

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF MINES AND MINERALS  
DIVISION OF OIL & GAS  
P O BOX 2244  
FRANKFORT, KENTUCKY 40601  
PHONE - (502) 573-0147

FOR OFFICE USE ONLY	
RECORD NO:	40395
FEE:	205357 35000
BOND:	BS 777 846
PLAT:	JH Mcconn
FWD:	
SAMPLES:	NO 15269
PERMIT NO:	
RESTRICTED AREA:	

COAL AREA  
15 DAY HOLD  
ISSUE ON 2/24/15

APPLICATION FOR PERMIT  
TYPE OR PRINT

1. TO DRILL  DEEPEN

REOPEN

# 191493 A WELL

PREVIOUS PERMIT NO. 111609 PREVIOUS PERMIT NO.

2. WELL OPERATOR (APPLICANT) Horizontal Technology Energy Co., LLC Attn: Steven Prelipp  
(MUST BE IDENTICAL TO NAME ON BOND)

3. PERMANENT ADDRESS 625 Liberty Avenue, Pittsburgh, PA 15222

4. ADDRESS FOR MAILING PERMIT PO BOX 23298, Pittsburgh, PA 15222-2006 (844) 851-6203

5. MINERAL OWNER (LESSOR) See attached  
(ATTACH ADDITIONAL SHEETS AS NEEDED)

ADDRESS: SAME AS ABOVE ZIP PHONE:  
COUNTY JOHNSON WELL NUMBER 572360 LEASE EXPIRATION DATE N/A

6. CARTER COORDINATES FNL 1824' FEL 1161' FSL FSL FWL SEC 04 LETTER Q NUMBER 81

7. ELEVATION BEFORE GRADING 929.28' ELEVATION AFTER GRADING IF DIFFERENT

ELEVATION CHANGES MUST BE FILED WITH THIS OFFICE PRIOR TO PLUGGING THE WELL.

8. NAME OF DEEPEST GEOLOGIC FORMATION TO BE TESTED CONASAUGA Max depth To permit 15,000'

9. THIS PROPOSED WELL IS TO BE DRILLED FOR THE FOLLOWING PURPOSE:

- |  |   |   |
|--|---|---|
| A. OIL - PRIMARY <input checked="" type="checkbox"/> | D. WATER SUPPLY <input type="checkbox"/>                | G. SALT WATER DISPOSAL <input type="checkbox"/> |
| B. GAS - PRIMARY <input checked="" type="checkbox"/> | E. ENHANCE RECOVERY INJECTION <input type="checkbox"/>  | H. STRATEGGRAPHIC TEST <input type="checkbox"/> |
| C. GAS STORAGE <input type="checkbox"/>              | F. ENHANCE RECOVERY PRODUCTION <input type="checkbox"/> | I. OBSERVATION <input type="checkbox"/>         |

10. A. IS THIS WELL TO BE COMPLETED IN A RESERVOIR WHICH HAD INJECTION WELLS IN EXISTENCE PRIOR TO THE EFFECTIVE DATE OF 805 KAR 1:110. Yes  No

B. THE OPERATOR OF A PROPOSED INJECTION WELL MUST OBTAIN A PERMIT TO DRILL (THIS APPLICATION), AND A SEPARATE PERMIT TO INJECT. THE PERMIT TO INJECT SHALL SATISFY THE REQUIREMENTS OF 805 KAR 1:110.

11. WILL THIS WELL PENETRATE COAL BEARING STRATA? YES  NO  IF YES, COMPLETE BOX BELOW.

12. IS THE COAL OWNED, OPERATED OR LEASED BY ANY PERSON OTHER THAN THE OIL OR GAS LESSEE OR LESSOR? YES  NO

COAL OWNER AND ADDRESS: SEE ATTACHED

THE UNDERSIGNED APPLICANT HAS SENT A COPY OF THIS APPLICATION AND THE WELL LOCATION PLAT BY REGISTERED OR CERTIFIED MAIL TO ALL COAL OWNERS AND OPERATORS NAMED HEREIN ON THE SAME DATE THAT THIS APPLICATION WAS MAILED TO THE DEPARTMENT.

13. WILL THIS WELL BE DRILLED WITHIN THE AREA OF A GAS STORAGE FIELD AS DEFINED BY THE DIVISION OF OIL AND GAS REGULATION 805 KAR 1:080? YES  NO

THE UNDERSIGNED APPLICANT HAS SENT A COPY OF THIS APPLICATION AND THE WELL LOCATION PLAT BY REGISTERED OR CERTIFIED MAIL TO THE GAS STORAGE OPERATOR NAMED HEREIN ON THE SAME DATE THAT THIS APPLICATION WAS MAILED TO THE DEPARTMENT.

14. SURFACE OWNER : SEE ATTACHED (IF DIFFERENT FROM MINERAL OWNER)

15. SURFACE OWNERS NOTIFICATION OF INTENT TO DRILL.

METHOD OF NOTIFICATION:  CERTIFIED MAIL (COPY OF LETTER AND RETURN RECEIPT ATTACHED)  
 PERSONAL DELIVERY (COPY OF NOTIFICATION ATTACHED)

16. DRILLING CONTRACTOR UNKNOWN  
ADDRESS  
PHONE NUMBER

17. U.S.G.S. QUADRANGLE NAME MAP DATE  
SITKA QUAD 1992

18. IS THIS PROPOSED WELL LOCATED ON, OR WILL IT BE NECESSARY TO CROSS LAND WHICH IS CURRENTLY UNDER PERMIT OR BOND BY A COAL OPERATOR AS REQUIRED BY KRS CHAPTER 350? YES  NO

IF YES, LIST THE NAME AND ADDRESS OF CURRENT BONDED OPERATOR

HAS THE APPLICANT MET AND CONFERRED WITH, OR OFFERED TO MEET AND CONFER WITH THE BONDED OPERATOR? YES  NO

19. IS THIS PROPOSED WELL A POOLED OR UNITIZED WELL? YES  NO

IF YES, BY WHAT AUTHORITY DOES THE APPLICANT HAVE TO POOL OR UNITIZE THIS PROPOSED WELL?

There are no adjacent mineral owners with mineral boundaries closer than 500' from the proposed well.

EQT Production Company either owns or maintains a lease, with pooling language, on all pooled or unitized tracts.

20. IS THIS PROPOSED WELL A TWIN WELL TO AN EXISTING WELL? YES  NO

IF YES, WHAT IS THE PERMIT NUMBER FOR THE EXISTING WELL?

WHAT IS THE PRODUCING FORMATION AND INTERVAL OF EXISTING WELL?

Twin well letter for:	Target Formation	Target Interval (TVD)	Direction
572360	Conasauga	10533-11673	155.5 SE

Existing Twin Wells

Well #	Permit #	KGS ID	Target Formation	Target Interval (TVD)	Direction	Status	Carter Coordinates	Latitude	Longitude	Distance to wellbore (ft)	On same surface loc as 572360?
None											

Existing Variance Wells

Well #	Permit #	KGS ID	Target Formation	Target Interval (TVD)	Direction	Status	Carter Coordinates	Latitude	Longitude	Distance to wellbore (ft)	On same surface loc as 572360?
None											

Planned Twin Wells as of 2/5/2015

Well #	Permit #	KGS ID	Target Formation	Target Interval (TVD)	Direction	Status	Carter Coordinates	Latitude	Longitude	Distance to wellbore (ft)	On same surface loc as 572360?
572361	n/a	n/a	Berea Sand	1252-1358	140 SE	Planned	04-Q-81 1874FNL/1169FEL	37.911521	- 82.804053	50	Y
572362	n/a	n/a	Berea Sand	1254-1360	320 NW	Planned	04-Q-81 1775FNL/1153FEL	37.911792	- 82.803996	25	Y

Planned Variance Wells as of 2/5/2015

Well #	Permit #	KGS ID	Target Formation	Target Interval (TVD)	Direction	Status	Carter Coordinates	Latitude	Longitude	Distance to wellbore (ft)	On same surface loc as 572360?
None											

DESCRIBE THE MEASURES TO BE TAKEN TO ENSURE THAT THE TWIN WELLS WILL NOT PRODUCE FROM THE SAME RESERVOIR ; The well will be drilled vertically to a kick-off point and then drilled horizontally out a distance of 4935' from the surface location, with the target zone at approximately 600' out from the surface location. The well will be isolated from the existing wells in this area by casing and either cement or a Packers Plus type system. Only one well will be completed in the vertical section from this well pad.

21. IS THIS PROPOSED WELL A HORIZONTAL OR DEVIATED WELL? YES  NO

IF YES, INDICATE THE LOCATION OF THE ENDPOINT OF THE WELLBORE BELOW.

