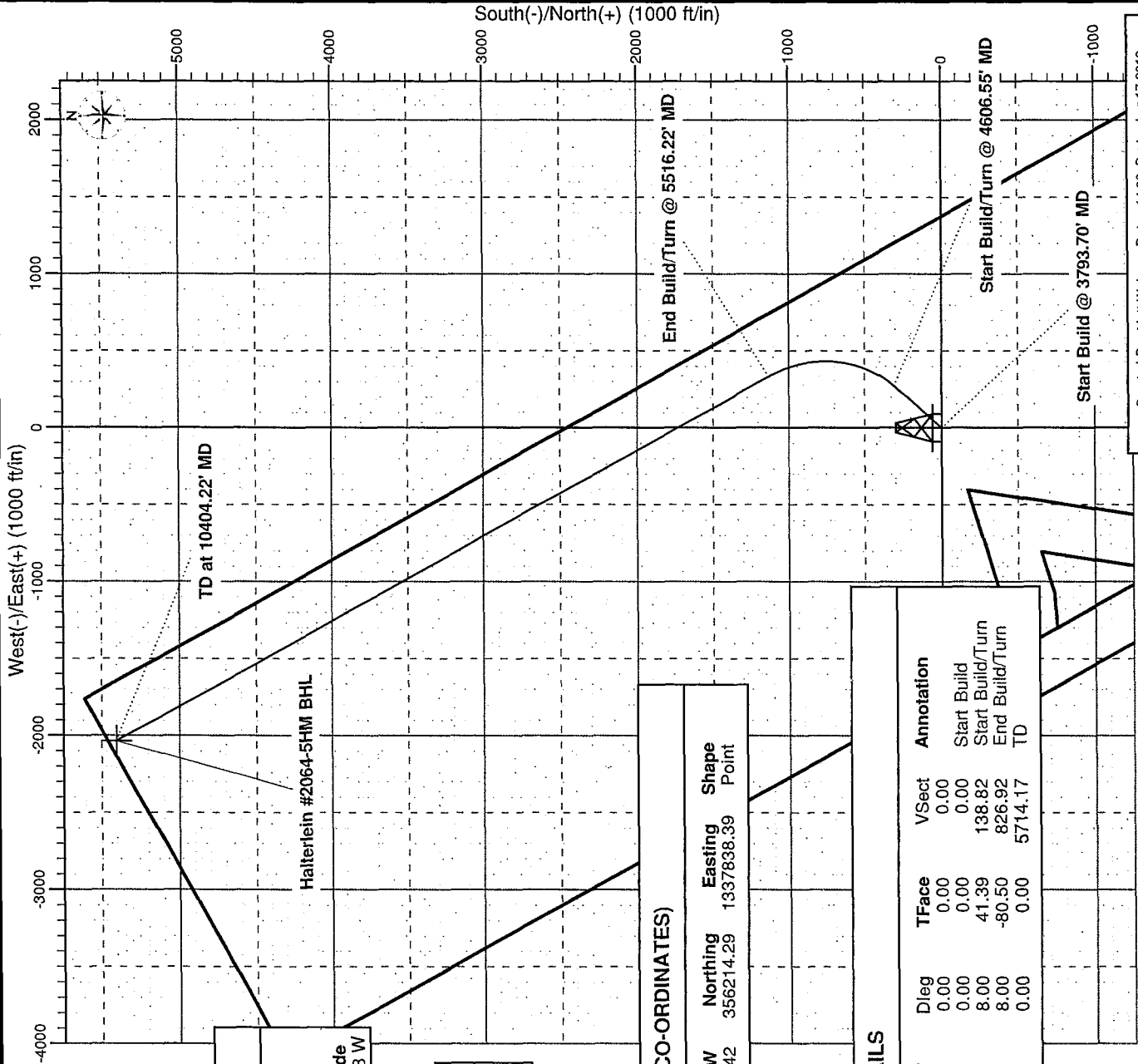
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-5HM BHL	4571.60	5405.07	-2035.42	356214.29	1337838.39	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3793.70	0.00	0.00	3793.70	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
4606.55	65.00	41.39	4443.08	310.34	273.54	8.00	41.39	138.82	End Build/Turn
5516.22	91.00	331.00	4656.91	1130.58	333.97	8.00	-80.50	826.92	TD
10404.22	91.00	331.00	4571.60	5405.07	-2035.42	0.00	0.00	5714.17	





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DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G:
	Permit #:	C:
	Project #:	

Top Hole Well is located on topo map 6623 feet south of latitude 41° 07' 30"		parcel lines taken from tax map information	
Bottom Hole Well is located on topo map 3009 feet south of latitude 41° 07' 30"			

Surface Hole Coordinates

True Latitude: NORTH
41° 06' 24.55"

True Longitude: WEST
80° 01' 53.78"

Bottom Hole Coordinates

True Latitude: NORTH
41° 07' 00.26"

True Longitude: WEST
80° 02' 38.44"

TH ☐ Top Hole

BH ☐ Bottom Hole

(Slippery Rock sect 2)

W ☐ Water Supply

Top Hole Well is located on topo map **8709** feet west of longitude **80° 02' 30"**

Bottom Hole Well is located on topo map **645** feet west of longitude **80° 02' 30"**

Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309		Well (Farm) Name: HALTERLEIN		Well #: 2064-1HD	
Address: 190 Thorn Hill Road, Warrendale, PA 15086				County: BUTLER		Municipality: MERCER	
911 Address of well site: 401 SHIELDS ROAD				USGS 7 1/2 Quadrangle Map Name: SLIPPERY ROCK		Map Section: 3	
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada		Phone #: 716-379-7918		Dwg #: 20120412 B		Date: SEPT 12, 2012	
Lat. & Long Metadata Method: RTK GPS		Accuracy: ± 5 ft.		Datum: NAD 83		Elevation Metadata Method: GPS	
				Accuracy: ± 5 ft.		Datum: NAD 83	
				Scale: 1" = 1000'		Tract Acreage: 545.6	
						Survey Date: APRIL 12, 2012	

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HD
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): N41° 53' 25"W 4974'	Anticipated True Vertical Depth Feet (TVD): 8631.83	Anticipated Total Measured Depth Feet (TMD): 13699.94
Target Formation(s): Utica Shale	Deepest Formation to be penetrated: Utica Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 13699.94

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 45.69"	80D 01' 40.07"
220-04F07-0000024G-0000	OSBORNE SHERRI L	41D 06' 24.51"	80D 01' 33.24"
220-04F07-0000024C-0000	BARRON TERRY L & BEATRICE A	41D 06' 21.97"	80D 01' 31.14"
220-03F94-0000024A-0000	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-04F07-0000025C-0000	CHRISTY GERALD & ALICE	41D 06' 20.11"	80D 01' 28100"
220-04F07-0000024D-0000	ARBLASTER HENRY E & JOAN	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024-0000	SHIELDS RICHARD L JR & LARRY D	41D 06' 21.35"	80D 01' 36.91"
220-04F07-0000024B-0000	KELLY BURTON F & NEVADA D	41D 06' 21.75"	80D 01' 42.62"
220-04F07-0000024A-0000	RODEMOYER PATRICIA L	41D 06' 21.95"	80D 01' 45.14"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.89"	80D 01' 29.28"
220-04F07-0000025B-0000	KONCHAR MITCHELL & GRACE	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000033-0000	LEONE THOMAS C & SHARON R	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000020B-0000	PEOPLES ELAINE L & REESEMAN HEATHER A	41D 05' 59.84"	80D 02' 07.73"
220-04F07-0000020A-0000	FORREST THOMAS E & AMY B	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020-0000	FEDOR JESSE N ET AL	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000020-0000	FEDOR JESSE N ET AL	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000026-0000	MASSELLA MARK A & JENNIFER L	41D 06' 15.32"	80D 02' 04.65"
220-04F07-0000026A-0000	MASSELLA ROBERT A & LYNISE S	41D 06' 17.37"	80D 02' 06.19"
220-04F07-00000022-0000	HALTERLEIN ANTHONY J	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	HALTERLEIN ANTHONY J	41D 06' 21.07"	80D 02' 03.76"
220-04F07-000025A1-0000	PIONTEK FRANK L III & ANNE M	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025A-0000	ARBLASTER STEVEN R & LINDA A	41D 06' 34.60"	80D 02' 01.17"
220-04F07-000025AA-0000	POWELL JAMES R & JULIE E	41D 06' 36.81"	80D 02' 00.93"
220-04F07-000023B4-0000	ARBLASTER DAVID S & BARBARA	41D 06' 32.98"	80D 01' 57.55"
220-04F07-000023B1-0000	ARBLASTER LARRY E & ERIN L	41D 06' 36.12"	80D 01' 58.88"
220-04F07-000023B5-0000	VESPAZIANI STAR A & KEVIN	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000003AA-0000	ENGLISH BLAIR C & CAROL A	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000004A-0000	HEMMERLIN JOHN J & CATHERINE L	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000023-0000	ARBLASTER MARK D ET AL	41D 06' 32.69"	80D 01' 53.20"
220-04F07-0000023A-0000	ISENBERG WILLIAM J & SHIRLEY	41D 06' 35.45"	80D 01' 52.90"
220-04F07-000023B2-0000	ARBLASTER MARK D & CRYSTAL K	41D 06' 34.06"	80D 01' 50.39"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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OCT 18 2012

ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HD
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL

Water Well Number	Direction	Length
W1	N26° 20' 57.31"E	2451'
W2	N27° 38' 04.51"E	2383'
W3	S88° 20' 33.19"E	1572'
W4	S79° 55' 12.26"E	1753'
W5	S75° 38' 49.34"E	2162'
W6	S75° 10' 12.89"E	1950'
W7	S74° 59' 30.54"E	1087'
W8	S74° 25' 33.72"E	1332'
W9	S70° 10' 44.71"E	900'
W10	S66° 48' 45.49"E	712'
W11	S43° 02' 51.17"E	2845'
W12	S41° 47' 53.08"E	2734'
W13	S17° 28' 57.19"W	2238'
W14	S17° 40' 16.39"W	2713'
W15	S24° 37' 39.52"W	2719'
W16	S32° 22' 33.80"W	1591'
W17	S32° 44' 00.69"W	2101'

BEARING/DISTANCE FROM TH TO WATER WELL

Water Well Number	Direction	Length
W18	S34° 33' 57.25"W	2667'
W19	S43° 11' 19.19"W	1251'
W20	S54° 05' 21.38"W	1196'
W21	S62° 49' 34.82"W	828'
W22	S66° 55' 32.87"W	846'
W23	N58° 01' 40.28"W	824'
W24	N27° 34' 43.86"W	1164'
W25	N22° 16' 59.45"W	1356'
W26	N17° 09' 32.38"W	901'
W27	N16° 54' 22.63"W	1235'
W28	N12° 56' 07.82"W	1062'
W29	N7° 54' 34.06"W	2258'
W30	N0° 13' 30.72"W	2717'
W31	N4° 35' 52.08"E	825'
W32	N4° 59' 49.45"E	1106'
W33	N16° 34' 26.10"E	997'

Municipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN - MERCER TWP-BUTLER CO
 ADJACENT TO - HARRISVILLE BORO-BUTLER CO
 IRWIN TWP- VENANGO CO
 MARION TWP-BUTLER CO
 CHERRY TWP-BUTLER CO
 SLIPPERY ROCK TWP-BUTLER CO
 LIBERTY TWP-MERCER CO
 PINE TWP- MERCER CO

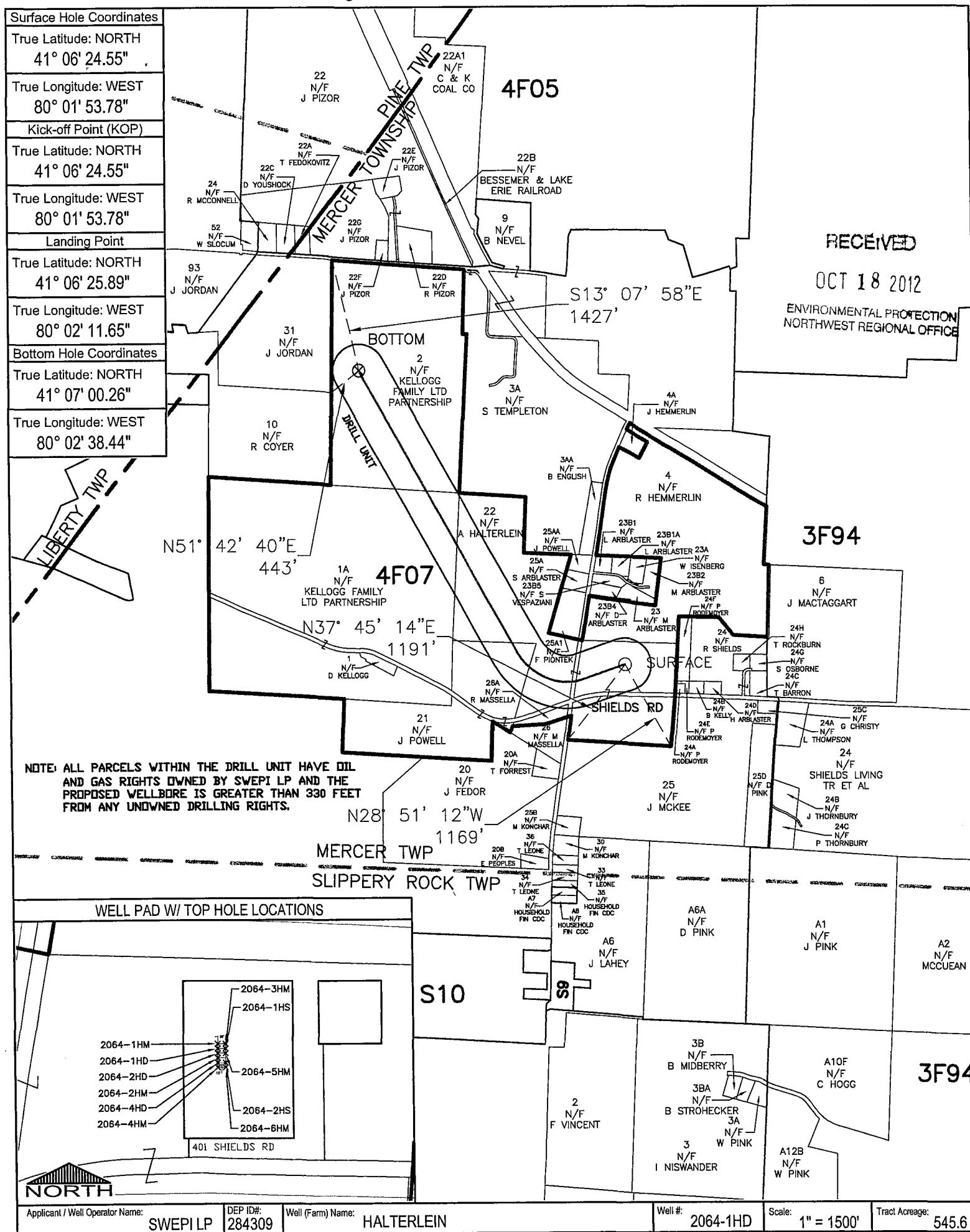
Coal related parties

NONE

RECEIVED

OCT 18 2012

ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE



WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HD
--	-----------------	------------------------------	------------------

DEP Use Only	Permit #
--------------------	----------

WELL PLAN

Operator Name: SWEPI LP
Well / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>7660.9</u>	TMD: <u>7660.9</u>	<u>41° 06' 24.55"</u>	<u>80° 01' 53.78"</u>
Landing Point:	TVD: <u>8631.83</u>	TMD: <u>9661.84</u>	<u>41° 06' 25.89"</u>	<u>80° 02' 11.65"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

RECEIVED

OCT 18 2012

ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-1HD
Wellbore: HALTERLEIN #2064-1HD
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188, 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350824.24 Easting 1339808.81 Latitude 41° 6' 24.548 N Longitude 80° 1' 53.782 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

