



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

February 28, 2014

WELL WORK PERMIT

Horizontal 6A Well

This permit, API Well Number: 47-9502135, issued to JAY-BEE OIL & GAS, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: SNEEZY 10
Farm Name: TESLOVICH, BRIAN
API Well Number: 47-9502135
Permit Type: Horizontal 6A Well
Date Issued: 02/28/2014

Promoting a healthy environment.


02/28/2014

PERMIT CONDITIONS

West Virginia Code § 22-6A-8(d) allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. This proposed activity may require permit coverage from the United States Army Corps of Engineers (USACOE). Through this permit, you are hereby being advised to consult with USACOE regarding this proposed activity.
2. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code § 22-6A-5a (12), which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
3. When compacting fills, each lift before compaction shall not be more than 12 inches in height, and the moisture content of the fill material shall be within limits as determined by the Standard Proctor Density test of the actual soils used in specific engineered fill, ASTM D698, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort, to achieve 95 % compaction of the optimum density. Each lift shall be tested for compaction, with a minimum of two tests per lift per acre of fill. All test results shall be maintained on site and available for review.
4. Operator shall install signage per § 22-6A-8g (6) (B) at all source water locations included in their approved water management plan within 24 hours of water management plan activation.
5. Oil and gas water supply wells will be registered with the Office of Oil and Gas and all such wells will be constructed and plugged in accordance with the standards of the Bureau for Public Health set forth in its Legislative rule entitled *Water Well Regulations*, 64 C.S.R. 19. Operator is to contact the Bureau of Public Health regarding permit requirements. In lieu of plugging, the operator may transfer the well to the surface owner upon agreement of the parties. All drinking water wells within fifteen hundred feet of the water supply well shall be flow tested by the operator upon request of the drinking well owner prior to operating the water supply well.
6. Pursuant to the requirements pertaining to the sampling of domestic water supply wells/springs the operator shall, no later than thirty (30) days after receipt of analytical data provide a written copy to the Chief and any of the users who may have requested such analyses.
7. If any explosion or other accident causing loss of life or serious personal injury occurs in or about a well or well work on a well, the well operator or its contractor shall give notice, stating the particulars of the explosion or accident, to the oil and gas inspector and the Chief, within 24 hours of said accident.
8. During the casing and cementing process, in the event cement does not return to the surface, the oil and gas inspector shall be notified within 24 hours.




| | | |
|---|--|---|
|  | Applicant: JAY BEE OIL & GAS Reference ID: Sneezy 10 (10/17/2013) Status: New | Type: Horizontal 6A Well Permit ID: New/Pending Printed: Feb. 14, 2014 3:16 PM |
|---|--|---|

WW-6B: General and Location Information

| | | |
|-------------------------|---|---------------------------------------|
| API Number: | <input type="text" value="47-095-02135"/> | (47-____-____) |
| Operator's Well Number: | <input type="text" value="Sneezy 10"/> | |
| Filing Fee: | <input type="radio"/> First Well on Pad <input checked="" type="radio"/> Subsequent Well on Pad | <input type="text" value="5,150.00"/> |
| Well Pad Name: | <input type="text" value="Sneezy (D415) Pad"/> | |
| Surface Owner: | <input type="text" value="Brian Teslovich"/> | |
| Public Road Access: | <input type="text" value="McIntyre Fork"/> | |

Please attach each of the following as separate documents:

- Well Plat
- Wellbore Schematic

| | | | |
|--------------------------------------|---|---|---|
| County: | <input type="text" value="Tyler-xx"/> | District: | <input type="text" value="McElroy-xx"/> |
| Quadrangle: | <input type="text" value="CENTER POINT"/> | | |
| Top Hole(UTM NAD83): | | | |
| Easting: | <input type="text" value="528361.0"/> | Northing: | <input type="text" value="4364609.3"/> |
| Zone: | <input type="text" value="17"/> |  | |
| Proposed Landing Point(UTM): | | | |
| Easting: | <input type="text" value="528216.5"/> | Northing: | <input type="text" value="4364472.6"/> |
| Zone: | <input type="text" value="17"/> |  | |
| Proposed Bottom Hole(UTM): | | | |
| Easting: | <input type="text" value="528508.8"/> | Northing: | <input type="text" value="4363482.5"/> |
| Zone: | <input type="text" value="17"/> |  | |
| Elevations (feet) -- Current Ground: | <input type="text" value="1356"/> | Proposed Post-Construction: | <input type="text" value="1346"/> |