CARTER COORDINATES FNL 307' FEL  
FSL, FWL, 744' SEC. 08 LETTER Q NUMBER 81

WHAT IS THE ESTIMATED TOTAL LENGTH OF THE WELLBORE? 18,100'

23. THE UNDERSIGNED HEREBY SWEARS OR AFFIRMS THAT THE FOREGOING FACTS GIVEN IN THIS APPLICATION ARE TRUE AS THEREIN SET FORTH.

DATED THIS 4th DAY OF FEBRUARY, 2015

24. THE APPLICANT ACKNOWLEDGES THAT OTHER LOCAL, STATE AND FEDERAL LAWS MAY APPLY TO A WELL DRILLED AT THIS LOCATION.

25. IF A CORPORATION, SIGNATORY MUST BE AN OFFICER OF THE COMPANY OR PROVIDE POWER OF ATTORNEY TO EXECUTE DOCUMENTS.

IF A PRIVATE INDIVIDUAL, SIGNATORY MUST BE SAME OR PROVIDE POWER OF ATTORNEY TO EXECUTE DOCUMENTS.

SIGNATURE OF APPLICANT

TITLE: Attorney in Fact

PRINT OR TYPE NAME OF APPLICANT :

Steven Prelipp

SWORN TO AND SUBSCRIBED BEFORE ME THIS 4th DAY OF FEBRUARY, 2015

*Shirley Jeanette Williams*  
NOTARY PUBLIC

MY COMMISSION EXPIRES:       JULY 5, 2016      

26. ALL APPLICANTS MUST BE NOTARIZED. FILE THIS APPLICATION ALONG WITH PERMIT FEE OF \$350.00 AND THREE (3) COPIES OF THE WELL LOCATION PLAT. ALL BLANKS MUST BE COMPLETED. INCOMPLETE APPLICATIONS WILL BE REJECTED.

(REVISED 2-99)  
ALL PREVIOUS EDITIONS ARE OBSOLETE  
FORM ED-1

ATTACHEMENT "A"

**Permit Application**  
**Well 572360**

**Oil, Gas and Surface Owner:**

EQT Production Co. - No Notice Required  
1710 Pennsylvania Ave.  
Charleston, WV 25302

**Oil and Gas Lessee:**

None - No Notice Required

**Coal Owner:**

Mayo Resources Inc. - Notice of Intent to Drill Attached  
Box 190, RT # 292 Affidavit of Personal Delivery Attached  
Lovely, KY 41231

**Coal Lessee:**

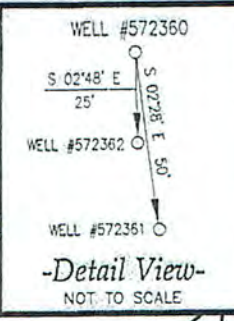
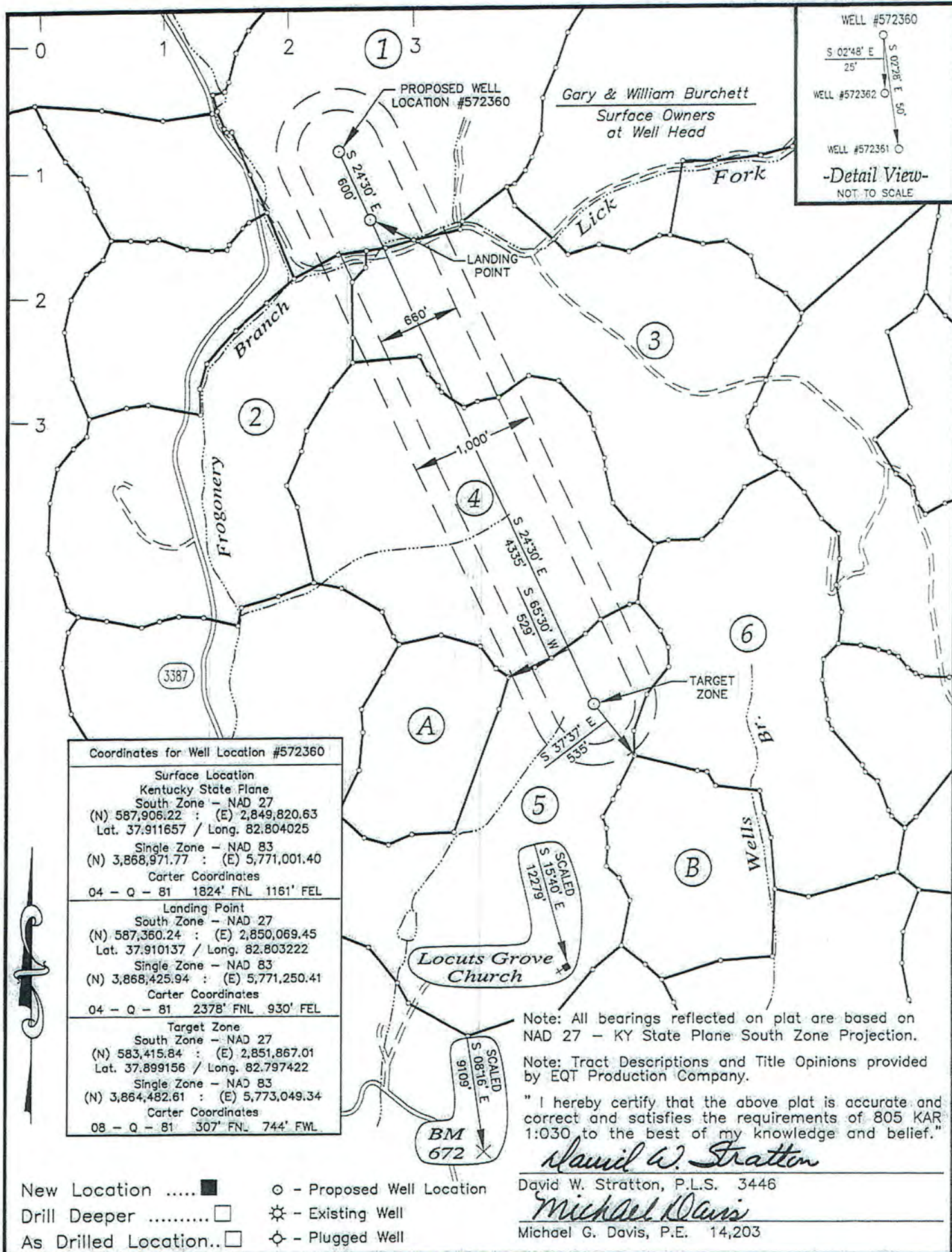
None - No Notice Required

**Surface Owner:**

Gary & Tammy Burchett - Signed ED-10 Attached  
P O Box 142 Drill Site & Access Road  
Wittensville, KY 41274

William & Sharon Burchett - Signed ED-10 Attached  
410 Burchett Hollow Road Drill Site & Access Road  
Stambaugh, KY 41257

Robert Conley - Signed ED-10 Attached  
514 KY RT 3387 Access Road  
Stambaugh, KY 41257



Coordinates for Well Location #572360	
Surface Location	
Kentucky State Plane	
South Zone - NAD 27	
(N) 587,906.22	(E) 2,849,820.63
Lat. 37.911657 / Long. 82.804025	
Single Zone - NAD 83	
(N) 3,868,971.77	(E) 5,771,001.40
Carter Coordinates	
04 - Q - 81	1824' FNL 1161' FEL
Landing Point	
South Zone - NAD 27	
(N) 587,360.24	(E) 2,850,069.45
Lat. 37.910137 / Long. 82.803222	
Single Zone - NAD 83	
(N) 3,868,425.94	(E) 5,771,250.41
Carter Coordinates	
04 - Q - 81	2378' FNL 930' FEL
Target Zone	
South Zone - NAD 27	
(N) 583,415.84	(E) 2,851,867.01
Lat. 37.899156 / Long. 82.797422	
Single Zone - NAD 83	
(N) 3,864,482.61	(E) 5,773,049.34
Carter Coordinates	
08 - Q - 81	307' FNL 744' FWL

Note: All bearings reflected on plat are based on NAD 27 - KY State Plane South Zone Projection.  
 Note: Tract Descriptions and Title Opinions provided by EQT Production Company.  
 "I hereby certify that the above plat is accurate and correct and satisfies the requirements of 805 KAR 1:030 to the best of my knowledge and belief."