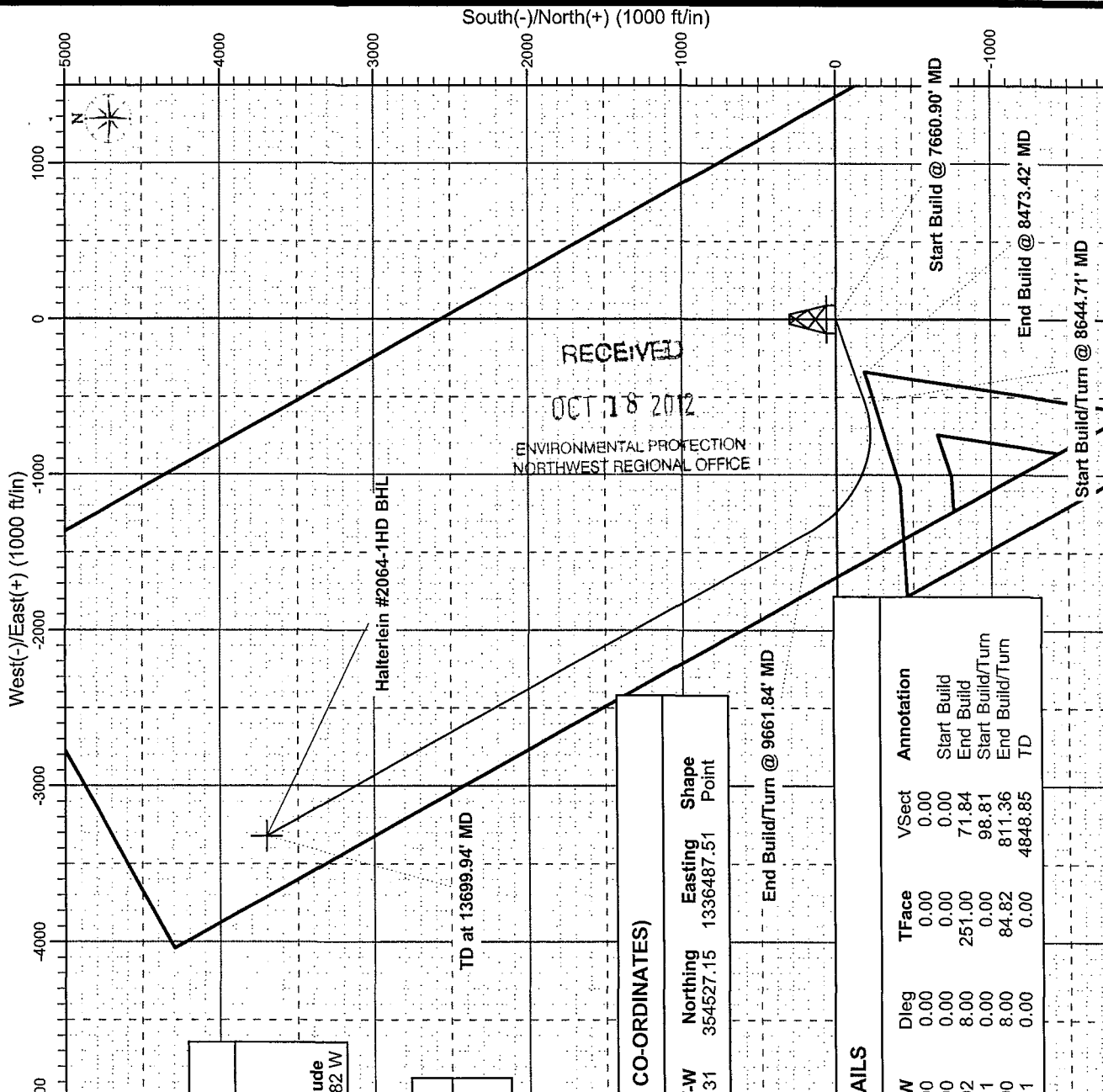
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
Halterlein #2064-1HD BHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
	7660.90	0.00	0.00	7660.90	0.00	0.00	0.00	0.00	0.00	End Build
	8473.42	65.00	251.00	8310.00	-134.60	-391.02	8.00	251.00	71.84	Start Build/Turn
	8644.71	65.00	251.00	8382.39	-185.14	-537.81	0.00	0.00	98.81	End Build/Turn
	9661.84	91.00	331.00	8631.83	171.65	-1363.90	8.00	84.82	811.36	TD
	13699.94	91.00	331.00	8561.36	3702.92	-3321.31	0.00	0.00	4848.85	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7660.90	0.00	0.00	7660.90	0.00	0.00	0.00	0.00	0.00	End Build
8473.42	65.00	251.00	8310.00	-134.60	-391.02	8.00	251.00	71.84	Start Build/Turn
8644.71	65.00	251.00	8382.39	-185.14	-537.81	0.00	0.00	98.81	End Build/Turn
9661.84	91.00	331.00	8631.83	171.65	-1363.90	8.00	84.82	811.36	TD
13699.94	91.00	331.00	8561.36	3702.92	-3321.31	0.00	0.00	4848.85	





UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-1HD
Wellbore: HALTERLEIN #2064-1HD
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188, 2271]
Elevation: DFE @ 1341.00ft (TBD)
Northing 350824.24
Easting 1339808.81
Latitude 41° 6' 24.548 N
Longitude 80° 1' 53.782 W

SECTION DETAILS

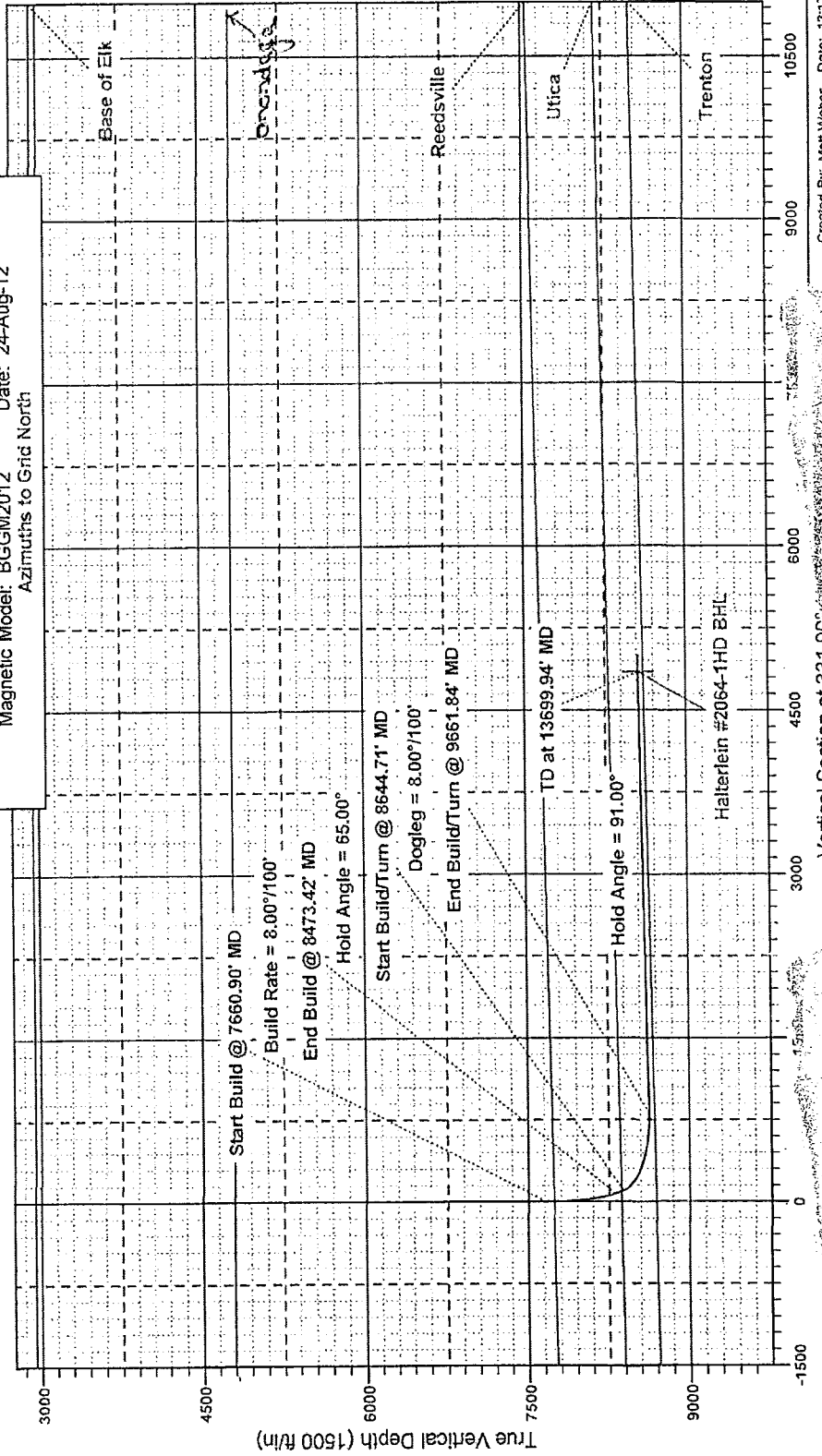
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7660.90	0.00	0.00	7660.90	0.00	0.00	0.00	0.00	0.00	End Build
8473.42	65.00	251.00	8310.00	-134.60	-391.02	8.00	251.00	71.84	Start Build/Turn
8644.71	65.00	251.00	8382.39	-185.14	-537.81	0.00	0.00	98.81	End Build/Turn
9661.84	91.00	331.00	8631.83	171.65	-1363.90	8.00	84.82	811.36	TD
13699.94	91.00	331.00	8561.36	3702.92	-3321.31	0.00	0.00	4848.85	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-1HD BHL	8561.36	3702.92	-3321.31	354527.15	1336487.51	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGM2012
Azimuths to Grid North
Date: 24-Aug-12



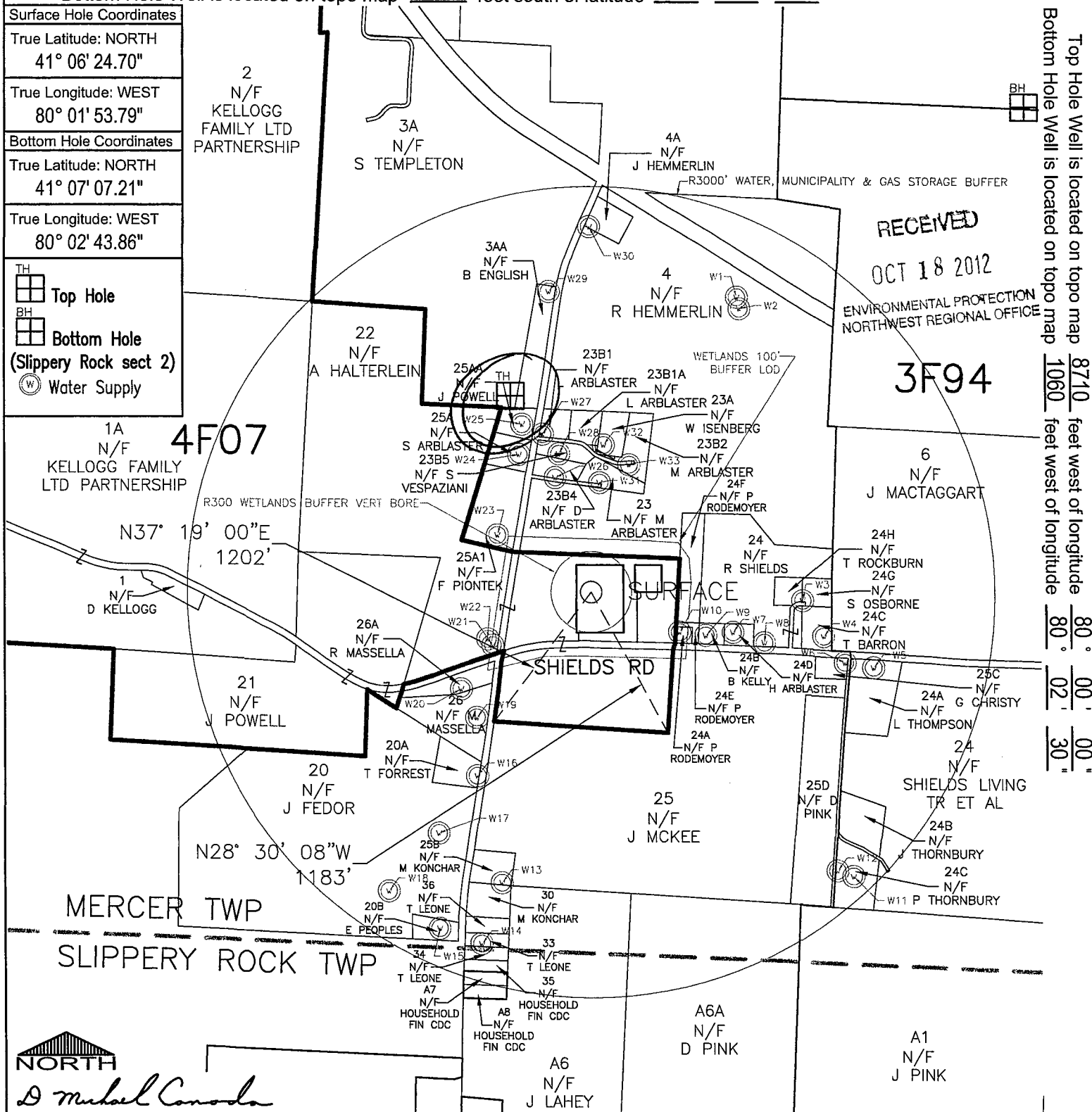


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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	6-188
	Permit #:	019-21989
	Project #:	

Top Hole Well is located on topo map 6608 feet south of latitude 41° 07' 30"
Bottom Hole Well is located on topo map 2306 feet south of latitude 41° 07' 30" parcel lines taken from tax map information



Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309	Well (Farm) Name: HALTERLEIN		Well #: 2064-1HM
Address: 190 Thorn Hill Road, Warrendale, PA 15086			County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: 401 SHIELDS RD			USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK		Map Section: 3
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada		Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPT 12, 2012	Scale: 1" = 1000'
Lat. & Long Metadata Method: RTK GPS		Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.
		Datum: NAD 83	Survey Date: APRIL 12, 2012		Tract Acreage: 502.66

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HM
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): N40° 11' 00"W 5762'	Anticipated True Vertical Depth Feet (TVD): 4656.73	Anticipated Total Measured Depth Feet (TMD): 10483.15
Target Formation(s): Marcellus Shale	Deepest Formation to be penetrated: Marcellus Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 10483.15