| | |
|--|--|
| Well Type: | <input checked="" type="radio"/> Gas <input type="radio"/> Oil |
| | <input type="radio"/> Underground Storage <input type="radio"/> Other <input type="text"/> |
| Will well be drilled more than 100 feet into the Onondaga Group? | <input type="radio"/> Yes <input checked="" type="radio"/> No |
| Depth Type: | <input checked="" type="radio"/> Shallow <input type="radio"/> Deep |
| Existing Pad? | <input type="radio"/> Yes <input checked="" type="radio"/> No |

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WW-6B: Target Formations

Complete the following table.

| Target Formation | Depth-Top (ft) | Anticipated Thickness (ft) | Associated Pressure (psi) |
|------------------|----------------|----------------------------|---------------------------|
| Marcellus | 7500 | 40 | 3500 |

WW-6B: Depth Specifics

Proposed Post-Construction Elevation:

Proposed Total Vertical Depth: (ft.)

Formation at Total Vertical Depth:

Proposed Total Measured Depth: (ft.)

Proposed Total Horizontal Leg Length: (ft.)

Method to Determine Fresh Water Depth:

Approximate Fresh Water Strata Depths

(ft.)

Approximate Coal Seam Depths

(ft.) Coal Seam Name, if known:

Approximate Depth to Possible Void(coal mine, karst, other)

(ft.) Not Anticipated:

Approximate Saltwater Depths

(ft.)

WW-6B: Well Work and Mine Details

Is proposed well location directly overlying or tributary to an active mine?

Yes No

If Yes, indicate name, depth, coal seam and owner of mine:

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Coal Seam: Depth:
 Mine Name: Owner:

Describe proposed well work, including the drilling and plugging back of any pilot hole.

Drill and Stimulate a new Horizontal Well. Using a top hole rig, we will drill top hole to kick off point by drilling the conductor, freshwater and intermediate holes. Using a directional rig we will drill the production holes.

Describe fracturing/stimulating methods in detail, including anticipated max pressure and anticipated max rate.

300-350' per stage 8,500bbls of water, 150,000-400,000lbs of sand, friction reducer, 1# per gallon, scale inhibitor and bacteria prevention 1/4# per gallon 2000 gallons 15% vol acid.

Total area to be disturbed, including roads, stockpile area, pits, etc, (acres):

Area to be disturbed for well pad only, less access road (acres):

WW-6B: FRAC Additives

Please select the chemical names of each additive used in your fracturing compounds.

You may opt to provide these compounds listed in the form of an attachment. See Attached.

| Chemical (CAS) Number | Name/Description |
|---|--|
| <input type="text" value="07732-18-5"/> | <input type="text" value="Water"/> |
| <input type="text" value="00107-21-1"/> | <input type="text" value="Ethylene Glycol"/> |
| <input type="text" value="00111-30-8"/> | <input type="text" value="Glutaraldehyde"/> |
| <input type="text" value="00064-17-5"/> | <input type="text" value="Ethyl Alcohol"/> |
| <input type="text" value="07647-01-0"/> | <input type="text" value="Hydrochloric Acid"/> |

Please list any and all chemicals and compounds used not found in list above.

| CAS Number | Chemical/Compound Name |
|------------|------------------------|
| | |

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| | |
|------------|--|
| 14808-60-7 | Sand |
| 64742-47-8 | Distillates (petroleum),hydrotreated light(Friction Reducer) |
| 10043-52-4 | Calcium chloride |
| 7173-51-5 | Didecyldimethylammonium chloride |
| 68424-85-1 | Benzalkonium chloride |