*David W. Stratton*  
 David W. Stratton, P.L.S. 3446  
*Michael G. Davis*  
 Michael G. Davis, P.E. 14,203

- New Location .....       ○ - Proposed Well Location
- Drill Deeper .....       ⚙ - Existing Well
- As Drilled Location..       ⊕ - Plugged Well

Company Horizontal Technology Energy Co., LLC  
 Address P.O. Box 23298 Pittsburgh, PA 15222-2006  
 Oil & Gas Owner EQT Production Company  
 Tract 4-377 Acres 171.89 Lease No. 228258F  
 Well (Farm) No. 572360 Permit No. \_\_\_\_\_  
 Elevation (G.P.S.) 929.28'  
 Quadrangle Sitka  
 County Johnson District \_\_\_\_\_  
 Engineer Michael G. Davis  
 Engineer's Registration No. 14203  
 File No. \_\_\_\_\_ Drawing No. 0015-635  
 Date 12/04/2014 Scale 1" = 1,000'

STATE OF KENTUCKY  
 DEPARTMENT FOR NATURAL RESOURCES  
 DIVISION OF OIL AND GAS  
 1025 Capital Center Drive, Frankfort, KY 40601  
**WELL LOCATION MAP**  
 FILE NO. \_\_\_\_\_

+ Denotes location of well on United States Topographic Maps, scale 1 to 24,000, latitude and longitude lines being represented by border lines as shown.  
 - Denotes one inch spaces on border line of original tracing.

**ELKHORN ENGINEERING, INC.**  
 109 Lonesome Cedar Dr., Pikeville, KY 41501  
 (606) 432-2993

**- WELL #572360 -**

**-UNIT TRACTS-**

①

**-Oil & Gas Owner-  
EQT Production Company  
(Winston Caudill Tr. #4-377)  
171.89 Acres  
Lease #228258F**

②

**-Oil & Gas Owner-  
EQT Production Company  
(W.G.H. Stambaugh Tr. #4-456)  
94.0 Acres  
Lease #228346F**

③

**-Oil & Gas Owner-  
EQT Production Company  
(Thomas Stambaugh Tr. #4-449)  
121.62 Acres  
Lease #228338F**

④

**-Oil & Gas Owner-  
EQT Production Company  
(James Stambaugh Tr. #4-447)  
105.0 Acres  
Lease #228336F**

⑤

**-Oil & Gas Owner-  
EQT Production Company  
(Julius Burchett Tract #4-356)  
117.96 Acres  
Lease #228235F**

⑥

**-Oil & Gas Owner-  
EQT Production Company  
(Samuel Stambaugh Tract #4-451)  
80.68 Acres  
Lease #228341F**

131.32 Acre Gas Unit

Unit Tract #1	28.34 Acres	21.58%
Unit Tract #2	2.33 Acres	1.77%
Unit Tract #3	25.06 Acres	19.08%
Unit Tract #4	54.47 Acres	41.48%
Unit Tract #5	19.99 Acres	15.22%
Unit Tract #6	1.13 Acres	0.87%
Total	131.32 Acres	100.00%

82.62 Acre Oil Unit

Unit Tract #1	16.69 Acres	20.20%
Unit Tract #2	0.69 Acres	0.84%
Unit Tract #3	17.80 Acres	21.54%
Unit Tract #4	35.67 Acres	43.17%
Unit Tract #5	11.77 Acres	14.25%
Total	82.62 Acres	100.00%

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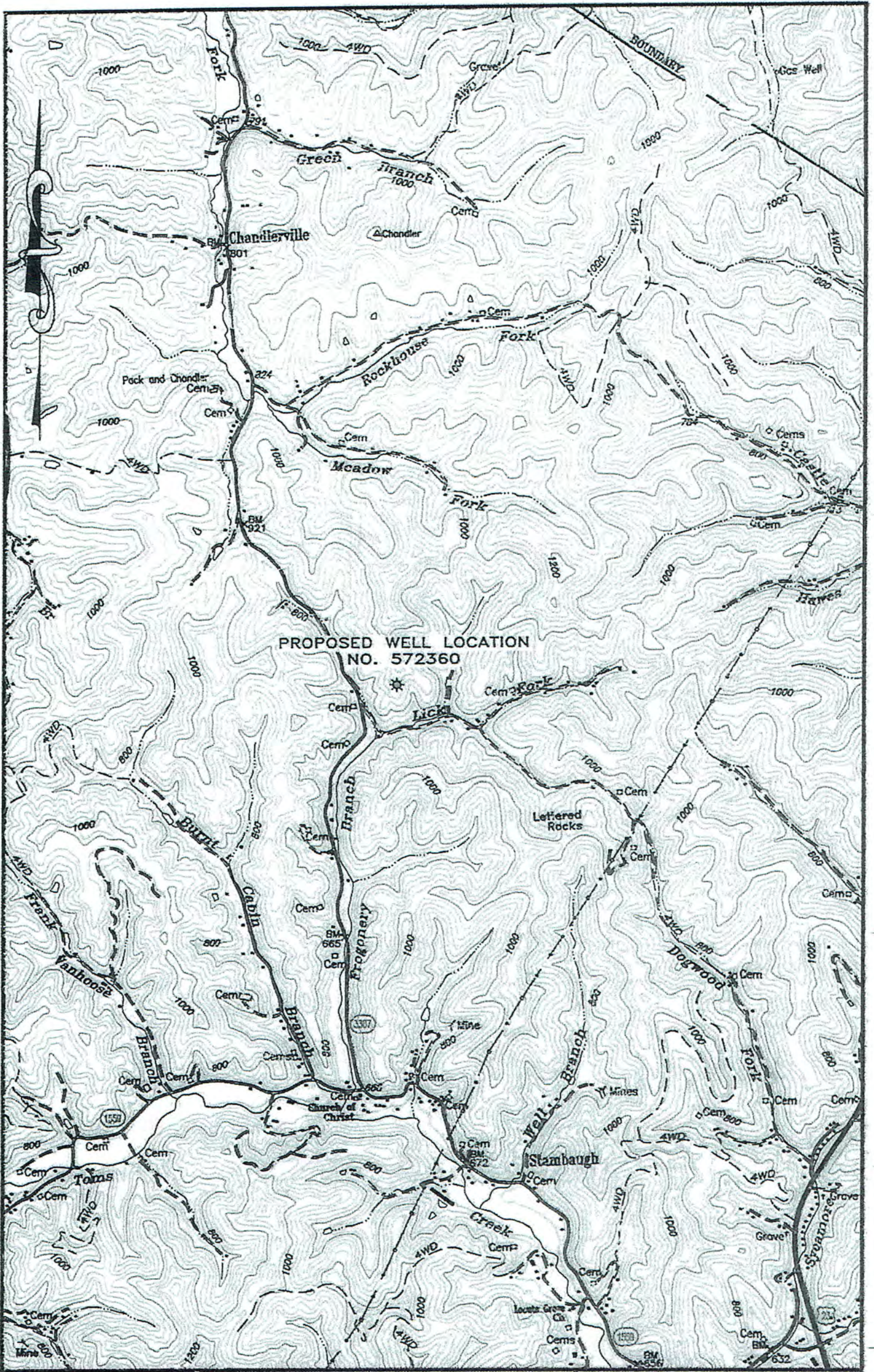
**-ADJOINING TRACTS-**