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-03F94-0000024A-0000	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	THORNBURY PATRICK D	41D 06' 04.89"	80D 01' 29.28"
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 45.69"	80D 01' 40.07"
220-04F07-00000004-0000	HEMMERLIN ROBERT E ET AL	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000020-0000	FEDOR JESSE N ET AL	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000020-0000	FEDOR JESSE N ET AL	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000022-0000	HALTERLEIN ANTHONY J	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	HALTERLEIN ANTHONY J	41D 06' 21.07"	80D 02' 03.76"
220-04F07-00000023-0000	ARBLASTER MARK D ET AL	41D 06' 32.69"	80D 01' 53.20"
220-04F07-00000024-0000	SHIELDS RICHARD L JR & LARRY D	41D 06' 21.35"	80D 01' 36.91"
220-04F07-00000026-0000	MASSELLA MARK A & JENNIFER L	41D 06' 15.32"	80D 02' 04.65"
220-04F07-00000033-0000	LEONE THOMAS C & SHARON R	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000004A-0000	HEMMERLIN JOHN J & CATHERINE L	41D 06' 51.38"	80D 01' 54.86"
220-04F07-0000020A-0000	FORREST THOMAS E & AMY B	41D 06' 11.05"	80D 02' 04.45"
220-04F07-0000020B-0000	PEOPLES ELAINE L & REESEMAN HEATHER A	41D 05' 59.84"	80D 02' 07.73"
220-04F07-0000023A-0000	ISENBERG WILLIAM J & SHIRLEY	41D 06' 35.45"	80D 01' 52.90"
220-04F07-0000024A-0000	RODEMOYER PATRICIA L	41D 06' 21.95"	80D 01' 45.14"
220-04F07-0000024B-0000	KELLY BURTON F & NEVADA D	41D 06' 21.75"	80D 01' 42.62"
220-04F07-0000024C-0000	BARRON TERRY L & BEATRICE A	41D 06' 21.97"	80D 01' 31.14"
220-04F07-0000024D-0000	ARBLASTER HENRY E & JOAN	41D 06' 22.04"	80D 01' 39.97"
220-04F07-0000024G-0000	OSBORNE SHERRI L	41D 06' 24.51"	80D 01' 33.24"
220-04F07-0000025A-0000	ARBLASTER STEVEN R & LINDA A	41D 06' 34.60"	80D 02' 01.17"
220-04F07-0000025B-0000	KONCHAR MITCHELL & GRACE	41D 06' 03.29"	80D 02' 01.83"
220-04F07-0000025C-0000	CHRISTY GERALD & ALICE	41D 06' 20.11"	80D 01' 28100"
220-04F07-0000026A-0000	MASSELLA ROBERT A & LYNISE S	41D 06' 17.37"	80D 02' 06.19"
220-04F07-000003AA-0000	ENGLISH BLAIR C & CAROL A	41D 06' 46.56"	80D 01' 58.61"
220-04F07-0000023B1-0000	ARBLASTER LARRY E & ERIN L	41D 06' 36.12"	80D 01' 58.88"
220-04F07-0000023B2-0000	ARBLASTER MARK D & CRYSTAL K	41D 06' 34.06"	80D 01' 50.39"
220-04F07-0000023B4-0000	ARBLASTER DAVID S & BARBARA	41D 06' 32.98"	80D 01' 57.55"
220-04F07-0000023B5-0000	VESPAZIANI STAR A & KEVIN	41D 06' 34.71"	80D 01' 57.24"
220-04F07-0000025A1-0000	PIONTEK FRANK L III & ANNE M	41D 06' 28.68"	80D 02' 03.07"
220-04F07-0000025AA-0000	POWELL JAMES R & JULIE E	41D 06' 36.81"	80D 02' 00.93"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-1HM
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL			
Water Well Number	Direction	Length	
W1	N26° 30' 20.13"E	2437	
W2	N27° 48' 09.43"E	2370	
W3	S87° 47' 46.53"E	1573	
W4	S79° 26' 16.58"E	1755	
W5	S75° 15' 45.05"E	2166	
W6	S74° 44' 41.64"E	1954	
W7	S74° 13' 50.93"E	1091	
W8	S73° 48' 22.02"E	1336	
W9	S69° 17' 07.57"E	905	
W10	S65° 42' 42.82"E	718	
W11	S42° 50' 31.16"E	2856	
W12	S41° 35' 21.50"E	2745	
W13	S17° 22' 05.16"W	2252	
W14	S17° 34' 32.60"W	2728	
W15	S24° 29' 48.30"W	2733	
W16	S32° 05' 21.84"W	1604	
W17	S32° 30' 49.72"W	2113	

BEARING/DISTANCE FROM TH TO WATER WELL			
Water Well Number	Direction	Length	
W18	S34° 23' 02.52"W	2679	
W19	S42° 43' 22.30"W	1262	
W20	S53° 30' 41.60"W	1204	
W21	S61° 54' 38.54"W	835	
W22	S65° 59' 51.82"W	852	
W23	N58° 55' 15.45"W	817	
W24	N27° 55' 29.86"W	1151	
W25	N22° 31' 34.81"W	1342	
W26	N17° 26' 44.00"W	886	
W27	N17° 06' 41.20"W	1220	
W28	N13° 07' 10.32"W	1048	
W29	N7° 57' 44.57"W	2243	
W30	N0° 13' 35.80"W	2702	
W31	N4° 40' 56.17"E	810	
W32	N5° 03' 55.11"E	1091	
W33	N16° 45' 20.91"E	986	

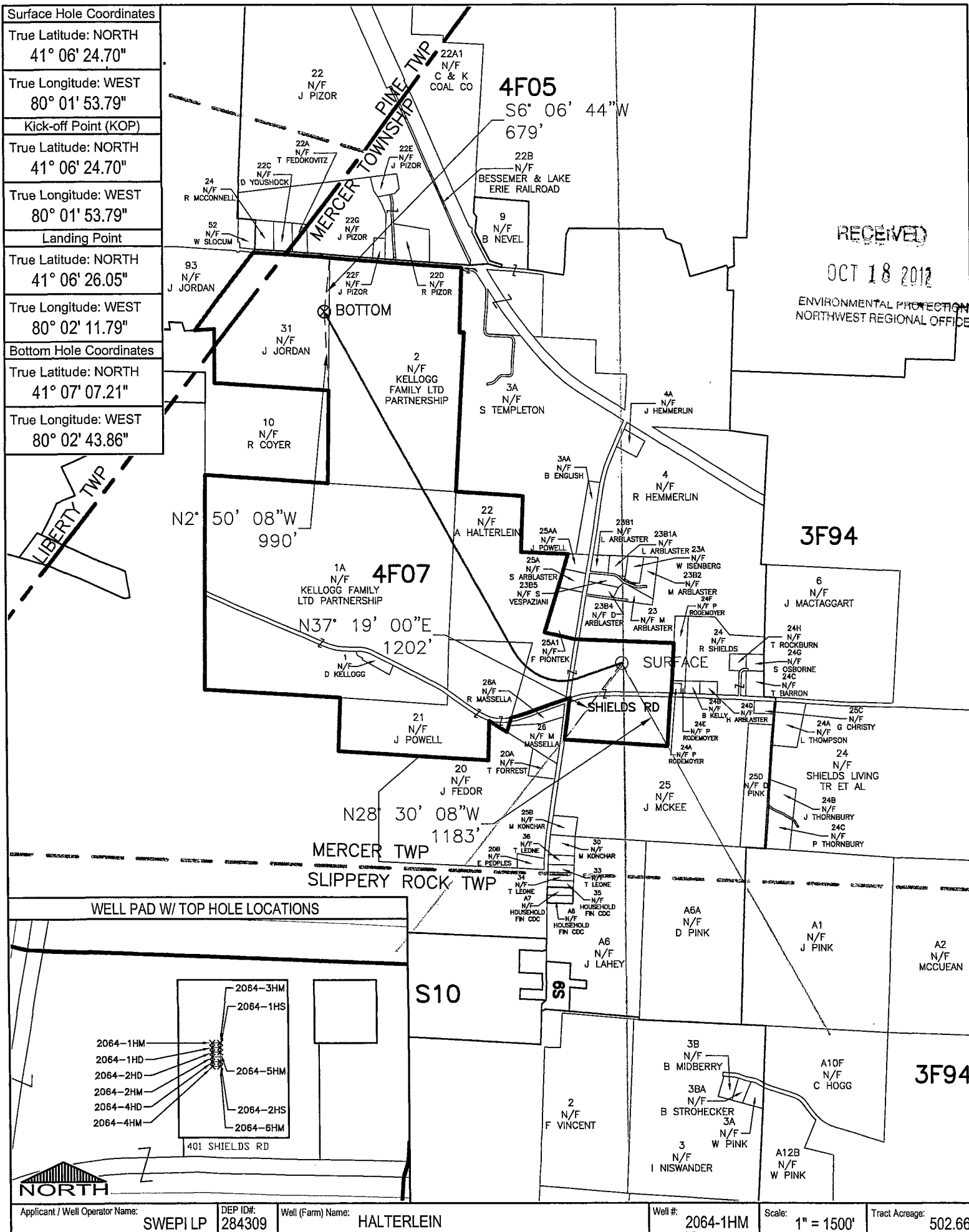
Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet	
DRILLED IN -	MERCER TWP-BUTLER CO
ADJACENT TO -	HARRISVILLE BORO-BUTLER CO
	IRWIN TWP- VENANGO CO
	MARION TWP-BUTLER CO
	CHERRY TWP-BUTLER CO
	SLIPPERY ROCK TWP-BUTLER CO
	LIBERTY TWP-MERCER CO
	PINE TWP- MERCER CO
Coal related parties	
NONE	

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NORTHWEST REGIONAL OFFICE

A map of Liberty Township, showing the location of the proposed project area. The map includes a dashed line representing the township boundary and a solid line representing the project area. The text "LIBERTY TWP" is written across the map.



WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name:

SWEPI LP

DEP ID#:

284309

Well (Farm) Name:

HALTERLEIN

Well #:

2064-1HM

DEP
Use
Only

Permit #

WELL PLAN

Operator Name: SWEPI LPWell / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3599</u>	TMD: <u>3599</u>	<u>41° 06' 24.70"</u>	<u>80° 01' 53.79"</u>
Landing Point:	TVD: <u>4656.73</u>	TMD: <u>5647.95</u>	<u>41° 06' 26.05"</u>	<u>80° 02' 11.79"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-1HM
Wellbore: HALTERLEIN #2064-1HM
Design: Design #1
Rig: TBD

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3599.00	0.00	0.00	3599.00	0.00	0.00	0.00	0.00	0.00	Start Build
4349.06	60.00	251.00	4219.27	-116.58	-338.64	8.00	251.00	62.21	End Build
4624.77	60.00	251.00	4357.11	-194.31	-564.42	0.00	0.00	103.69	Start Build/Turn
5647.95	91.00	331.00	4656.73	173.66	-1373.96	8.00	84.09	818.00	End Build/Turn
10483.15	91.00	331.00	4572.34	4401.98	-3717.75	0.00	0.00	5652.46	TD

Surface Location:

NAD83 / Pennsylvania North [188_2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350839.24
 Easting 1339808.82
 Longitude 80° 1' 53.787 W
 Latitude 41° 6' 24.696 N

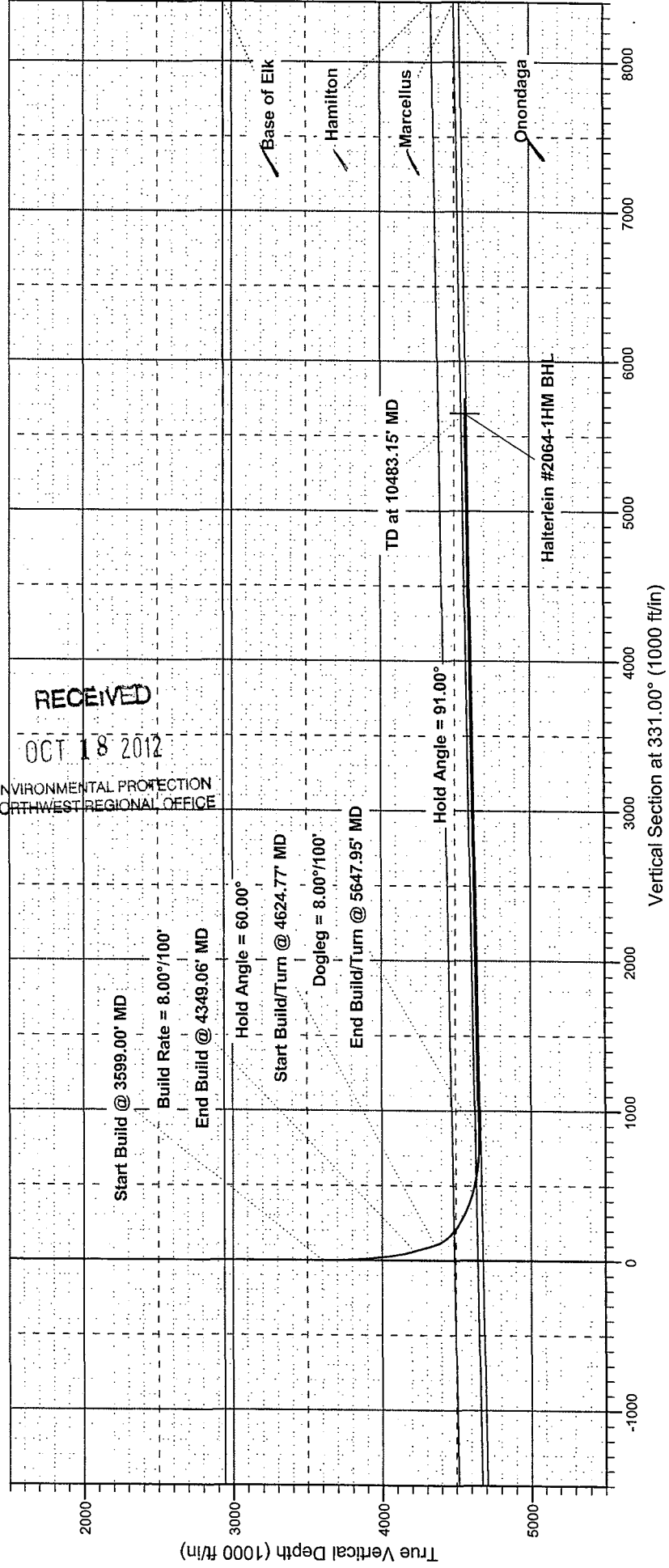
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-1HM BHL	4572.34	4401.98	-3717.75	355241.21	1336091.07	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012
 Azimuths to Grid North
 Date: 24-Aug-12

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 ENVIRONMENTAL PROTECTION
 NORTHWEST REGIONAL OFFICE



UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-1HM
Wellbore: HALTERLEIN #2064-1HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188, 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350839.24
 Easting 1339808.82
 Latitude 41° 6' 24.696 N
 Longitude 80° 1' 53.787 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