WW-6B: Casing and Cementing

Complete the following table, adding as many rows of each **Type** as needed.

| Type | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | Footage: For Drilling | Intervals: Left in Well |
|------------------------|-----------|---------------------|---------------------|------------------------|-------------------------------------|-------------------------|
| Conductor | 16 | New | J55 | 40 | 40 | 40 |
| Wellbore Diameter (in) | | Wall Thickness (in) | | Burst Pressure (psi) | | |
| 17.5 | | .495 | | 3000 | | |
| Cement Type | | Yield (cu. ft./sk) | Fillup - Cubic Feet | Top of Cement | Circulated to Surface? | |
| Class A Cement | | 1.19 | 98.3 | 0 | <input checked="" type="checkbox"/> | |
| Type | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | Footage: For Drilling | Intervals: Left in Well |
| Fresh Water | 11 3/4 | New | J55 | 32 | 506 | 506 |
| Wellbore Diameter (in) | | Wall Thickness (in) | | Burst Pressure (psi) | | |
| 15 | | .333 | | 1500 | | |
| Cement Type | | Yield (cu. ft./sk) | Fillup - Cubic Feet | Top of Cement | Circulated to Surface? | |
| Class A Cement | | 1.26 | 239.93 | 0 | <input checked="" type="checkbox"/> | |
| Type | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | Footage: For Drilling | Intervals: Left in Well |
| Intermediate | 8 5/8 | New | J55 | 24 | 2000 | 2000 |
| Wellbore Diameter (in) | | Wall Thickness (in) | | Burst Pressure (psi) | | |
| 11 | | .264 | | 2500 | | |
| Cement Type | | Yield (cu. ft./sk) | Fillup - Cubic Feet | Top of Cement | Circulated to Surface? | |
| Class A Cement | | 1.45 | 508.43 | 0 | <input checked="" type="checkbox"/> | |
| Type | Size (in) | New or Used | Grade | Weight per ft. (lb/ft) | Footage: For Drilling | Intervals: Left in Well |
| Production | 5 1/2 | New | P110 | 17 | 12200 | 12200 |
| Wellbore Diameter (in) | | Wall Thickness (in) | | Burst Pressure (psi) | | |
| 7 7/8 | | .304 | | 15000 | | |
| Cement Type | | Yield (cu. ft./sk) | Fillup - Cubic Feet | Top of Cement | Circulated to Surface? | |
| Type 1 Cement | | 1.34 | 173.25 | 1000 | <input type="checkbox"/> | |

WW-6B: Centralizers, Cement, Borehole

Describe proposed borehole conditioning procedures.

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Air Hole: 15" hole for the 11 3/4 fresh water case - Circulate until clean with air. If soaping, slug then dry.
 Air Hole: 11" hole for the 8 5/8 intermediate base - Circulate until clean with air. If soaping, slug then dry.
 7 7/8" hole for the 5 1/2 production case - Circulate with mud and sweeps for two times bottoms up.
 If needed weight up mud until no cuttings retrieved, then circulate with mud and sweeps for two times bottoms up.

Centralizers Type and Placement.

Vertical - Every 500' Bow Centralizer, and 50' from top of ground. Horizontal every 42' Spiral Centralizer, Curve - Every 84' Spiral Centralizer.

Cement Additives.

Superior Well Services - 15" hole for the 11 3/4 fresh water case, Class A Cement, 2% Calcium Chloride, 1/4# flake.
 Superior Well Services - 11" hole for the 8 5/8 intermediate base, Class A Cement, 2% Calcium Chloride
 Baker Hughes - 7 7/8" hole for the 5 1/2 production case, Type 1 Cement, Fly Ash, Barite, Finetol 300L, R-3 Celio Flake, Sugar, CD-32, FL-62

WW-6B: Packers

Will Packers be Used? Yes No

If Yes, complete the following:

| Kind | Sizes | Depths Set |
|------|-------|------------|
| | | |

WW-9: Fluids, Cuttings Disposal and Reclamation Plan

State: West Virginia
 District: 05

County: Tyler-xx
 Quadrangle: CENTER POINT

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Removed Offsite (name/permit number?)