Ⓐ

**-Oil & Gas Owner-  
EQT Production Company  
(James Akers Tr. #4-507)  
33.37 Acres  
Lease #228403F**

Ⓑ

**-Oil & Gas Owner-  
Newton & Alice Bayes Heirs  
40 Acres  
-Not Leased-**



PROPOSED WELL LOCATION  
NO. 572360

HORIZONTAL TECHNOLOGY  
ENERGY CO., LLC

P.O. BOX 23298

PITTSBURGH, PA 15222-2008

GENERAL LOCATION MAP

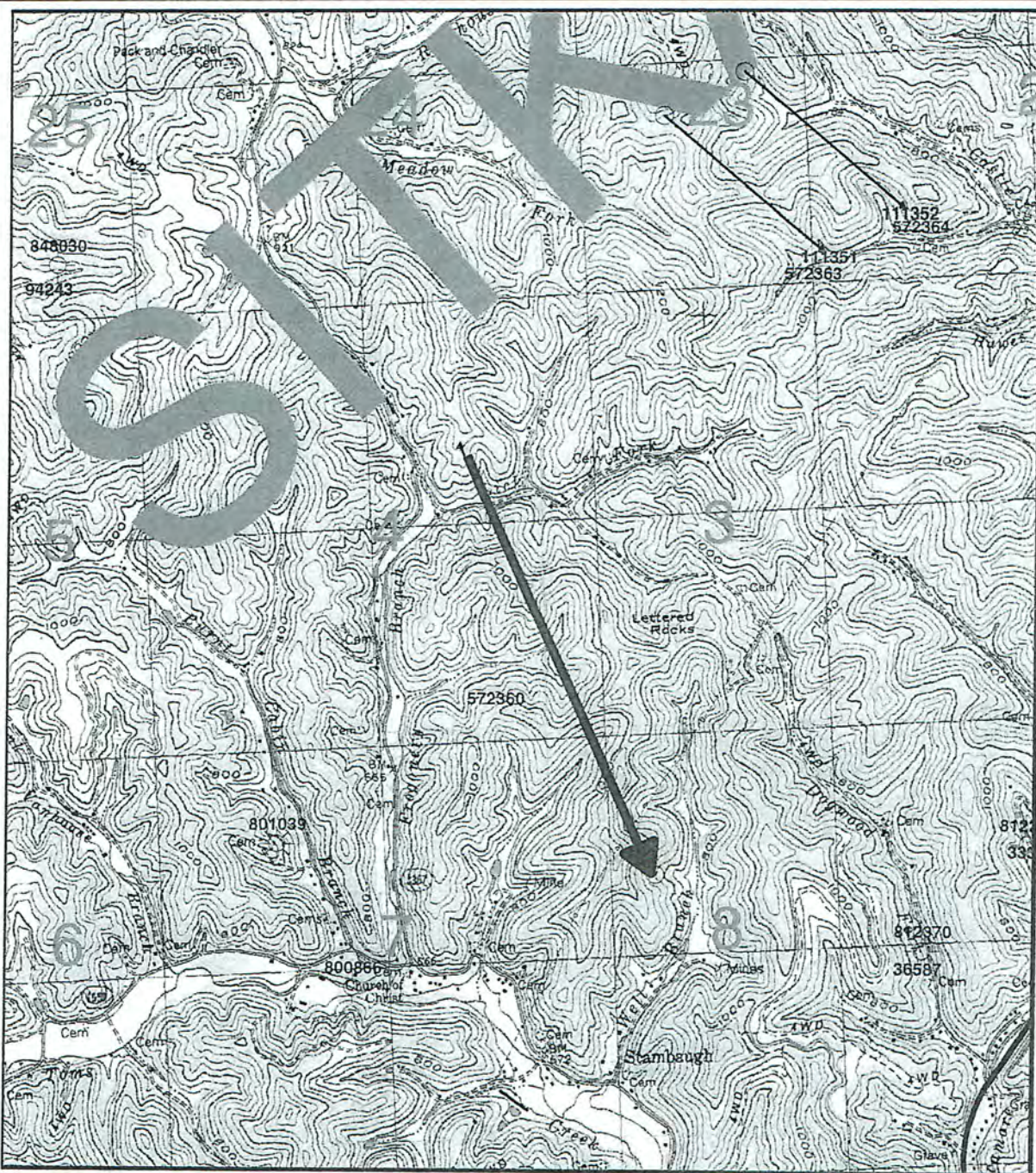
SITKA QUADRANGLE

SCALE: 1" = 2000'



ELKHORN  
ENGINEERING  
INC.

708 LAMORICHIE CEDAR DRIVE, PINEVILLE, KY. (606) 437-0983



**LEGEND**

 PROPOSED WELLPATH

Well ID  
  
 Permit Number



**PROPOSED HORIZONTAL  
572360**

**Azimuth 156 Degrees**

**SITKA QUAD  
04-Q-81**

**JOHNSON COUNTY, KY**





February 4, 2015

Kim Collings  
Commonwealth of Kentucky  
Department of Mines and Minerals  
Division of Oil and Gas  
P. O. Box 2244  
Frankfort, Kentucky 40601

**SUBJECT: PERMIT APPLICATION TO DRILL "WILDCAT" WELL NO. 572360,  
(STRATEGGRAPHIC TEST PERMIT # 111609), PUD ID NO. SIT163H1,  
SITKA QUAD, JOHNSON COUNTY, KENTUCKY**

Dear Kim:

Please find enclosed the following information:

1. One (1) permit application form.
2. Three (3) certified plats of the above referenced proposed oil/gas well.
3. A list of coal owners/lessees which are being notified at the same time by certified mail, or which have already been notified, and have waived the 15 day review period.
4. A list of the oil and gas owners/Lessors.
5. Copy(s) of the Plan to Prevent Erosion of and Sedimentation from a Well Site, signed by affected surface owners, if required.
6. The permit fee in the amount of \$350.00 (Three Hundred Dollars and fifty) made payable to the Kentucky State Treasurer.

If you require additional information, please contact me at the address above or by phone at (844) 851-6203.

Sincerely,



Steven Prelipp  
Horizontal Technology Energy Co., LLC

Attachments: as stated

Date: 10/9/14

Addressee: Mayo Resources Inc.  
Box 190, Rt# 292  
Lovely, KY 41231

Personal Delivery Date 10/9/14

**SUBJECT: NOTICE OF INTENT TO PERMIT AND DRILL WELL NO. 572360, SITKA QUAD,  
JOHNSON COUNTY, KENTUCKY**

The purpose of this letter is to notify **Mayo Resources Inc.** of Horizontal Technology Energy Company, LLC plans to permit and drill the above well in the near future.

Enclosed please find, for your review and information, a certified plat indicating the previously agreed to location at the following coordinates:

Kentucky State Plane Coordinates: South Zone, NAD 27	Carter Coordinates:	<u>04-Q-81</u>
<u>N 587,906.22</u>	<u>1824' FNL</u>	
<u>E 2,849,820.63</u>	<u>1161' FEL</u>	
Kentucky State Plane Coordinates: Single Zone, NAD 83		
<u>N 3,868,971.77</u>		
<u>E 5,771,001.40</u>		

When drilled at the above location the well bore, to the best of my knowledge:

- will not penetrate any known existing deep mine workings, or  
 will penetrate existing deep mine workings, in the following seams at approx. the following elevations:

<u>COAL SEAM</u>	<u>ELEVATION</u>
_____	_____
_____	_____
_____	_____

If the proposed location is acceptable, please sign below to signify that Mayo Resources Inc. waives the fifteen (15) day coal review period, fax a copy to my attention at (606) 437-2278 and mail the original to my attention.

If you have any questions, please contact me at (606) 437-2278.

Sincerely,



Larry K. Reeves II  
Landman II

**Mayo Resources Inc., HEREBY WAIVES THE 15  
DAY COAL REVIEW PERIOD.**

BY: \_\_\_\_\_

ITS: \_\_\_\_\_

Attachments: As stated

# AFFIDAVIT

## State of Kentucky

Comes the Affiant, Sarah Markland, who being duly sworn, deposes and says to-wit as follows:

Pursuant to KRS 353.050, "Notice to Intent to Permit and Drill Gas Well 572360" was personally delivered to:

Mayo Resources Inc,  
Box 190 RT # 292  
Lovely, KY 41231

On the date of 9th day of October, 2014.

Further affiant saith not.

Sarah Markland  
LANDMAN

## Acknowledgment

STATE OF KENTUCKY

COUNTY OF PIKE

On this the 10<sup>th</sup> day of October, 2014, before me personally appeared Sarah Markland, to me known to be the person described in and who executed the forgoing instrument, and acknowledgement that he executed the same as his free act and deed, for the purposes therein set forth.

Larry K. Reeves II  
Notary Public

My Commission Expires 4-28, 20 18



COMMONWEALTH OF KENTUCKY  
 DEPARTMENT OF MINES AND MINERALS  
 DIVISION OF OIL AND GAS  
 PO BOX 2244  
 FRANKFORT, KY 40601  
 PHONE (502) 573-0147



**PLAN TO PREVENT EROSION OF AND SEDIMENTATION FROM A WELL SITE**

Operator Name: Horizontal Technology Energy Company, LLC County: Johnson  
 Surface Owner Name, Address and Phone No.: Gary & Tammy Burchett  
P.O. Box 142  
Wittensville, KY 41274  
(606) 297-1271

Well No. 572360

A narrative description of the location of all areas to be disturbed, including the location of roads, gathering lines, the well site, tanks and other storage facilities:  
 (Must be typed)

Beginning at the intersection of US 23 and Rt. 80 near Prestonsburg. Head NW on US23 N/ US 460W, continue to follow US 23 N for 20.4 miles. Turn left onto St. HWY 1559 for 0.6 miles. Turn left to stay on St. HWY 1559 for 1.9 miles. Turn right onto St. HWY 3887 for 1.5 miles at coordinates 37.91087 / -82.80626. Turn right onto Burchett Hollow Rd. and immediately turn onto new proposed well access road to be constructed and continue uphill to location at coordinates 37.91179 / -82.80396.

Describe steps to be taken to prevent erosion of and sedimentation from the well site and all disturbed areas, including roads:  
 (Must be typed)

Ditches and culverts will be installed as needed for drainage control on the access road and drill site. Additional drainage and sediment controls will be installed as needed during construction of the well site. After construction is complete, the disturbed areas will be regarded and seeded with the mixture shown below or a pasture mix.