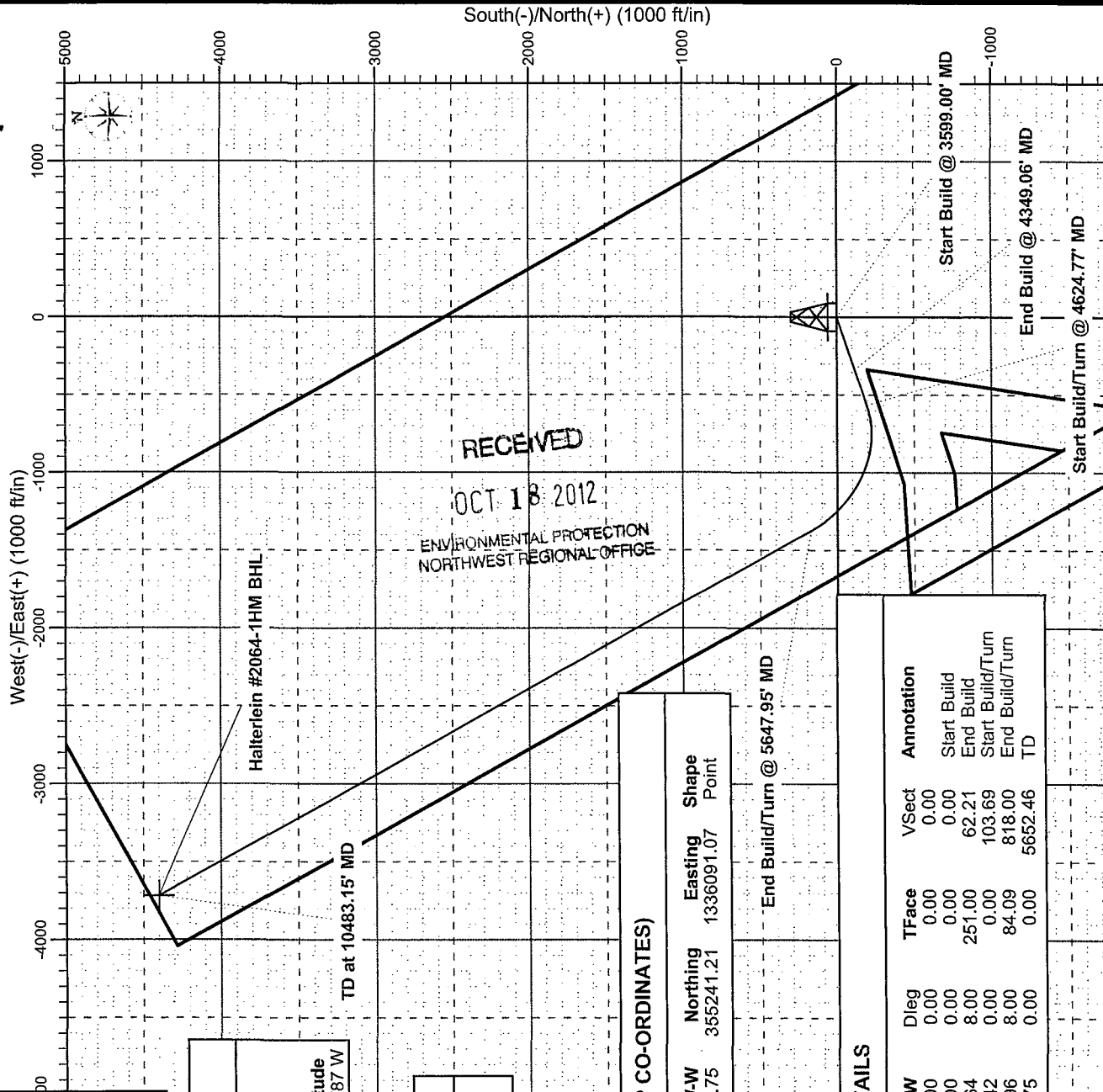
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	MD	Inc	Azi	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-1HM BHL	0.00	0.00	0.00	0.00	0.00	0.00	355241.21	1336091.07	Point
	3599.00	0.00	0.00	3599.00	0.00	0.00			
	4349.06	60.00	251.00	4219.27	-116.58	-338.64			
	4624.77	60.00	251.00	4357.11	-194.31	-564.42			
	5647.95	91.00	331.00	4656.73	-1373.96	-84.09			
	10483.15	91.00	331.00	4572.34	-3717.75	0.00			

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3599.00	0.00	0.00	3599.00	0.00	0.00	0.00	0.00	0.00	End Build
4349.06	60.00	251.00	4219.27	-116.58	-338.64	8.00	251.00	62.21	Start Build/Turn
4624.77	60.00	251.00	4357.11	-194.31	-564.42	0.00	0.00	103.69	End Build/Turn
5647.95	91.00	331.00	4656.73	-1373.96	-84.09	8.00	84.09	818.00	TD
10483.15	91.00	331.00	4572.34	-3717.75	0.00	0.00	0.00	5652.46	



WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HD
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): S14° 48' 23"E 4418'	Anticipated True Vertical Depth Feet (TVD): 8720.76	Anticipated Total Measured Depth Feet (TMD): 12782.82
Target Formation(s): Utica Shale	Deepest Formation to be penetrated: Utica Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 12782.82

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-03F94-0000024A-0000 ✓	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-03F94-0000024C-0000 ✓	THORNBURY PATRICK D ✓	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000 ✓	THORNBURY PATRICK D ✓	41D 06' 04.89"	80D 01' 29.28"
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL ✓	41D 06' 45.69"	80D 01' 40.07"
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL ✓	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL ✓	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
220-04F07-00000023-0000 ✓	ARBLASTER MARK D ET AL ✓	41D 06' 32.69"	80D 01' 53.20"
220-04F07-00000024-0000 ✓	SHIELDS RICHARD L JR & LARRY D ✓	41D 06' 21.35"	80D 01' 36.91"
220-04F07-00000026-0000 ✓	MASSELLA MARK A & JENNIFER L ✓	41D 06' 15.32"	80D 02' 04.65"
220-04F07-00000033-0000 ✓	LEONE THOMAS C & SHARON R ✓	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000004A-0000 ✓	HEMMERLIN JOHN J & CATHERINE L ✓	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000020A-0000 ✓	FORREST THOMAS E & AMY B ✓	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020B-0000 ✓	PEOPLES ELAINE L & REESEMAN HEATHER A ✓	41D 05' 59.84"	80D 02' 07.73"
220-04F07-00000023A-0000 ✓	ISENBERG WILLIAM J & SHIRLEY ✓	41D 06' 35.45"	80D 01' 52.90"
220-04F07-00000024A-0000 ✓	RODEMOYER PATRICIA L ✓	41D 06' 21.95"	80D 01' 45.14"
220-04F07-00000024B-0000 ✓	KELLY BURTON F & NEVADA D ✓	41D 06' 21.75"	80D 01' 42.62"
220-04F07-00000024C-0000 ✓	BARRON TERRY L & BEATRICE A ✓	41D 06' 21.97"	80D 01' 31.14"
220-04F07-00000024D-0000 ✓	ARBLASTER HENRY E & JOAN ✓	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024G-0000 ✓	OSBORNE SHERRI L ✓	41D 06' 24.51"	80D 01' 33.24"
220-04F07-00000025A-0000 ✓	ARBLASTER STEVEN R & LINDA A ✓	41D 06' 34.60"	80D 02' 01.17"
220-04F07-00000025B-0000 ✓	KONCHAR MITCHELL & GRACE ✓	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000025C-0000 ✓	CHRISTY GERALD & ALICE ✓	41D 06' 20.11"	80D 01' 28100"
220-04F07-00000026A-0000 ✓	MASSELLA ROBERT A & LYNISE S ✓	41D 06' 17.37"	80D 02' 06.19"
220-04F07-0000003AA-0000 ✓	ENGLISH BLAIR C & CAROL A ✓	41D 06' 46.56"	80D 01' 58.61"
220-04F07-00000023B1-0000 ✓	ARBLASTER LARRY E & ERIN L ✓	41D 06' 36.12"	80D 01' 58.88"
220-04F07-00000023B2-0000 ✓	ARBLASTER MARK D & CRYSTAL K ✓	41D 06' 34.06"	80D 01' 50.39"
220-04F07-00000023B4-0000 ✓	ARBLASTER DAVID S & BARBARA ✓	41D 06' 32.98"	80D 01' 57.55"
220-04F07-00000023B5-0000 ✓	VESPAZIANI STAR A & KEVIN ✓	41D 06' 34.71"	80D 01' 57.24"
220-04F07-00000025A1-0000 ✓	PIONTEK FRANK L III & ANNE M ✓	41D 06' 28.68"	80D 02' 03.07"
220-04F07-00000025AA-0000 ✓	POWELL JAMES R & JULIE E ✓	41D 06' 36.81"	80D 02' 00.93"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HD
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N26° 11' 40.64"E	2464
W2	N27° 28' 06.30"E	2397
W3	S88° 53' 20.92"E	1572
W4	S80° 24' 13.13"E	1750
W5	S76° 01' 58.38"E	2158
W6	S75° 35' 50.18"E	1946
W7	S75° 45' 29.76"E	1083
W8	S75° 02' 58.93"E	1328
W9	S71° 04' 58.36"E	895
W10	S67° 55' 54.38"E	706
W11	S43° 15' 16.90"E	2834
W12	S42° 00' 30.83"E	2723
W13	S17° 35' 54.52"W	2224
W14	S17° 46' 03.81"W	2699
W15	S24° 45' 35.49"W	2706
W16	S32° 40' 02.33"W	1579
W17	S32° 57' 21.23"W	2088

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S34° 44' 58.07"W	2654
W19	S43° 39' 45.67"W	1240
W20	S54° 40' 32.02"W	1187
W21	S63° 45' 26.16"W	821
W22	S67° 52' 00.72"W	840
W23	N57° 09' 06.40"W	832
W24	N27° 14' 25.99"W	1177
W25	N22° 02' 41.83"W	1370
W26	N16° 52' 53.08"W	915
W27	N16° 42' 21.02"W	1249
W28	N12° 45' 23.29"W	1077
W29	N7° 51' 26.04"W	2273
W30	N0° 13' 25.69"W	2732
W31	N4° 30' 58.81"E	840
W32	N4° 55' 50.34"E	1121
W33	N16° 16' 06.22"E	1015

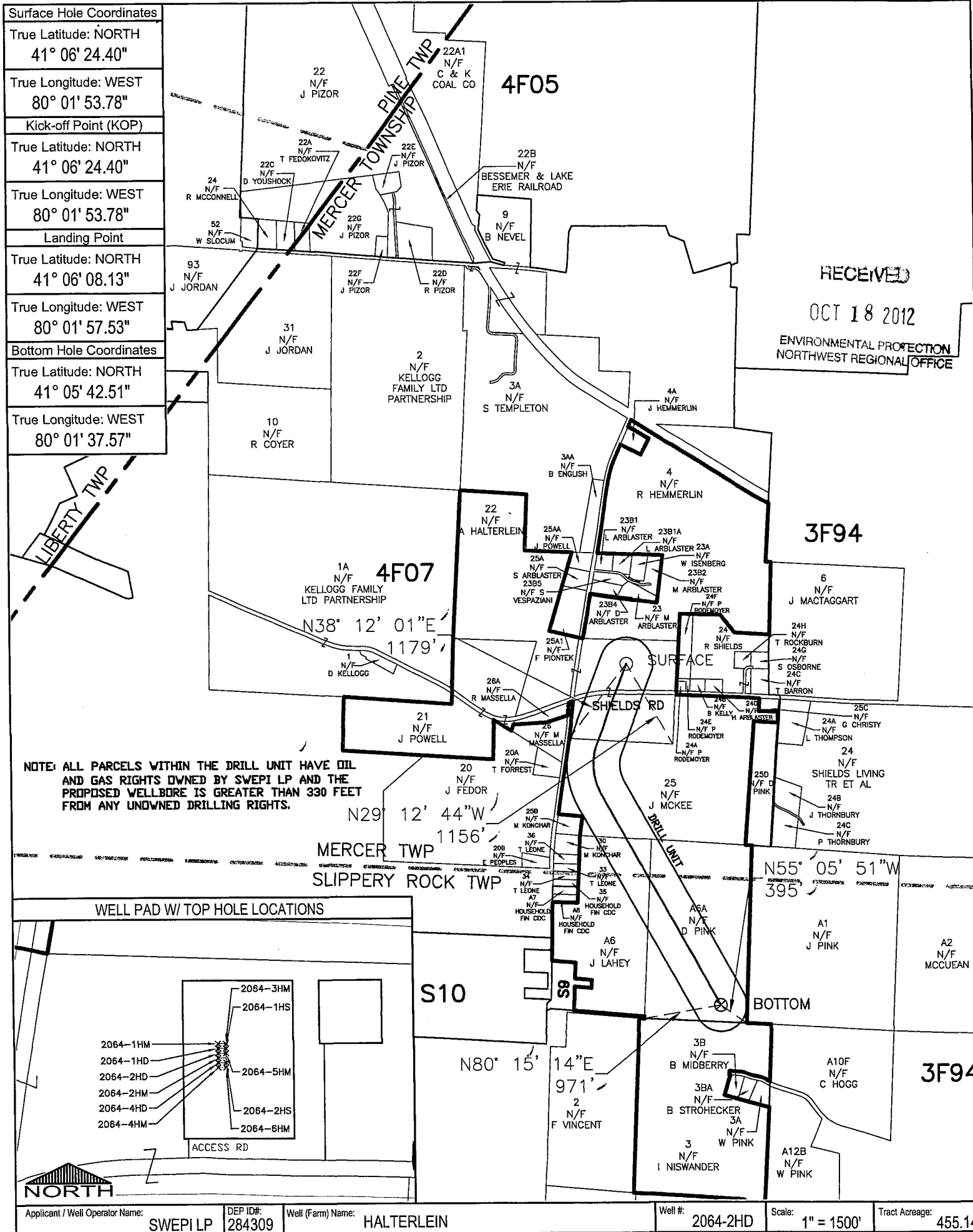
Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet
DRILLED IN - ☒ MERCER TWP-BUTLER CO
ADJACENT TO - ☒ HARRISVILLE BORO-BUTLER CO
☒ IRWIN TWP- VENANGO CO
☒ MARION TWP-BUTLER CO
☒ CHERRY TWP-BUTLER CO
☒ SLIPPERY ROCK TWP-BUTLER CO
☒ LIBERTY TWP-MERCER CO
☒ PINE TWP- MERCER CO

Coal related parties
NONE

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NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 3 Plan View of Deviated Well Bore



WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HD
---	------------------------	-------------------------------------	-------------------------

DEP Use Only	Permit #
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WELL PLAN

Operator Name: SWEPI LPWell / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>7546.3</u>	TMD: <u>7546.3</u>	<u>41° 06' 24.40"</u>	<u>80° 01' 53.78"</u>
Landing Point:	TVD: <u>8668.22</u>	TMD: <u>9772.12</u>	<u>41° 06' 08.13"</u>	<u>80° 01' 57.53"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

UA_APPALACHIA



Project: SLIPPERY ROCK
 Site: HALTERLEIN #2064
 Well: HALTERLEIN #2064-2HD
 Wellbore: HALTERLEIN #2064-2HD
 Design: Design #1
 Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188_2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350809.24 Easting 1339808.81 Latitude 41° 6' 24.400 N Longitude 80° 1' 53.777 W

SECTION DETAILS

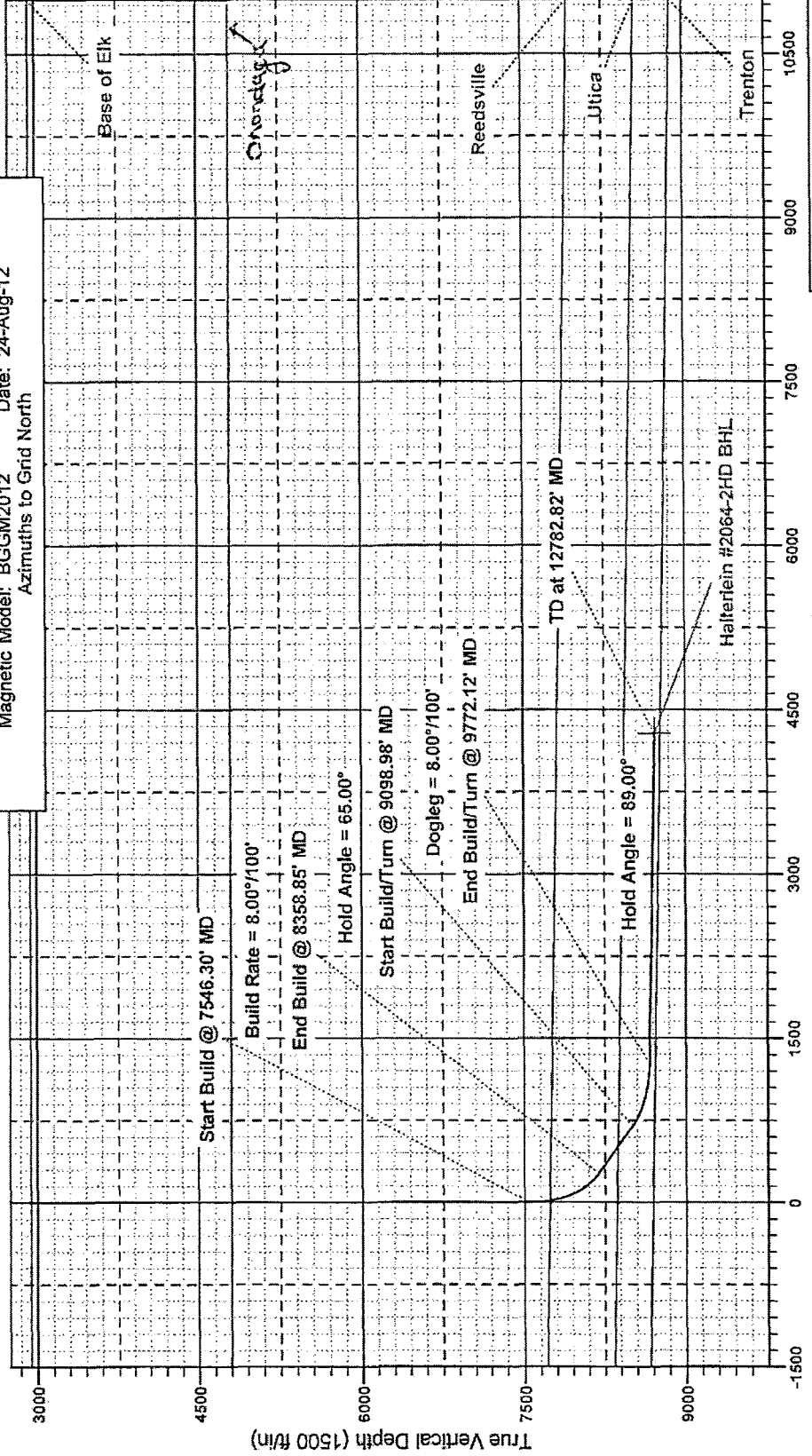
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7546.30	0.00	0.00	7546.30	0.00	0.00	0.00	0.00	0.00	End Build
8358.85	65.00	201.00	8195.41	-386.09	-148.20	8.00	201.00	265.84	Start Build/Turn
9098.98	65.00	201.00	8508.16	-1012.35	-388.59	0.00	0.00	697.03	End Build/Turn
9772.12	89.00	151.00	8668.22	-1638.24	-330.41	8.00	-71.53	1272.65	End Build/Turn
12782.82	89.00	151.00	8720.76	-4271.05	1128.98	0.00	0.00	4282.89	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-2HD BHL	8720.76	-4271.05	1128.98	346538.19	1340937.79	Point