Other: (please explain)

Proposed Revegetation Treatment:

Acres Disturbed: Prevegetation pH:

Lime Tons/acre to correct to pH:

Fertilizer (10-20-20 or equivalent): lbs/acre

Mulch lbs/acre

Comments:

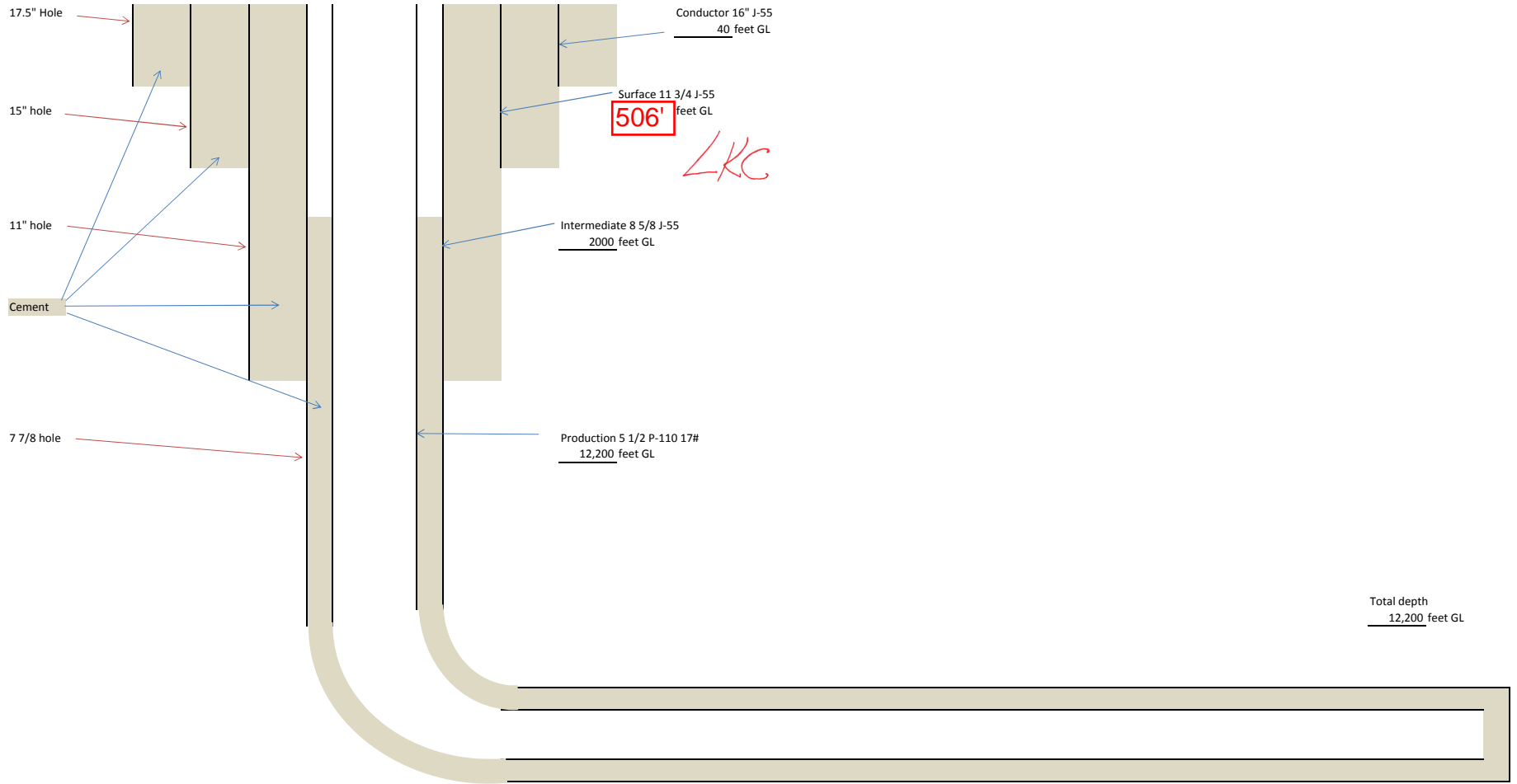
Attach a Reclamation Plan/Drawing

| Seed Mixtures | | |
|---------------|---|---------------------------------|
| Area Type | Seed Type | lbs/acre |
| Permanent ▾ | <input type="text" value="KY-31"/> | <input type="text" value="20"/> |
| Permanent ▾ | <input type="text" value="Creeping Red Fescue"/> | <input type="text" value="30"/> |
| Permanent ▾ | <input type="text" value="Lathco Flat Pea/Perennial Ryegrass"/> | <input type="text" value="30"/> |
| Temporary ▾ | <input type="text" value="Annual Ryegrass"/> | <input type="text" value="40"/> |

Jay-Bee Oil & Gas Inc.
Well Name Sneezy 10
GL Elevation 1346'
KB 14 feet

Date 11/22/2013
District McElroy
County Tyler
State West Virginia

Input by: Shane Dowell



JAY –BEE OIL & GAS INC
3570 SHIELDS HILL RD
CAIRO, WV 26337
OFFICE (304) 628-3111
FAX (304) 628-3107

WELL SITE DRILLING PROCEDURES AND SITE SAFETY PLAN

Per 35CSR8/§22-6A

(Any changes or modifications to previously approved plans must be approved by the West Virginia Department of Environmental Protection - Office of Oil and Gas)

A copy of this plan will be provided to the local emergency planning committee or county emergency services offices at least 7 days prior to land disturbance from well work.

SITING STANDARDS

| | |
|---|--|
| Well Name | Sneezy 10 |
| Well Pad | Sneezy (D415) Pad |
| Latitude/Longitude | NAD83- Lat. 39.430472 Long. -80.670647 |
| Location of Access Road | From WV 23 (Mile Point 12.9), .4 miles east on Broad Run, 1.9 east miles north on McIntyre Fork Rd. |
| Detail of Actual Well Work | Drill and Stimulate a New Horizontal Well. |