**Proposed Revegetation Treatment:**

Fertilizer and Soil Amendments	Seed or Trees Planted (Type and Amount/Acre)
Area I _____	<u>25# Fawn Fescue</u> <u>4# Birdsfoot Trefoil</u>
_____	<u>10# Orchard Grass</u> <u>3# Med. Red Clover</u>
_____	<u>7# Perennial Rye</u> <u>1# Red Top Grass Seed</u>
_____	<u>5# Annual Rye</u> <u>10# Millet</u>
Area II _____	_____
_____	_____
_____	_____

Additional sheets may be attached for your convenience.  
 FORM #ED-10 (Org.2-27-97) (REV. 2-99)

OVER

Attach: Drawing(s) of the road, well location and proposed area involved, drawn over an enlarged section of the U.S.G.S. 1=24,000 topographic map (enlarged to approximately 1"= 400' ) on an 8 X 14 sheet using the applicable symbols from the following legend:

See Legend on attached Map

The undersigned hereby swears or affirms that the foregoing information and attachments in this plan to prevent erosion of and sedimentation from the well site and all disturbed areas, including roads, are true to the best of my knowledge and belief.

Dated this 2<sup>ND</sup> day of OCTOBER, 20 14

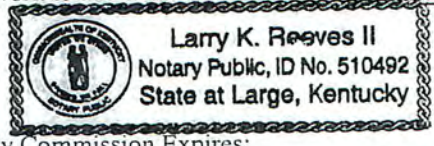
If a corporation, signatory shall be an officer of the company or provide Power of Attorney to execute documents. If a private individual, signatory shall be the same as the applicant or provide Power of Attorney to execute documents.

Conley Smith  
Signature of Operator

Regional Land Manager  
Title

Conley Smith  
Print or Type Name

Sworn to and subscribed before me this 2<sup>nd</sup> day of October, 20 14



Larry K. Reeves II  
Notary Public

My Commission Expires: 4/28/2018

**Surface Owner Agreement**

(Surface Owner Signature Below, Shall Be Notarized)

I have reviewed the application and the information submitted with this form, and agree to the well operator's operations and reclamation proposal as set forth herein. I understand that the execution of this document in no way affects compensation for surface damages as described in KRS 353.595(6) or other contractual agreement.

Gary Burchett  
Signature of severed mineral surface owner

10-1-2014  
Date

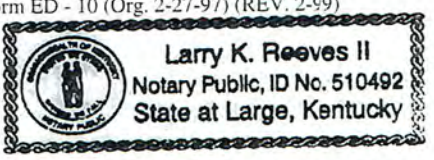
Gary Burchett  
Print or type name of severed mineral surface owner

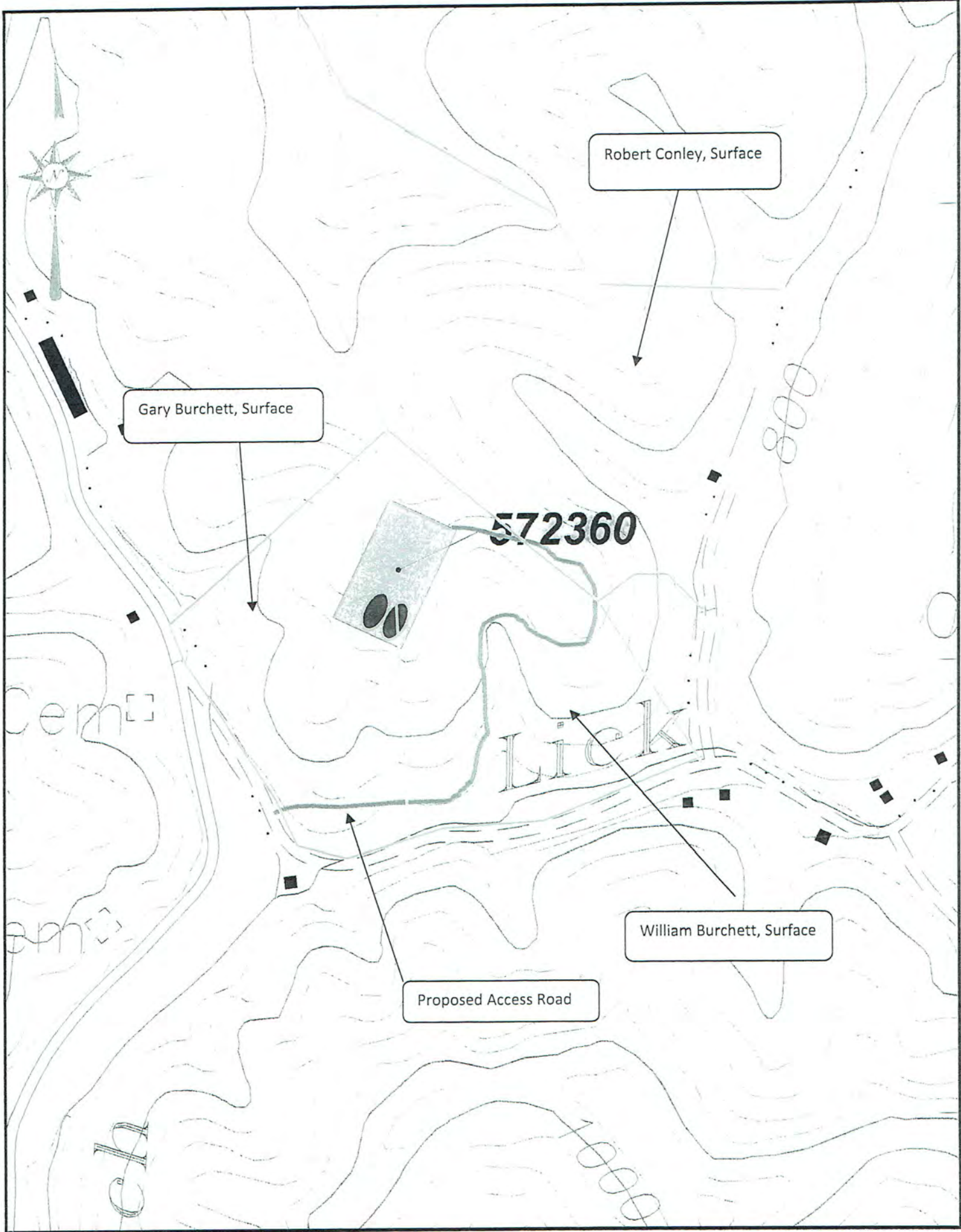
Sworn to and subscribed before me this 1<sup>st</sup> day of October, 20 14

Larry K. Reeves II  
Notary Public

My Commission Expires: 4/28/2018

Form ED - 10 (Org. 2-27-97) (REV. 2-99)





<p>Stream: </p> <p>Road: </p> <p>Existing Fence: </p> <p>Planned Fences: </p> <p>Open Ditch: </p> <p>Rock: </p> <p>North: </p> <p>Buildings: </p> <p>Water Wells: </p> <p>Tank: </p> <p>Drill Site: </p>	<p>Gathering Lines: </p> <p>Diversion: </p> <p>Spring: </p> <p>Drain Pipe: </p> <p>Waterway: </p> <p>Cross Drain: </p> <p>Artificial Filter Strip: </p> <p>Pit-Cut Walls: </p> <p>Area for Land Application of: </p> <p>Pit Waste: </p> <p>Storage Facilities: </p>	<p><b>STATE OF KENTUCKY</b>  <b>DEPARTMENT OF MINES</b>  <b>OIL AND GAS DIVISION</b>  <b>Frankfort</b>  <b>WELL SITE RECLAMATION PLAN</b></p> <hr/> <p><b>HORIZONTAL TECHNOLOGY ENERGY</b>  <b>COMPANY, LLC</b>  <i>PO Box 23298, Pittsburgh, PA 15222</i></p> <hr/> <p>WELL NO. <u>572360</u></p> <p>QUADRANGLE <u>Sitka</u> County <u>Johnson</u></p> <p>DATE <u>9/25/2014</u> SCALE <u>1" = 400'</u></p>
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COMMONWEALTH OF KENTUCKY  
 DEPARTMENT OF MINES AND MINERALS  
 DIVISION OF OIL AND GAS  
 PO BOX 2244  
 FRANKFORT, KY 40601  
 PHONE (502) 573-0147



**PLAN TO PREVENT EROSION OF AND SEDIMENTATION FROM A WELL SITE**

Operator Name: Horizontal Technology Energy Company, LLC County: Johnson  
 Surface Owner Name: \_\_\_\_\_  
 Address and Phone No.: William and Sharon Burchett  
410 Burchett Hollow Road  
Stambaugh, KY 41257  
(606) 297-2730

Well No. 572360

A narrative description of the location of all areas to be disturbed, including the location of roads, gathering lines, the well site, tanks and other storage facilities:  
 (Must be typed)

Beginning at the intersection of US 23 and Rt. 80 near Prestonsburg. Head NW on US23 N/ US 460W, continue to follow US 23 N for 20.4 miles. Turn left onto St. HWY 1559 for 0.6 miles. Turn left to stay on St. HWY 1559 for 1.9 miles. Turn right onto St. HWY 3887 for 1.5 miles at coordinates 37.91087 / -82.80626. Turn right onto Burchett Hollow Rd. and immediately turn onto new proposed well access road to be constructed and continue uphill to location at coordinates 37.91179 / -82.80396.