To convert a Magnetic Direction to a Grid Direction. Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North



Vertical Section at 151.00° (1500 ft/in)



UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-2HD
Wellbore: HALTERLEIN #2064-2HD
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188, 2271]
Elevation: DFE @ 1341.00ft (TBD)
Northing 350809.24 Easting 1339808.81
Longitude 80° 1' 53.777 W
Latitude 41° 6' 24.400 N

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

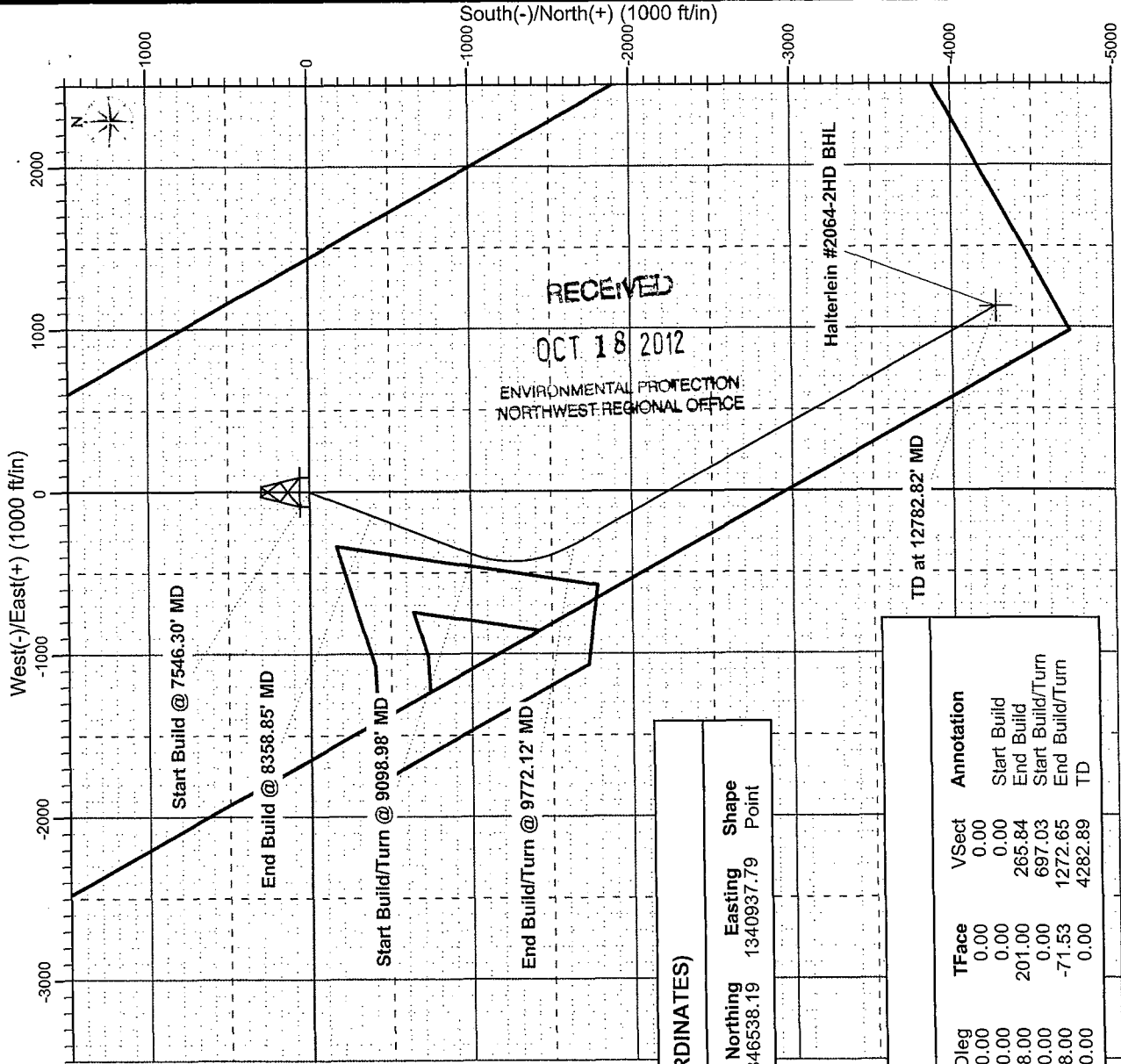
Magnetic Model: BGGM2012 Date: 24-Aug-12
Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	MD	Inc	Azi	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-2HD BHL	8720.76	89.00	151.00	8720.76	-4271.05	1128.98	346538.19	1340937.79	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7546.30	0.00	0.00	7546.30	0.00	0.00	0.00	0.00	0.00	End Build
8358.85	65.00	201.00	8195.41	-386.09	-148.20	8.00	201.00	265.84	Start Build/Turn
9098.98	65.00	201.00	8508.16	-1012.35	-388.59	0.00	0.00	697.03	End Build/Turn
9772.12	89.00	151.00	8668.22	-1638.24	-330.41	8.00	-71.53	1272.65	TD
12782.82	89.00	151.00	8720.76	-4271.05	1128.98	0.00	0.00	4282.89	TD



Survey Date:
APRIL 12, 2012

Top Hole Well is located on topo map 8708 feet west of longitude
Bottom Hole Well is located on topo map 7326 feet west of longitude

$$\frac{\frac{80}{100}}{\frac{80}{100}} = \frac{\frac{100}{100}}{\frac{100}{100}}$$

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HM
Surface Landowner: HALTERLEIN ANTHONY J	Angle & Course of Deviation (Drilling): S15° 42' 06"E 4675'	Anticipated True Vertical Depth Feet (TVD): 4750.42	Anticipated Total Measured Depth Feet (TMD): 9320.73
Target Formation(s): Marcellus Shale	Deepest Formation to be penetrated: Marcellus Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 9320.73

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-03F94-0000024A-0000 ✓	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-03F94-0000024C-0000 ✓	THORNBURY PATRICK D	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000 ✓	THORNBURY PATRICK D	41D 06' 04.89"	80D 01' 29.28"
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL	41D 06' 45.69"	80D 01' 40.07"
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J	41D 06' 21.07"	80D 02' 03.76"
220-04F07-00000023-0000 ✓	ARBLASTER MARK D ET AL	41D 06' 32.69"	80D 01' 53.20"
220-04F07-00000024-0000 ✓	SHIELDS RICHARD L JR & LARRY D	41D 06' 21.35"	80D 01' 36.91"
220-04F07-00000026-0000 ✓	MASSELLA MARK A & JENNIFER L	41D 06' 15.32"	80D 02' 04.65"
220-04F07-00000033-0000 ✓	LEONE THOMAS C & SHARON R	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000004A-0000 ✓	HEMMERLIN JOHN J & CATHERINE L	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000020A-0000 ✓	FORREST THOMAS E & AMY B	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020B-0000 ✓	PEOPLES ELAINE L & REESEMAN HEATHER A	41D 05' 59.84"	80D 02' 07.73"
220-04F07-00000023A-0000 ✓	ISENBERG WILLIAM J & SHIRLEY	41D 06' 35.45"	80D 01' 52.90"
220-04F07-00000024A-0000 ✓	RODEMOYER PATRICIA L	41D 06' 21.95"	80D 01' 45.14"
220-04F07-00000024B-0000 ✓	KELLY BURTON F & NEVADA D	41D 06' 21.75"	80D 01' 42.62"
220-04F07-00000024C-0000 ✓	BARRON TERRY L & BEATRICE A	41D 06' 21.97"	80D 01' 31.14"
220-04F07-00000024D-0000 ✓	ARBLASTER HENRY E & JOAN	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024G-0000 ✓	OSBORNE SHERRI L	41D 06' 24.51"	80D 01' 33.24"
220-04F07-00000025A-0000 ✓	ARBLASTER STEVEN R & LINDA A	41D 06' 34.60"	80D 02' 01.17"
220-04F07-00000025B-0000 ✓	KONCHAR MITCHELL & GRACE	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000025C-0000 ✓	CHRISTY GERALD & ALICE	41D 06' 20.11"	80D 01' 28.00"
220-04F07-00000026A-0000 ✓	MASSELLA ROBERT A & LYNISE S	41D 06' 17.37"	80D 02' 06.19"
220-04F07-0000003AA-0000 ✓	ENGLISH BLAIR C & CAROL A	41D 06' 46.56"	80D 01' 58.61"
220-04F07-00000023B1-0000 ✓	ARBLASTER LARRY E & ERIN L	41D 06' 36.12"	80D 01' 58.88"
220-04F07-00000023B2-0000 ✓	ARBLASTER MARK D & CRYSTAL K	41D 06' 34.06"	80D 01' 50.39"
220-04F07-00000023B4-0000 ✓	ARBLASTER DAVID S & BARBARA	41D 06' 32.98"	80D 01' 57.55"
220-04F07-00000023B5-0000 ✓	VESPAZIANI STAR A & KEVIN	41D 06' 34.71"	80D 01' 57.24"
220-04F07-00000025A1-0000 ✓	PIONTEK FRANK L III & ANNE M	41D 06' 28.68"	80D 02' 03.07"
220-04F07-00000025AA-0000 ✓	POWELL JAMES R & JULIE E	41D 06' 36.81"	80D 02' 00.93"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HM
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N26° 02' 30.02"E	2478
W2	N27° 18' 14.69"E	2410
W3	S89° 26' 09.36"E	1572
W4	S80° 53' 18.97"E	1748
W5	S76° 25' 12.08"E	2155
W6	S76° 01' 33.36"E	1942
W7	S76° 31' 47.80"E	1080
W8	S75° 40' 37.25"E	1324
W9	S71° 59' 47.52"E	890
W10	S69° 04' 07.99"E	701
W11	S43° 27' 48.41"E	2823
W12	S42° 13' 14.81"E	2712
W13	S17° 42' 57.26"W	2209
W14	S17° 51' 54.94"W	2685
W15	S24° 53' 36.28"W	2692
W16	S32° 57' 47.76"W	1566
W17	S33° 10' 51.47"W	2076

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S34° 56' 05.06"W	2642
W19	S44° 08' 42.28"W	1229
W20	S55° 16' 13.76"W	1178
W21	S64° 42' 12.13"W	815
W22	S68° 49' 14.52"W	835
W23	N56° 17' 33.52"W	841
W24	N26° 54' 35.40"W	1191
W25	N21° 48' 41.44"W	1384
W26	N16° 36' 44.64"W	929
W27	N16° 30' 35.83"W	1263
W28	N12° 34' 56.05"W	1092
W29	N7° 48' 20.47"W	2288
W30	N0° 13' 20.72"W	2747
W31	N4° 26' 15.80"E	855
W32	N4° 51' 57.53"E	1136
W33	N16° 02' 05.68"E	1029

Municipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN - ☒ MERCER TWP-BUTLER CO

ADJACENT TO - ☒ HARRISVILLE BORO-BUTLER CO

☒ IRWIN TWP- VENANGO CO

☒ MARION TWP-BUTLER CO

☒ CHERRY TWP-BUTLER CO

☒ SLIPPERY ROCK TWP-BUTLER CO

☒ LIBERTY TWP-MERCER CO

☒ PINE TWP- MERCER CO

Coal related parties

NONE

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-2HM
--	---------------------------	--	----------------------------

DEP Use Only	Permit #
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WELL PLAN

Operator Name: SWEPI LP

Well / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3617</u>	TMD: <u>3617</u>	<u>41° 06' 24.25"</u>	<u>80° 01' 53.77"</u>
Landing Point:	TVD: <u>4686.09</u>	TMD: <u>5634.93</u>	<u>41° 06' 11.50"</u>	<u>80° 02' 00.14"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

UA_APPALACHIA



Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-2HM
Wellbore: HALTERLEIN #2064-2HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350794.24 Easting 1339808.80 Latitude 41° 6' 24.252 N Longitude 80° 1' 53.772 W

SECTION DETAILS

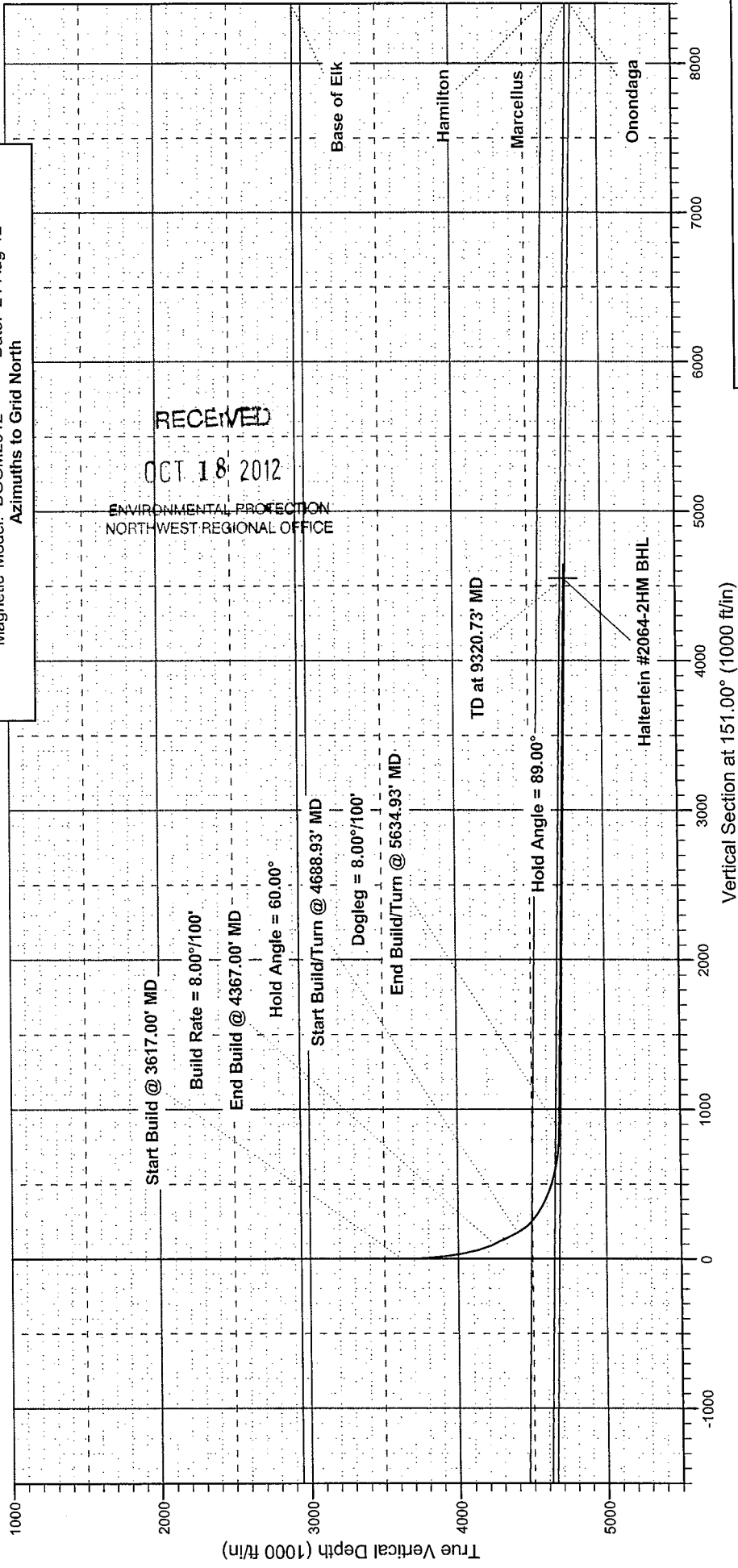
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3617.00	0.00	0.00	3617.00	0.00	0.00	0.00	0.00	0.00	Start Build
4367.00	60.00	225.00	4237.24	-253.19	-253.23	8.00	225.00	98.68	End Build
4688.93	60.00	225.00	4398.21	-450.33	-450.39	0.00	0.00	175.51	Start Build/Turn
5634.93	89.00	151.00	4686.09	-1277.50	-521.42	8.00	-82.73	864.54	End Build/Turn
9320.73	89.00	151.00	4750.42	-4500.68	1265.22	0.00	0.00	4549.77	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-2HM BHL	4750.42	-4500.68	1265.22	346293.57	1341074.02	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North