| Detail of Completion and Production Activities | <u>Fracturing/ Stimulating Methods</u> 300-350' per stage 8,500bbls of water, 150,000 – 400,000lbs of sand, friction reducer, 1# per gallon, scale inhibitor, and bacteria prevention ¼# per gallon 2000 gallons 15% vol acid. |
| Directions to Well | From WV 18 and WV23 intersection, take WV 23 east for 12.9 miles. Turn left onto Broad Run Rd, and follow east for .4 miles. Turn left onto McIntyre Fork and follow north for 1.9 miles. Lease road is on right. |
| Prevailing Wind Direction | South/ South East |

[Handwritten signature]
11-15-13



Water Management Plan: Secondary Water Sources



WMP-01709

API/ID Number: 047-095-02135

Operator:

Jay-Bee Oil & Gas, Inc.

Sneezy 10

Important:

For each proposed secondary water source identified in your water management plan (i.e., groundwater well, lake/reservoir, recycled frac water, multi-site impoundment, out-of-state source), DEP makes no estimation of the availability of water. These sources may prove to be unsuitable water supplies. Please review the following notes:

- For groundwater supply wells, DEP recommends that the operator contact the local health department prior to drilling any new well; and reminds the operator that all drinking water wells within 1,500 feet of a water supply well shall be flow- and quality-tested by the operator at the request of the drinking well owner prior to operation of the water supply well.
- For each proposed multi-site impoundment water source identified in your water management plan (if applicable), DEP will review the withdrawal limits established in the referenced Water Management Plan for current suitability and provide to the operator these limits for each identified intake. Note that withdrawal limits may be modified as necessary based on changing demands upon that water supply.