Describe steps to be taken to prevent erosion of and sedimentation from the well site and all disturbed areas, including roads:  
 (Must be typed)

Ditches and culverts will be installed as needed for drainage control on the access road and drill site. Additional drainage and sediment controls will be installed as needed during construction of the well site. After construction is complete, the disturbed areas will be regarded and seeded with the mixture shown below or a pasture mix.

**Proposed Revegetation Treatment:**

Fertilizer and Soil Amendments

Seed or Trees Planted  
 (Type and Amount/Acre)

Area I	_____	25# Fawn Fescue	4# Birdsfoot Trefoil
	_____	10# Orchard Grass	3# Med. Red Clover
	_____	7# Perennial Rye	1# Red Top Grass Seed
	_____	5# Annual Rye	10# Millet
Area II	_____		
	_____		
	_____		
	_____		

Additional sheets may be attached for your convenience.  
 FORM #ED-10 (Org.2-27-97) (REV. 2-99)

OVER

Attach: Drawing(s) of the road, well location and proposed area involved, drawn over an enlarged section of the U.S.G.S. 1=24,000 topographic map (enlarged to approximately 1"= 400' ) on an 8 X 14 sheet using the applicable symbols from the following legend:

See Legend on attached Map

The undersigned hereby swears or affirms that the foregoing information and attachments in this plan to prevent erosion of and sedimentation from the well site and all disturbed areas, including roads, are true to the best of my knowledge and belief.

Dated this 2<sup>ND</sup> day of OCTOBER, 20 14

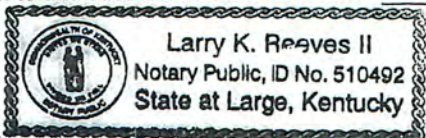
If a corporation, signatory shall be an officer of the company or provide Power of Attorney to execute documents. If a private individual, signatory shall be the same as the applicant or provide Power of Attorney to execute documents.

Conley Smith  
Signature of Operator

Regional Land Manager  
Title

Conley Smith  
Print or Type Name

Sworn to and subscribed before me this 2<sup>nd</sup> day of October, 20 14



Larry K. Reeves II  
Notary Public

My Commission Expires: 4/28/2018

**Surface Owner Agreement**

(Surface Owner Signature Below, Shall Be Notarized)

I have reviewed the application and the information submitted with this form, and agree to the well operator's operations and reclamation proposal as set forth herein. I understand that the execution of this document in no way affects compensation for surface damages as described in KRS 353.595(6) or other contractual agreement.

William H. Burchett  
Signature of severed mineral surface owner

10/1/14  
Date

William H. Burchett  
Print or type name of severed mineral surface owner

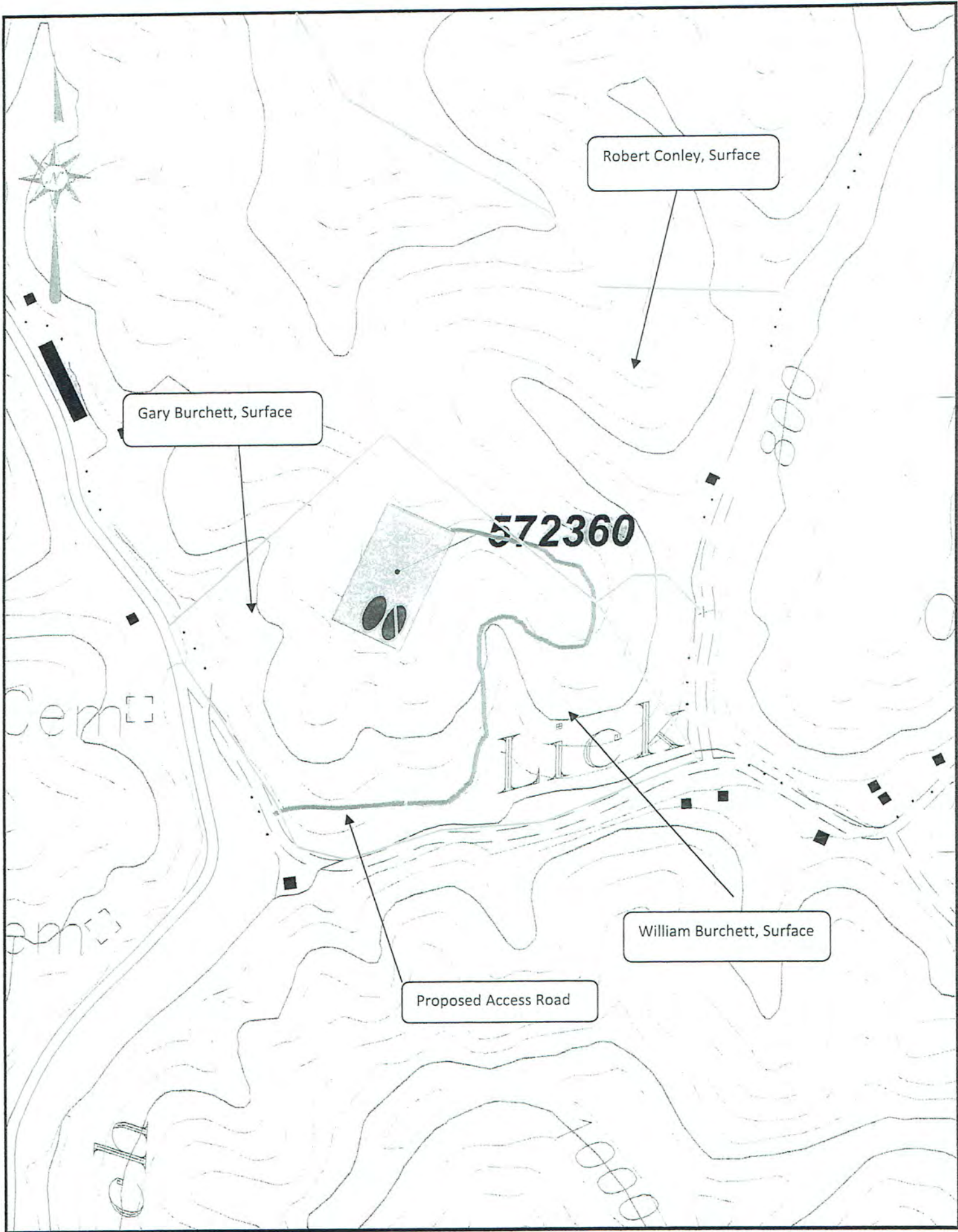
Sworn to and subscribed before me this 1<sup>ST</sup> day of October, 20 14

Larry K. Reeves II  
Notary Public

My Commission Expires: 4/28/2018







<p>Stream: </p> <p>Road: </p> <p>Existing Fence: </p> <p>Planned Fences: </p> <p>Open Ditch: </p> <p>Rock: </p> <p>North: </p> <p>Buildings: </p> <p>Water Wells: </p> <p>Tank: </p> <p>Drill Site: </p>	<p>Gathering Lines: </p> <p>Diversion: </p> <p>Spring: </p> <p>Drain Pipe: </p> <p>Waterway: </p> <p>Cross Drain: </p> <p>Artificial Filter Strip: </p> <p>Pit-Cut Walls: </p> <p>Area for Land Application of Pit Waste: </p> <p>Storage Facilities: </p>	<p><b>STATE OF KENTUCKY</b>  <b>DEPARTMENT OF MINES</b>  <b>OIL AND GAS DIVISION</b>  <b>Frankfort</b>  <b>WELL SITE RECLAMATION PLAN</b></p> <hr/> <p><b>HORIZONTAL TECHNOLOGY ENERGY</b>  <b>COMPANY, LLC</b>  <i>PO Box 23298, Pittsburgh, PA 15222</i></p> <hr/> <p>WELL NO. <u>572360</u></p> <p>QUADRANGLE <u>Sitka</u> County <u>Johnson</u></p> <p>DATE <u>9/25/2014</u> SCALE <u>1" = 400'</u></p>
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COMMONWEALTH OF KENTUCKY  
 DEPARTMENT OF MINES AND MINERALS  
 DIVISION OF OIL AND GAS  
 PO BOX 2244  
 FRANKFORT, KY 40601  
 PHONE (502) 573-0147