Vertical Section at 151.00° (1000 ft/in)



UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-2HM
Wellbore: HALTERLEIN #2064-2HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188_2271]
Elevation: DFE @ 1341.00ft (TBD)

Northing	Easting	Latitude	Longitude
350794.24	1339808.80	41° 6' 24.252 N	80° 1' 53.772 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

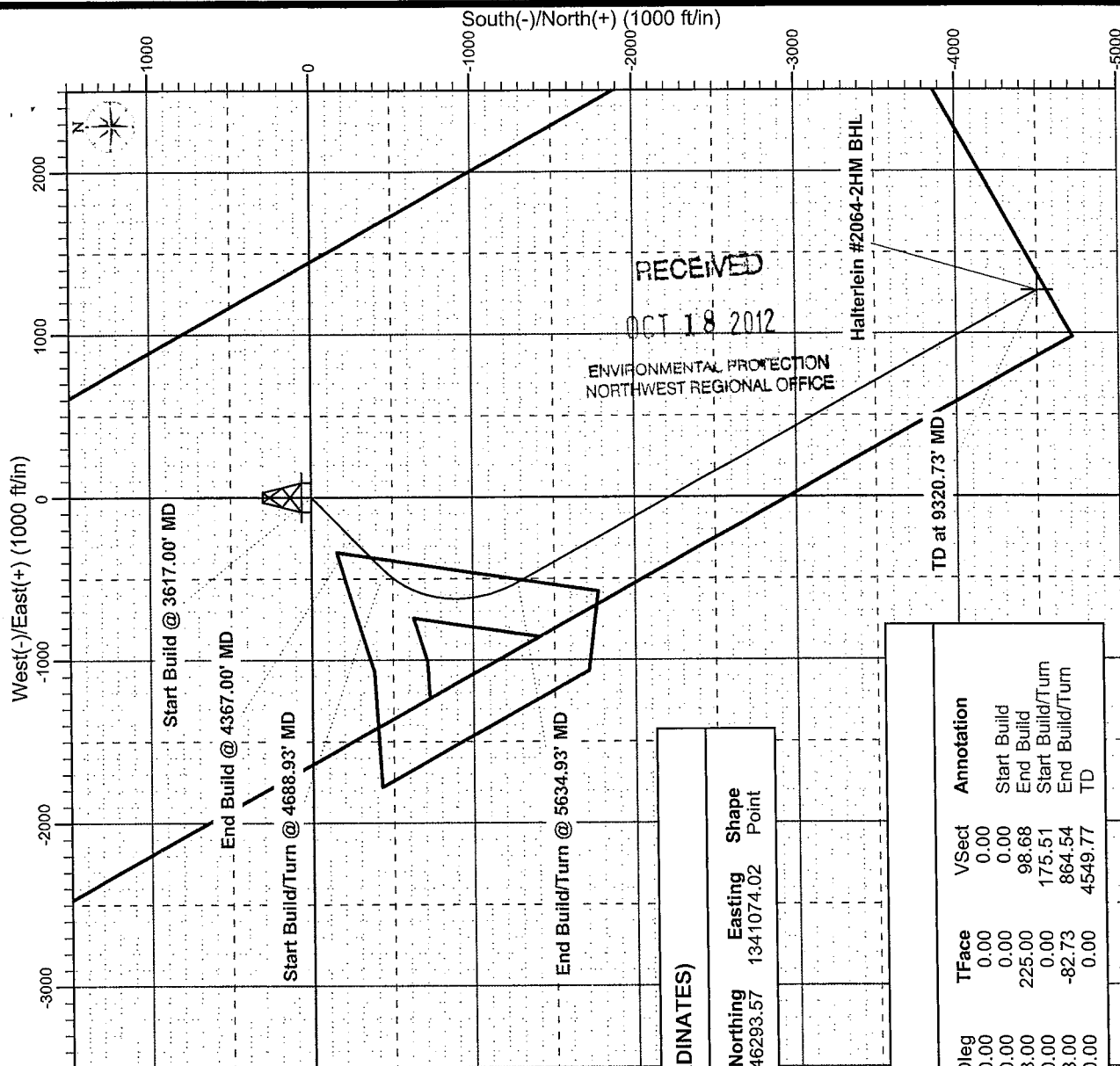
Magnetic Model: BGGM2012 Date: 24-Aug-12
Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	MD	Inc	Azi	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
Halterlein #2064-2HM BHL	4750.42	0.00	0.00	4750.42	-4500.68	1265.22	346293.57	1341074.02	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
3617.00	0.00	0.00	3617.00	0.00	0.00	0.00	0.00	0.00	End Build
4367.00	60.00	225.00	4237.24	-253.19	-253.23	8.00	225.00	98.68	Start Build/Turn
4688.93	60.00	225.00	4398.21	-450.33	-450.39	0.00	0.00	175.51	End Build/Turn
5634.93	89.00	151.00	4686.09	-1277.50	-521.42	8.00	-82.73	864.54	TD
9320.73	89.00	151.00	4750.42	-4500.68	1265.22	0.00	0.00	4549.77	





pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Oil and Gas Management Program

WELL LOCATION PLAT

Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: SEP 11/6/12
	Permit #: 019-21992	C:
	Project #:	

Top Hole Well is located on topo map 6669 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 10369 feet south of latitude 41° 07' 30" tax map information

Surface Hole Coordinates

True Latitude: NORTH
41° 06' 24.10"

True Longitude: WEST
80° 01' 53.77"

Bottom Hole Coordinates

True Latitude: NORTH
41° 05' 47.54"

True Longitude: WEST
80° 01' 26.33"

TH

BH

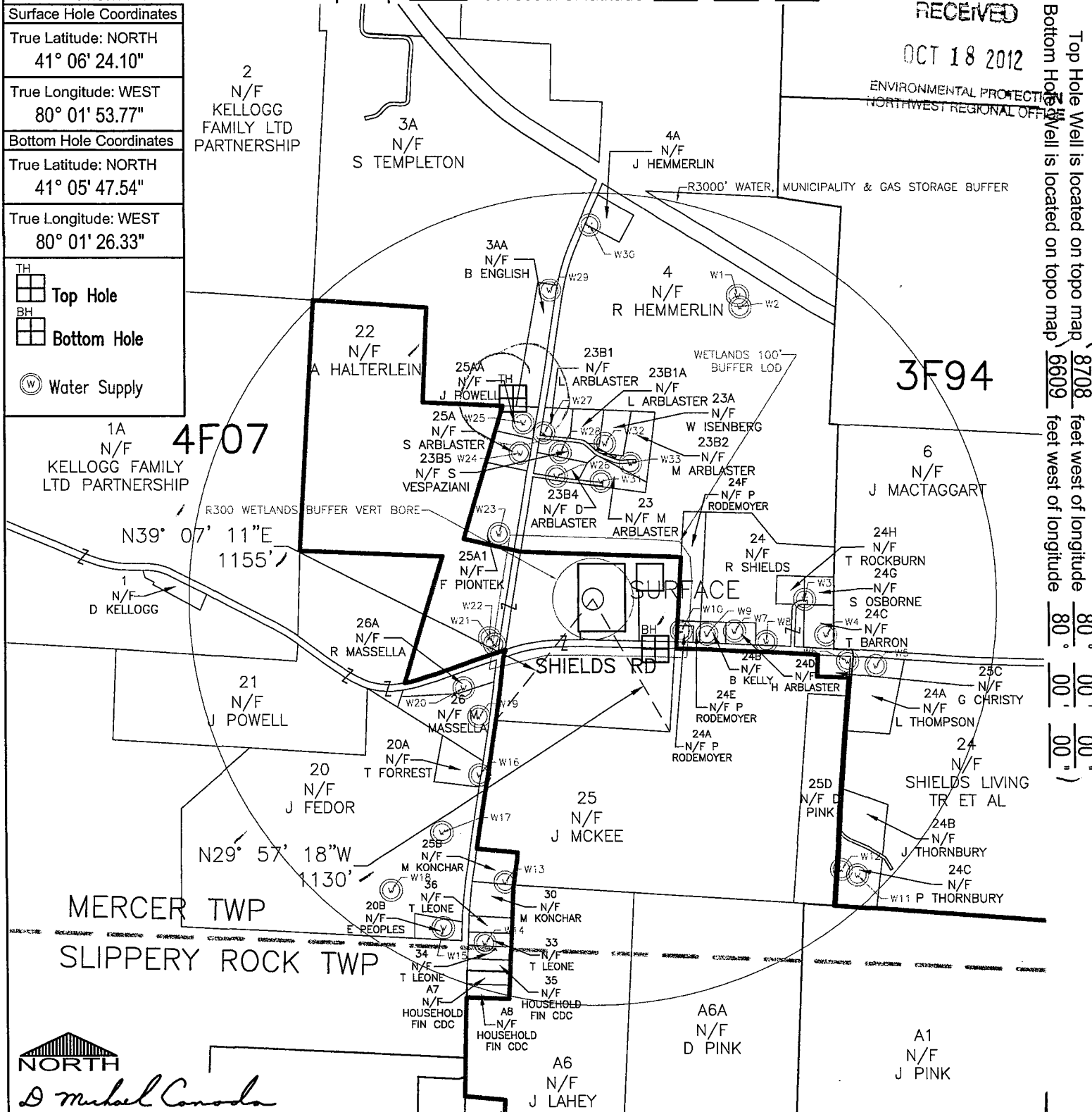
TH

BH

Top Hole

Bottom Hole

Water Supply



D Michael Canada

Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309	Well (Farm) Name: HALTERLEIN		Well #: 2064-4HD
Address: 190 Thorn Hill Road, Warrendale, PA 15086			County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: 401 SHIELDS RD			USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3 Surface Elevation: 1320 ft.
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada	Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPT 12, 2012	Scale: 1" = 1000'	Tract Acreage: 444.57
Lat. & Long Metadata Method: RTK GPS	Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.	Datum: NAD 83
Survey Date: APRIL 12, 2012					

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-4HD
Surface Landowner: HALTERLEIN ANTHONY J ✓	Angle & Course of Deviation (Drilling): S28° 04' 32"E 4255' ✓	Anticipated True Vertical Depth Feet (TVD): 8720.27 ✓	Anticipated Total Measured Depth Feet (TMD): 12607.79 ✓
Target Formation(s): Utica Shale	Deepest Formation to be penetrated: Utica Shale	Number of Laterals: 1 ✓	Total footage to be drilled - all laterals: 12607.79 ✓

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-03F94-0000024A-0000 ✓	THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-03F94-0000024C-0000 ✓	THORNBURY PATRICK D ✓	41D 06' 04.52"	80D 01' 27.71"
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220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL ✓	41D 06' 45.69"	80D 01' 40.07"
220-04F07-00000004-0000 ✓	HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
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220-04F07-00000020-0000 ✓	FEDOR JESSE N ET AL ✓	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000 ✓	HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
220-04F07-00000023-0000 ✓	ARBLASTER MARK D ET AL ✓	41D 06' 32.69"	80D 01' 53.20"
220-04F07-00000024-0000 ✓	SHIELDS RICHARD L JR & LARRY D ✓	41D 06' 21.35"	80D 01' 36.91"
220-04F07-00000026-0000 ✓	MASSELLA MARK A & JENNIFER L ✓	41D 06' 15.32"	80D 02' 04.65"
220-04F07-00000033-0000 ✓	LEONE THOMAS C & SHARON R ✓	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000004A-0000 ✓	HEMMERLIN JOHN J & CATHERINE L ✓	41D 06' 51.38"	80D 01' 54.86"
220-04F07-0000020A-0000 ✓	FORREST THOMAS E & AMY B ✓	41D 06' 11.05"	80D 02' 04.45"
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220-04F07-0000024D-0000 ✓	ARBLASTER HENRY E & JOAN ✓	41D 06' 22.04"	80D 01' 39.97"
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220-04F07-0000025B-0000 ✓	KONCHAR MITCHELL & GRACE ✓	41D 06' 03.29"	80D 02' 01.83"
220-04F07-0000025C-0000 ✓	CHRISTY GERALD & ALICE ✓	41D 06' 20.11"	80D 01' 28100"
220-04F07-0000026A-0000 ✓	MASSELLA ROBERT A & LYNISE S ✓	41D 06' 17.37"	80D 02' 06.19"
220-04F07-000003AA-0000 ✓	ENGLISH BLAIR C & CAROL A ✓	41D 06' 46.56"	80D 01' 58.61"
220-04F07-000023B1-0000 ✓	ARBLASTER LARRY E & ERIN L ✓	41D 06' 36.12"	80D 01' 58.88"
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220-04F07-000023B4-0000 ✓	ARBLASTER DAVID S & BARBARA ✓	41D 06' 32.98"	80D 01' 57.55"
220-04F07-000023B5-0000 ✓	VESPAZIANI STAR A & KEVIN ✓	41D 06' 34.71"	80D 01' 57.24"
220-04F07-000025A1-0000 ✓	PIONTEK FRANK L III & ANNE M ✓	41D 06' 28.68"	80D 02' 03.07"
220-04F07-000025AA-0000 ✓	POWELL JAMES R & JULIE E ✓	41D 06' 36.81"	80D 02' 00.93"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

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Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-4HD
Surface Landowner: HALTERLEIN ANTHONY J			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N25° 53' 25.36"E	2491
W2	N27° 08' 29.60"E	2423
W3	S89° 58' 58.14"E	1571
W4	S81° 22' 29.55"E	1745
W5	S76° 48' 30.34"E	2151
W6	S76° 27' 22.29"E	1939
W7	S77° 18' 23.84"E	1076
W8	S76° 18' 28.23"E	1320
W9	S72° 55' 11.06"E	886
W10	S70° 13' 24.60"E	695
W11	S43° 40' 25.73"E	2812
W12	S42° 26' 05.06"E	2701
W13	S17° 50' 05.50"W	2195
W14	S17° 57' 49.82"W	2670
W15	S25° 01' 41.96"W	2679
W16	S33° 15' 50.47"W	1554
W17	S33° 24' 31.58"W	2063