**PLAN TO PREVENT EROSION OF AND SEDIMENTATION FROM A WELL SITE**

Operator Name: Horizontal Technology Energy Company, LLC County: Johnson  
 Surface Owner Name: \_\_\_\_\_  
 Address and Phone No.: Robert Conley  
514 KY Rt 3387  
Stambaugh, KY 41257  
(606) 297-6155

Well No. 572360

A narrative description of the location of all areas to be disturbed, including the location of roads, gathering lines, the well site, tanks and other storage facilities:  
 (Must be typed)

Beginning at the intersection of US 23 and Rt. 80 near Prestonsburg. Head NW on US23 N/ US 460W, continue to follow US 23 N for 20.4 miles. Turn left onto St. HWY 1559 for 0.6 miles. Turn left to stay on St. HWY 1559 for 1.9 miles. Turn right onto St. HWY 3887 for 1.5 miles at coordinates 37.91087 / -82.80626. Turn right onto Burchett Hollow Rd. and immediately turn onto new proposed well access road to be constructed and continue uphill to location at coordinates 37.91179 / -82.80396.

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**Proposed Revegetation Treatment:**

Fertilizer and Soil Amendments	Seed or Trees Planted (Type and Amount/Acre)
Area I _____	25# Fawn Fescue      4# Birdsfoot Trefoil
_____	10# Orchard Grass    3# Med. Red Clover
_____	7# Perennial Rye      1# Red Top Grass Seed
_____	5# Annual Rye        10# Millet
Area II _____	_____
_____	_____
_____	_____

Additional sheets may be attached for your convenience.  
 FORM #ED-10 (Org.2-27-97) (REV. 2-99)

OVER

Attach: Drawing(s) of the road, well location and proposed area involved, drawn over an enlarged section of the U.S.G.S. 1=24,000 topographic map (enlarged to approximately 1"= 400' ) on an 8 X 14 sheet using the applicable symbols from the following legend:

See Legend on attached Map

The undersigned hereby swears or affirms that the foregoing information and attachments in this plan to prevent erosion of and sedimentation from the well site and all disturbed areas, including roads, are true to the best of my knowledge and belief.

Dated this 2<sup>ND</sup> day of OCTOBER, 20 14

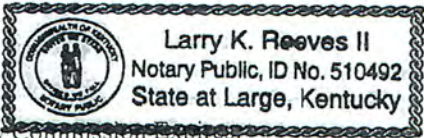
If a corporation, signatory shall be an officer of the company or provide Power of Attorney to execute documents. If a private individual, signatory shall be the same as the applicant or provide Power of Attorney to execute documents.

Conley Smith  
Signature of Operator

Regional Land Manager  
Title

Conley Smith  
Print or Type Name

Sworn to and subscribed before me this 2<sup>nd</sup> day of October, 20 14



Larry K. Reeves II  
Notary Public

My Commission Expires: 4/28/2018

**Surface Owner Agreement**

(Surface Owner Signature Below, Shall Be Notarized)

I have reviewed the application and the information submitted with this form, and agree to the well operator's operations and reclamation proposal as set forth herein. I understand that the execution of this document in no way affects compensation for surface damages as described in KRS 353.595(6) or other contractual agreement.

Robert K. Conley  
Signature of severed mineral surface owner

10/8/14  
Date

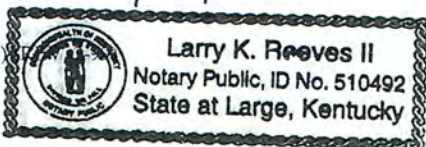
Robert K. Conley  
Print or type name of severed mineral surface owner

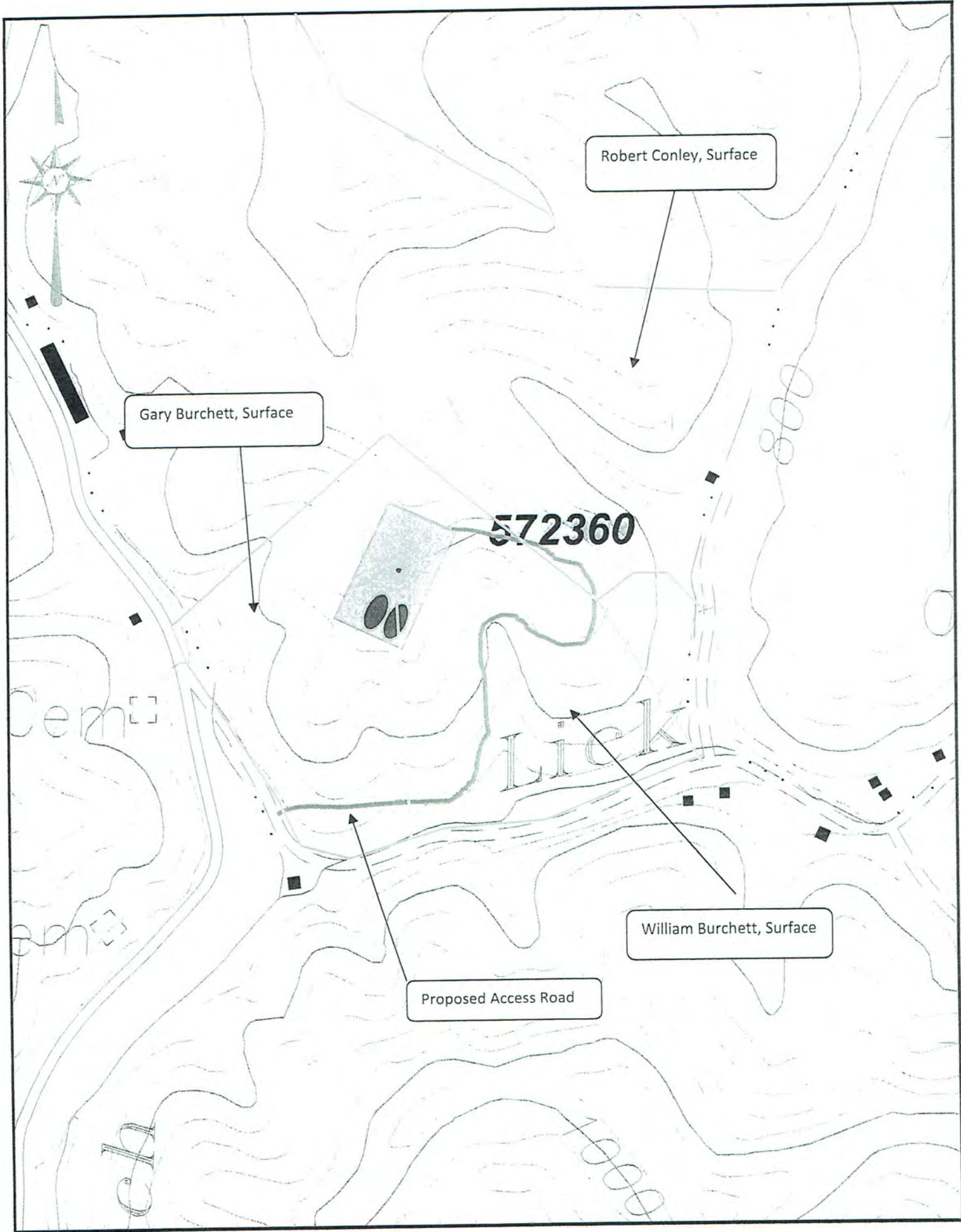
Sworn to and subscribed before me this 8<sup>th</sup> day of October, 20 14

Larry K. Reeves II  
Notary Public

My Commission Expires: 4/28/2018

Form ED - 10 (Org. 2-27-97)





Stream:	Gathering Lines:
Road:	Diversion:
Existing Fence:	Spring:
Planned Fences:	Drain Pipe:
Open Ditch:	Waterway:
Rock:	Cross Drain:
North:	Artificial Filter Strip:
Buildings:	Pit-Cut Walls:
Water Wells:	Area for Land Application of Pit Waste:
Tank:	Storage Facilities:
Drill Site:	

**STATE OF KENTUCKY**  
**DEPARTMENT OF MINES**  
**OIL AND GAS DIVISION**  
 Frankfort  
**WELL SITE RECLAMATION PLAN**

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**HORIZONTAL TECHNOLOGY ENERGY COMPANY, LLC**  
*PO Box 23298, Pittsburgh, PA 15222*

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WELL NO. 572360  
 QUADRANGLE Sitka County Johnson  
 DATE 9/25/2014 SCALE 1" = 400'