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S35° 07' 18.29"W	2630
W19	S44° 38' 09.59"W	1219
W20	S55° 52' 26.81"W	1170
W21	S65° 39' 52.17"W	808
W22	S69° 47' 13.26"W	829
W23	N55° 27' 01.23"W	849
W24	N26° 35' 11.25"W	1204
W25	N21° 34' 57.80"W	1397
W26	N16° 21' 05.70"W	944
W27	N16° 19' 06.50"W	1278
W28	N12° 24' 45.40"W	1106
W29	N7° 45' 17.28"W	2302
W30	N0° 13' 15.80"W	2762
W31	N4° 21' 42.51"E	870
W32	N4° 48' 10.76"E	1150
W33	N15° 48' 28.36"E	1044

Municipality: where the well will be drilled, adjacent to the well, or within 3000 feet
DRILLED IN - ☒ MERCER TWP-BUTLER CO ☒
ADJACENT TO - ☒ HARRISVILLE BORO-BUTLER CO ☒
☒ IRWIN TWP- VENANGO CO ☒
☒ MARION TWP-BUTLER CO ☒
☒ CHERRY TWP-BUTLER CO ☒
☒ SLIPPERY ROCK TWP-BUTLER CO ☒
☒ LIBERTY TWP-MERCER CO ☒
☒ PINE TWP- MERCER CO ☒

Coal related parties
NONE

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

[illegible]

Tract Acreage: 444.5

WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-4HD
--	---------------------------	--	----------------------------

DEP Use Only	Permit #
--------------------	----------

WELL PLAN

Operator Name: SWEPI LP

Well / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>7938.4</u>	TMD: <u>7938.4</u>	<u>41° 06' 24.10"</u>	<u>80° 01' 53.77"</u>
Landing Point:	TVD: <u>8658.37</u>	TMD: <u>9061.11</u>	<u>41° 06' 17.73"</u>	<u>80° 01' 49.84"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

UA_APPALACHIA



Project: SLIPPERY ROCK
 Site: HALTERLEIN #2064
 Well: HALTERLEIN #2064-4HD
 Wellbore: HALTERLEIN #2064-4HD
 Design: Design #1
 Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188, 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Easting 133808.79
 Latitude 41° 6' 24.104 N
 Longitude 80° 1' 53.766 W

SECTION DETAILS

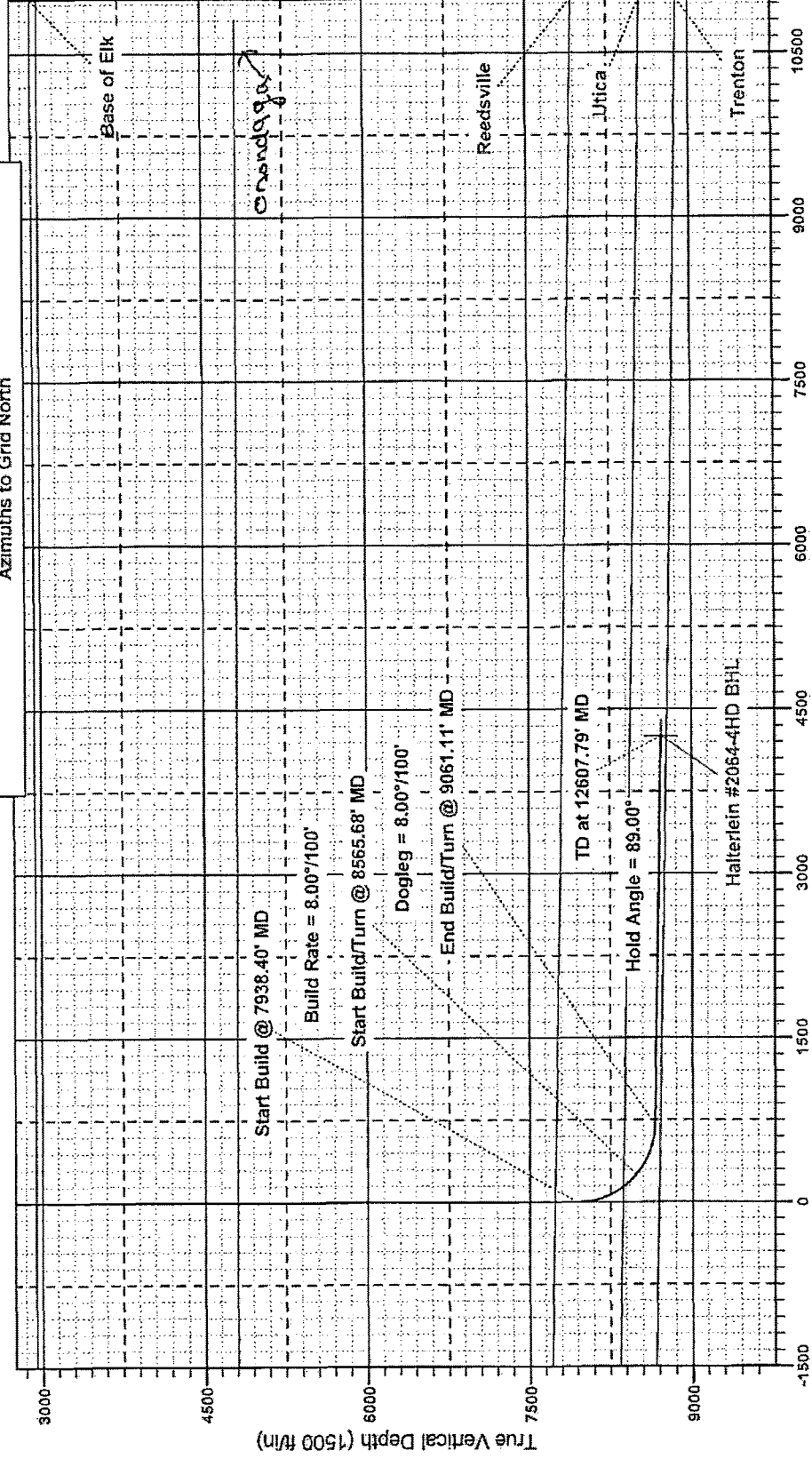
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Start Build
7938.40	0.00	0.00	7938.40	0.00	0.00	0.00	0.00	0.00	Start Build/Turn
8565.68	50.17	159.67	8488.55	-241.46	89.48	8.00	159.67	254.57	End Build/Turn
9061.11	89.00	151.00	8658.37	-652.99	283.46	8.00	-13.66	708.54	TD
12607.79	89.00	151.00	8720.27	-3754.51	2002.66	0.00	0.00	4254.68	TD

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting	Shape
Halterlein #2064-4HD BHL	8720.27	-3754.51	2002.66	347024.73	1341811.45	Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North



Vertical Section at 151.00° (1500 ft/in)

UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-4HD
Wellbore: HALTERLEIN #2064-4HD
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
 NAD83 / Pennsylvania North [1188, 2271]
 Elevation: DFE @ 1341.00ft (TBD)
 Northing 350779.24 Easting 1339808.79 Latitude 41° 6' 24.104 N Longitude 80° 1' 53.766 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

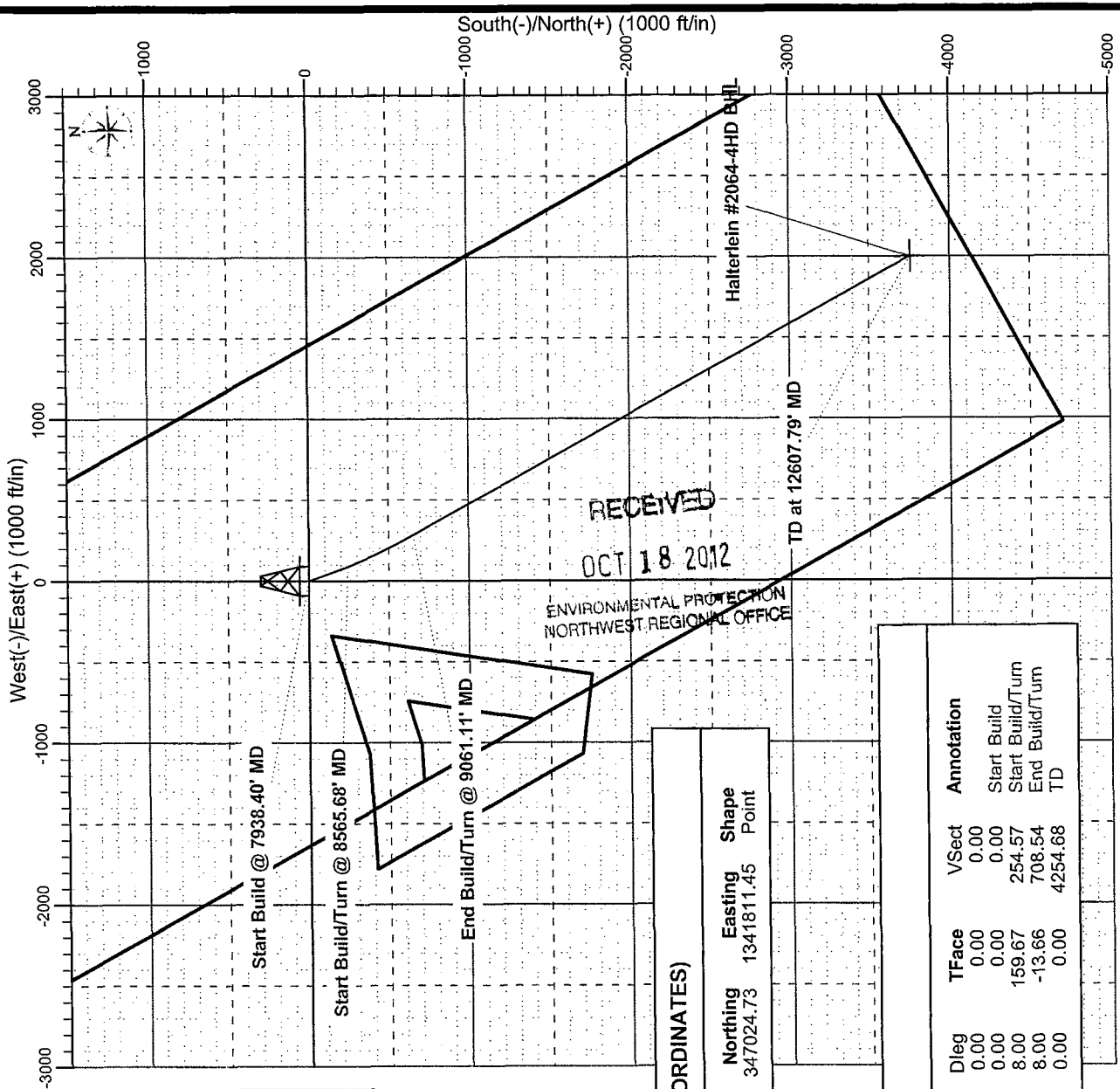
Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Halterlein #2064-4HD BHL	8720.27	-3754.51	2002.66	347024.73	1341811.45	Point

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
7938.40	0.00	0.00	7938.40	0.00	0.00	0.00	0.00	0.00	Start Build
8565.68	50.17	159.67	8488.55	-241.46	89.48	8.00	159.67	254.57	Start Build/Turn
9061.11	89.00	151.00	8658.37	-652.99	283.46	8.00	-13.66	708.54	End Build/Turn
12607.79	89.00	151.00	8720.27	-3754.51	2002.66	0.00	0.00	4254.68	TD



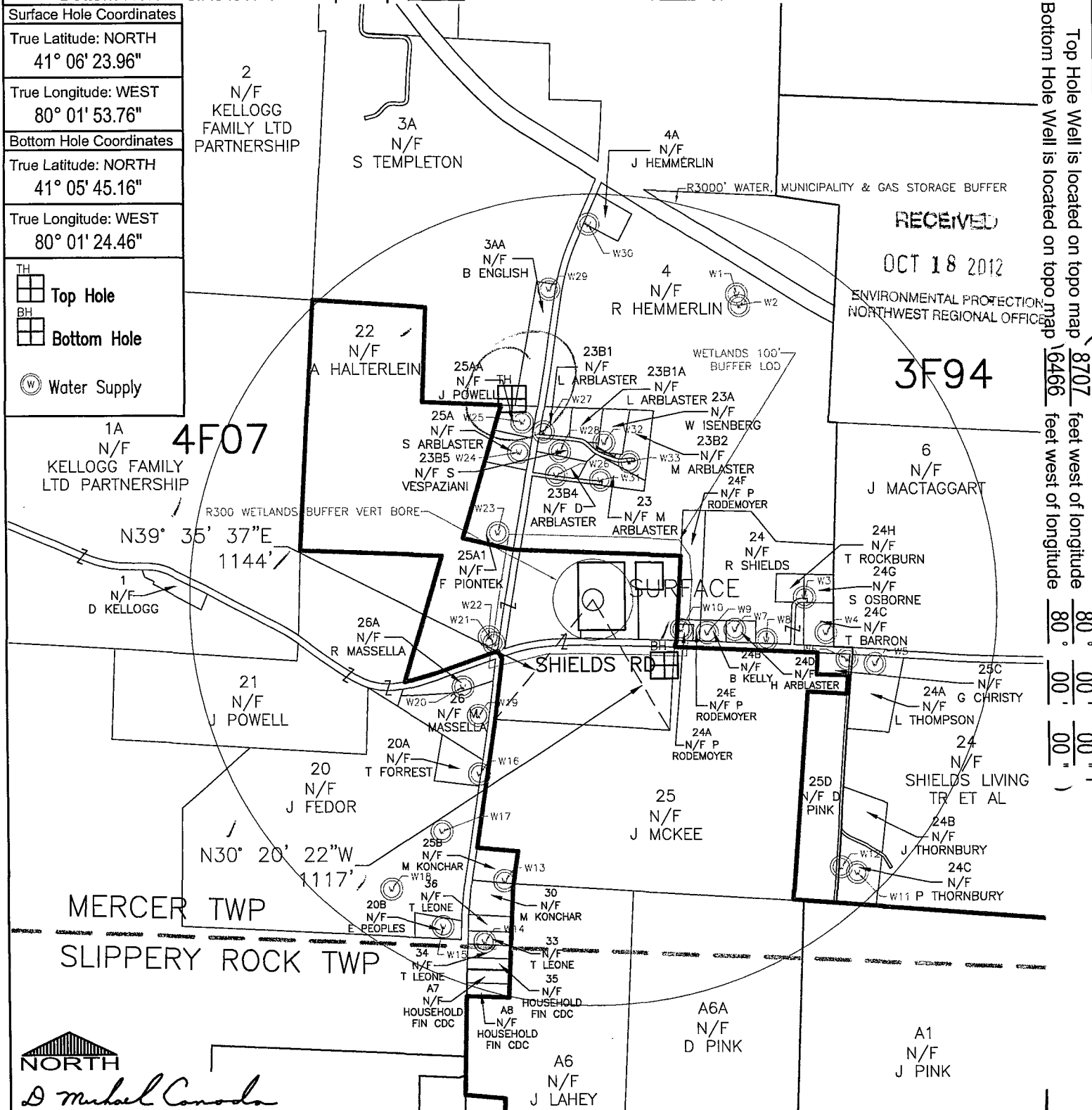


pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT
Page 1 Surface Location

DEP USE ONLY	Auth ID #:	G: 569 11/6/12
	Permit #: 019-21993	C:
	Project #:	

Top Hole Well is located on topo map 6683 feet south of latitude 41° 07' 30" parcel lines taken from
Bottom Hole Well is located on topo map 10610 feet south of latitude 41° 07' 30" tax map information



Applicant / Well Operator Name: SWEPI LP		DEP ID#: 284309	Well (Farm) Name: HALTERLEIN		Well #: 2064-4HM
Address: 190 Thorn Hill Road, Warrendale, PA 15086			County: BUTLER	Municipality: MERCER	Well Type: Gas
911 Address of well site: 401 SHIELDS ROAD			USGS 71/2 Quadrangle Map Name: SLIPPERY ROCK 1005		Map Section: 3
Surveyor: Pa. Lic. # SU029272 E D. Michael Canada	Phone #: 716-379-7918	Dwg #: 20120412 B	Date: SEPTEMBER 12, 2012	Scale: 1" = 1000'	Surface Elevation: 1320 ft.
Lat. & Long Metadata Method: RTK GPS	Accuracy: ± 5 ft.	Datum: NAD 83	Elevation Metadata Method: GPS	Accuracy: ± 5 ft.	Datum: NAD 83
Tract Acreage: 341.07					Survey Date: APRIL 12, 2012

WELL LOCATION PLAT

Page 2 Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-4HM
Surface Landowner: ✓ HALTERLEIN ANTHONY J ✓	Angle & Course of Deviation (Drilling): S28° 13' 45"E 4522'	Anticipated True Vertical Depth Feet (TVD): 4749.92	Anticipated Total Measured Depth Feet (TMD): 8900.43
Target Formation(s): Marcellus Shale	Deepest Formation to be penetrated: Marcellus Shale	Number of Laterals: 1	Total footage to be drilled - all laterals: 8900.43

Surface Owner or Water Purveyor
with a Water Supply within 3,000 ft.