COMMONWEALTH OF KENTUCKY  
 DEPARTMENT OF MINES AND MINERALS  
 DIVISION OF OIL AND GAS  
 P. O. BOX 2244  
 FRANKFORT, KY 40601  
 PHONE (502) 573-0147



Casing and Cementing  
 Plan as Required for  
 Permit per 805 KAR 1:130  
 and 805 KAR 1:140

Horizontal Technology Energy Co., LLC  
 (MUST BE IDENTICAL TO NAME ON BOND)

MINERAL OWNER (LESSOR) Horizontal Technology Energy Co., LLC

COUNTY Johnson WELL NUMBER 572360 ELEVATION 929.28'

CARTER  FNL  FEL

COORDINATES 1824' FSL 1161' FWL SEC 4 LETTER Q NUMBER 81

**CASING INFORMATION**

TYPE	OD SIZE	WT/FT GRADE NEW OR USED	DEPTH
CONDUCTOR	26"	77#, A500, New	40' MD
SURFACE/FRESH WATER	13-3/8"	54.5#, J-55, New	1020' MD
INTERMEDIATE	9-5/8"	40#, P-110, New	6258' MD
PRODUCTION	5-1/2"	23# & P-110 New	17,954' MD 11,200' TVD

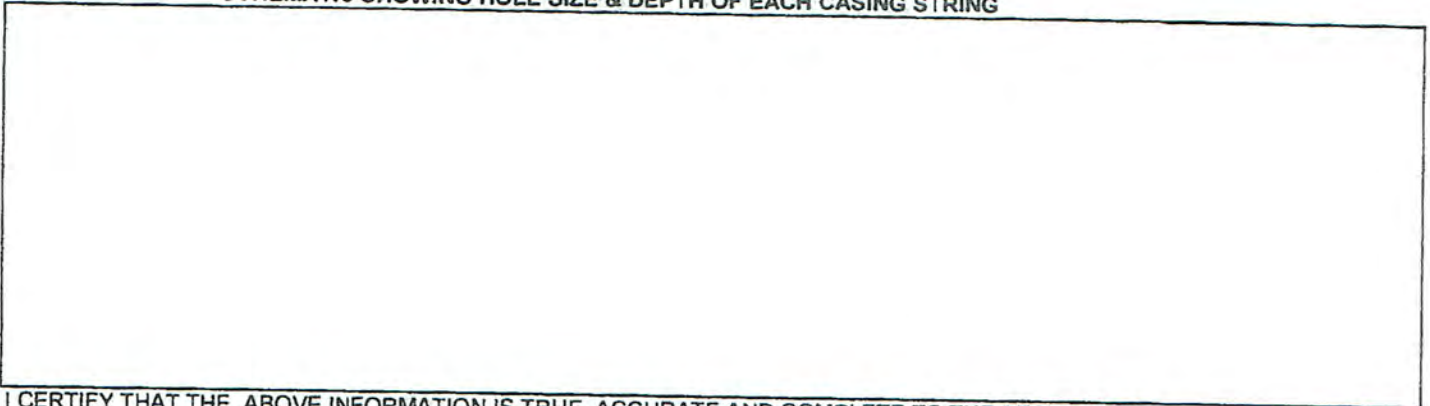
**CEMENT INFORMATION**

CASING	HOLE SIZE	SACKS	CLASS	WEIGHT	ADDITIVES
26"	30"	Cement to Surface	TYPE 1	15.6	
13-3/8"	17-1/2"	Cement to Surface	TYPE 1	15.6	2% CaCl 2, 1/4# Flake
9-5/8"	12-3/8"	Cement to Surface	TYPE 1	13.2/14.2	2% CaCl 2, 1/4# Flake
5-1/2"	8-1/2"	1000	TYPE 1	14.2/15.2	

**BLOW-OUT PREVENTOR INFORMATION**

BRAND	TYPE	WORKING PRESSURE	TEST PRESSURE
Cameron	Annular & Dual Rams	5000 psi	3500 psi

**SCHEMATIC SHOWING HOLE SIZE & DEPTH OF EACH CASING STRING**



I CERTIFY THAT THE ABOVE INFORMATION IS TRUE, ACCURATE AND COMPLETE TO THE BEST OF MY KNOWLEDGE

OPERATOR  DATE SIGNED 2/5/15

The Director of the Division of Oil and Gas, Department of Mines and Minerals, hereby approve of this Casing and cementing Plan for the above-referenced location.

DIRECTOR \_\_\_\_\_ DATE \_\_\_\_\_

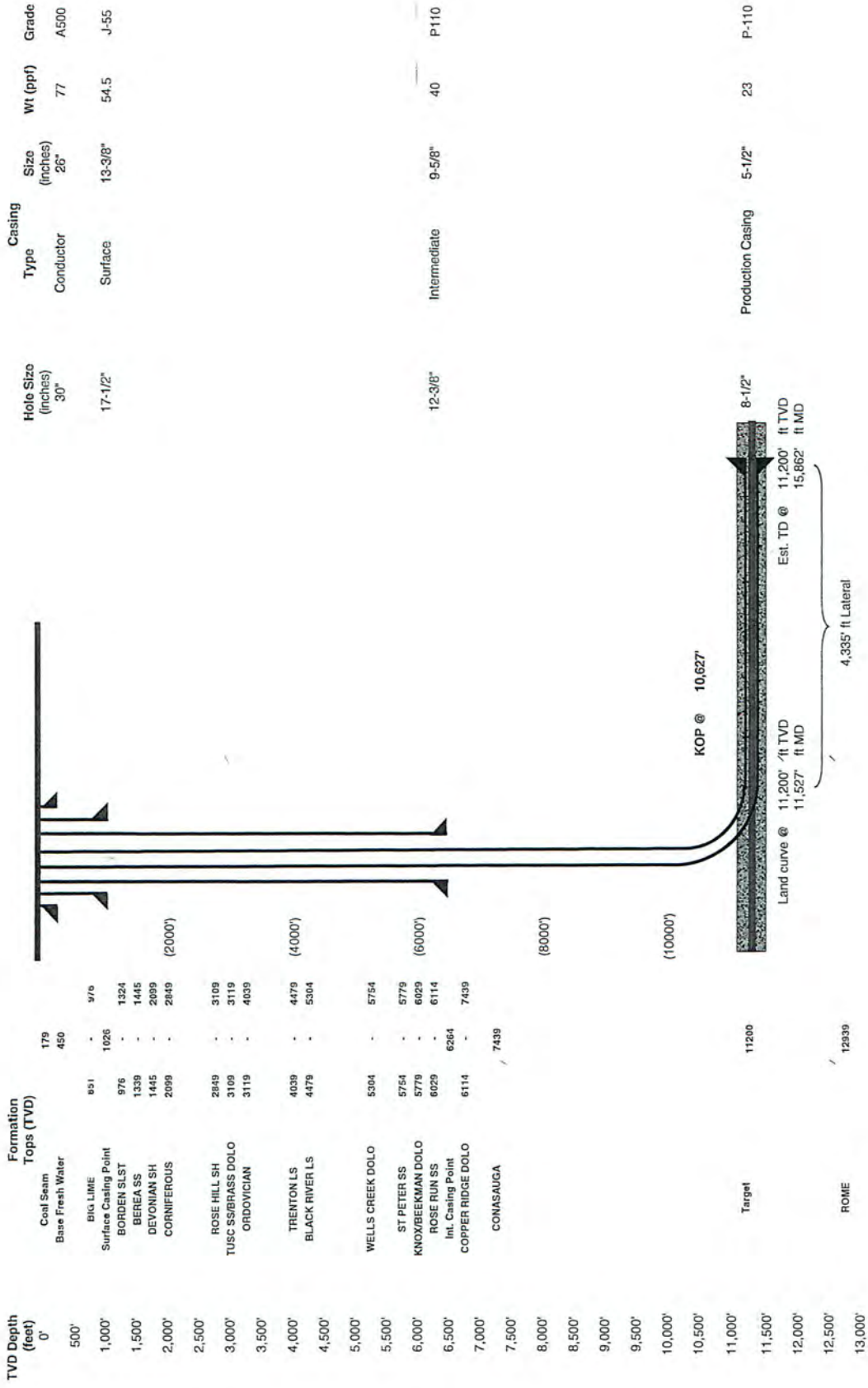


**Well 572360**

**Sitka Quad  
Johnson**

**Kentucky**

Azimuth 155.5  
Vertical Section 4935



Well Schematic  
Horizontal Technology Energy Company

Well Name 572960  
County Johnson  
State KY

Elevation KB: 999  
Target 180  
Prospect  
Azimuth 165.5  
Vertical Section 4035