Latitude/Longitude of Water Supply

PIN	OWNER	LAT	LONG
220-03F94-0000024A-0000	✓ THOMPSON LEON E & NORMA L	41D 06' 19.80"	80D 01' 26.25"
220-03F94-0000024C-0000	✓ THORNBURY PATRICK D ✓	41D 06' 04.52"	80D 01' 27.71"
220-03F94-0000024C-0000	✓ THORNBURY PATRICK D ✓	41D 06' 04.89"	80D 01' 29.28"
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 45.69"	80D 01' 40.07"
220-04F07-00000004-0000	✓ HEMMERLIN ROBERT E ET AL ✓	41D 06' 46.52"	80D 01' 40.33"
220-04F07-00000020-0000	✓ FEDOR JESSE N ET AL ✓	41D 06' 06.80"	80D 02' 08.01"
220-04F07-00000020-0000	✓ FEDOR JESSE N ET AL ✓	41D 06' 02.46"	80D 02' 12.78"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 20.62"	80D 02' 03.27"
220-04F07-00000022-0000	✓ HALTERLEIN ANTHONY J ✓	41D 06' 21.07"	80D 02' 03.76"
220-04F07-00000023-0000	✓ ARBLASTER MARK D ET AL ✓	41D 06' 32.69"	80D 01' 53.20"
220-04F07-00000024-0000	✓ SHIELDS RICHARD L JR & LARRY D ✓	41D 06' 21.35"	80D 01' 36.91"
220-04F07-00000026-0000	✓ MASSELLA MARK A & JENNIFER L ✓	41D 06' 15.32"	80D 02' 04.65"
220-04F07-00000033-0000	✓ LEONE THOMAS C & SHARON R ✓	41D 05' 58.80"	80D 02' 03.65"
220-04F07-0000004A-0000	✓ HEMMERLIN JOHN J & CATHERINE L ✓	41D 06' 51.38"	80D 01' 54.86"
220-04F07-00000020A-0000	✓ FORREST THOMAS E & AMY B ✓	41D 06' 11.05"	80D 02' 04.45"
220-04F07-00000020B-0000	✓ PEOPLES ELAINE L & REESEMAN HEATHER A ✓	41D 05' 59.84"	80D 02' 07.73"
220-04F07-00000023A-0000	✓ ISENBERG WILLIAM J & SHIRLEY ✓	41D 06' 35.45"	80D 01' 52.90"
220-04F07-00000024A-0000	✓ RODEMOYER PATRICIA L ✓	41D 06' 21.95"	80D 01' 45.14"
220-04F07-00000024B-0000	✓ KELLY BURTON F & NEVADA D ✓	41D 06' 21.75"	80D 01' 42.62"
220-04F07-00000024C-0000	✓ BARRON TERRY L & BEATRICE A ✓	41D 06' 21.97"	80D 01' 31.14"
220-04F07-00000024D-0000	✓ ARBLASTER HENRY E & JOAN ✓	41D 06' 22.04"	80D 01' 39.97"
220-04F07-00000024G-0000	✓ OSBORNE SHERRI L ✓	41D 06' 24.51"	80D 01' 33.24"
220-04F07-00000025A-0000	✓ ARBLASTER STEVEN R & LINDA A ✓	41D 06' 34.60"	80D 02' 01.17"
220-04F07-00000025B-0000	✓ KONCHAR MITCHELL & GRACE ✓	41D 06' 03.29"	80D 02' 01.83"
220-04F07-00000025C-0000	✓ CHRISTY GERALD & ALICE ✓	41D 06' 20.11"	80D 01' 28100"
220-04F07-00000026A-0000	✓ MASSELLA ROBERT A & LYNISE S ✓	41D 06' 17.37"	80D 02' 06.19"
220-04F07-0000003AA-0000	✓ ENGLISH BLAIR C & CAROL A ✓	41D 06' 46.56"	80D 01' 58.61"
220-04F07-00000023B1-0000	✓ ARBLASTER LARRY E & ERIN L ✓	41D 06' 36.12"	80D 01' 58.88"
220-04F07-00000023B2-0000	✓ ARBLASTER MARK D & CRYSTAL K ✓	41D 06' 34.06"	80D 01' 50.39"
220-04F07-00000023B4-0000	✓ ARBLASTER DAVID S & BARBARA ✓	41D 06' 32.98"	80D 01' 57.55"
220-04F07-00000023B5-0000	✓ VESPAZIANI STAR A & KEVIN ✓	41D 06' 34.71"	80D 01' 57.24"
220-04F07-00000025A1-0000	✓ PIONTEK FRANK L III & ANNE M ✓	41D 06' 28.68"	80D 02' 03.07"
220-04F07-00000025AA-0000	✓ POWELL JAMES R & JULIE E ✓	41D 06' 36.81"	80D 02' 00.93"

WATER PURVEYOR INFORMATION CONTINUED ON SHEET 2A

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ENVIRONMENTAL PROTECTION
NORTHWEST REGIONAL OFFICE

WELL LOCATION PLAT

Page 2A Notifications

DEP Statewide toll-free phone number for reporting cases of water contamination which may be associated with development of oil and gas resources is 1-866-255-5158.

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-4HM
Surface Landowner: HALTERLEIN ANTHONY J /			

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W1	N25° 44' 26.56"E	2505
W2	N26° 58' 50.92"E	2437
W3	N89° 28' 13.08"E	1572
W4	S81° 51' 44.63"E	1743
W5	S77° 11' 53.05"E	2148
W6	S76° 53' 16.84"E	1935
W7	S78° 05' 17.02"E	1073
W8	S76° 56' 31.43"E	1317
W9	S73° 51' 07.77"E	881
W10	S71° 23' 42.23"E	690
W11	S43° 53' 08.92"E	2801
W12	S42° 39' 01.65"E	2690
W13	S17° 57' 19.35"W	2181
W14	S18° 03' 48.51"W	2656
W15	S25° 09' 52.59"W	2665
W16	S33° 34' 10.80"W	1541
W17	S33° 38' 21.71"W	2051

BEARING/DISTANCE FROM TH TO WATER WELL		
Water Well Number	Direction	Length
W18	S35° 18' 37.83"W	2618
W19	S45° 08' 08.14"W	1208
W20	S56° 29' 11.37"W	1161
W21	S66° 38' 25.59"W	802
W22	S70° 45' 55.81"W	824
W23	N54° 37' 29.04"W	858
W24	N26° 16' 12.75"W	1217
W25	N21° 21' 30.43"W	1411
W26	N16° 05' 54.97"W	958
W27	N16° 07' 52.54"W	1292
W28	N12° 14' 50.71"W	1121
W29	N7° 42' 16.45"W	2317
W30	N0° 13' 10.94"W	2777
W31	N4° 17' 18.46"E	885
W32	N4° 44' 29.81"E	1165
W33	N15° 35' 13.34"E	1058

Municipality: where the well will be drilled,
adjacent to the well, or within 3000 feet

DRILLED IN - ☒ MERCER TWP-BUTLER CO ☒
 ADJACENT TO - ☒ HARRISVILLE BORO-BUTLER CO ☒
☒ IRWIN TWP- VENANGO CO ☐
☒ MARION TWP-BUTLER CO ☐
☒ CHERRY TWP-BUTLER CO ☐
☒ SLIPPERY ROCK TWP-BUTLER CO ☐
☒ LIBERTY TWP-MERCER CO ☐
☒ PINE TWP- MERCER CO ☐

Coal related parties

NONE

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NORTHWEST REGIONAL OFFICE

WELL PAD W/ TOP HOLE LOCATIONS

ACCESS RD



Applicant / Well Operator Name:

DEP ID#: 284309

Well (Farm) Name: HALTERLEIN

Well #: 2064-4HM

Scale: $1'' = 1500'$

Tract Acreage: 341.0

WELL LOCATION PLAT
Page 4 Cross Section

Applicant / Well Operator Name: SWEPI LP	DEP ID#: 284309	Well (Farm) Name: HALTERLEIN	Well #: 2064-4HM
--	---------------------------	--	----------------------------

DEP Use Only	Permit #
--------------------	----------

WELL PLAN

Operator Name: SWEPI LP
Well / Farm Name: HALTERLEIN

			Latitude:	Longitude:
KOP:	TVD: <u>3967</u>	TMD: <u>3967</u>	<u>41° 06' 23.96"</u>	<u>80° 01' 53.76"</u>
Landing Point:	TVD: <u>4683.09</u>	TMD: <u>5079.5</u>	<u>41° 06' 17.69"</u>	<u>80° 01' 49.77"</u>

*FOR CLARITY PURPOSES, SEE THE
FOLLOWING ATTACHED WELL PLAN AND
SECTION VIEWS

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Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-4HM
Wellbore: HALTERLEIN #2064-4HM
Design: Design #1
Rig: TBD

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3967.00	0.00	0.00	3967.00	0.00	0.00	0.00	0.00	0.00	Start Build
5079.50	89.00	155.75	4683.09	-641.61	289.02	8.00	155.75	701.28	Start Turn
5138.85	89.00	151.00	4684.13	-694.64	315.61	8.00	-90.07	760.55	End Turn
8900.43	89.00	151.00	4749.92	-3984.14	2138.90	0.00	0.00	4521.56	TD

Surface Location:

Northing
350764.24

Easting
1339808.78

Latitude
41° 6' 23.955 N

Longitude
80° 1' 53.761 W

EPW NAD83
 NAD83 / Pennsylvania North [1188_2271]
 Elevation: DFE @ 1341.00ft (TBD)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name
Halterlein #2064-4HM BHL

TVD
4749.92

+N/-S
-3984.14

+E/-W
2138.90

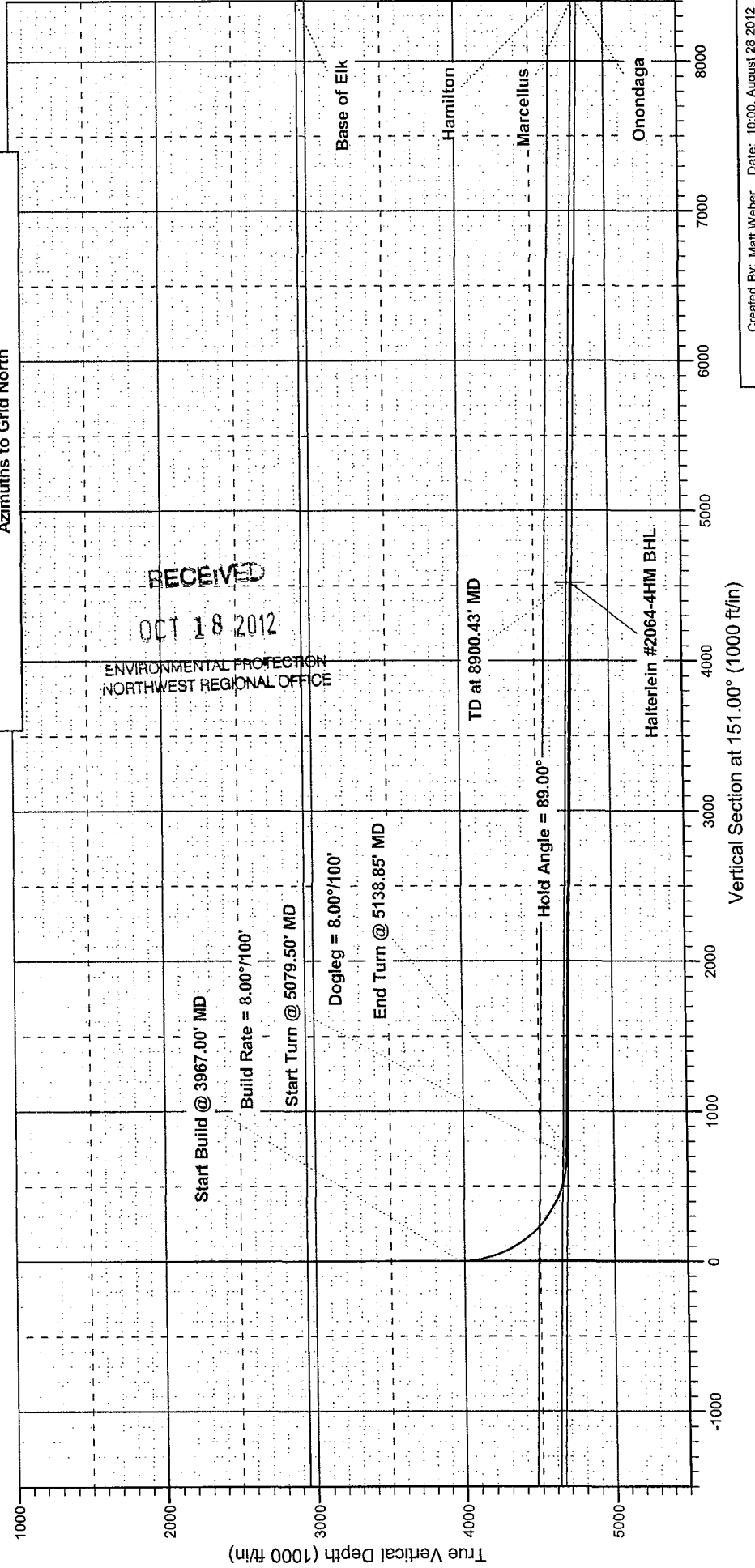
Northing
346780.11

Easting
1341947.68

Shape
Point

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
 Azimuths to Grid North





UA_APPALACHIA

Project: SLIPPERY ROCK
Site: HALTERLEIN #2064
Well: HALTERLEIN #2064-4HM
Wellbore: HALTERLEIN #2064-4HM
Design: Design #1
Rig: TBD

Surface Location:

EPW NAD83
NAD83 / Pennsylvania North [1188_2271]
Elevation: DFE @ 1341.00ft (TBD)
Northing 350764.24 Easting 1339808.78 Latitude 41° 6' 23.955 N Longitude 80° 1' 53.761 W

To convert a Magnetic Direction to a Grid Direction, Subtract 7.83°

Magnetic Model: BGGM2012 Date: 24-Aug-12
Azimuths to Grid North

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
Halterlein #2064-4HM BHL	4749.92	-3984.14	2138.90	346780.11	1341947.68	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3967.00	0.00	0.00	3967.00	0.00	0.00	0.00	0.00	0.00	Start Build
5079.50	89.00	155.75	4683.09	-641.61	289.02	8.00	155.75	701.28	Start Turn
5138.85	89.00	151.00	4684.13	-694.64	315.61	8.00	-90.07	760.55	End Turn
8900.43	89.00	151.00	4749.92	-3984.14	2138.90	0.00	0.00	4521.56	TD