Multi-site impoundment

| | | | | | | |
|---------------|---------------------------|-------------|---|------------|--------------------|-----------|
| Source ID: | 31662 | Source Name | McIntyre Centralized Freshwater Impoundment | | Source start date: | 4/1/2014 |
| | | | | | Source end date: | 4/1/2015 |
| | Source Lat: | 39.435889 | Source Long: | -80.667583 | County | Tyler |
| | Max. Daily Purchase (gal) | | Total Volume from Source (gal): | | | 7,854,000 |
| DEP Comments: | 095-FWC-00006 | | | | | |

The intake identified above has been defined in a previous water management plan. The thresholds established in that plan govern this water management plan unless otherwise noted.

Reference: WMP-573

APPROVED DEC 18 2013

SNEEZY (D415 LEASE) WELLS 1, 10 & 11

Gas Well



15-20% GRADE±
380' ± @
0-5% GRADE±
260' ± @
320' ± @
5-10% GRADE±

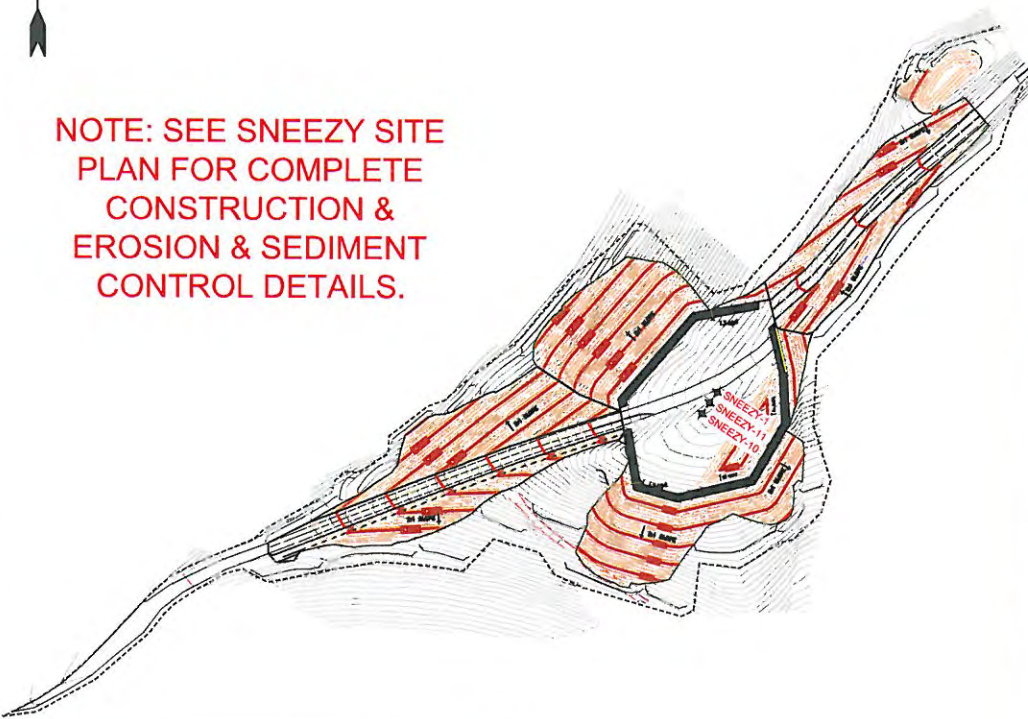


NOTE: SEE SNEEZY SITE PLAN FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.

Detail Sketch for Proposed SNEEZY 1, 10 & 11 Wells



NOTE: SEE SNEEZY SITE PLAN FOR COMPLETE CONSTRUCTION & EROSION & SEDIMENT CONTROL DETAILS.



02/28/2014

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING

SURVEYORS PROJECT MGMT. **SLS** ENGINEERS ENVIRONMENTAL

228 West Main St.
P.O. Box 150
Circleville, WV 26038
HOUSTY INTEGRITY QUALITY

56055 Orlin Bottom Road
Shady Side, OH 43042
(740) 671-0911

Not To Scale

SCALE: 1"=500'



| | | | |
|--------------------|------------------|------------------|----------------------------------|
| DRAWN BY K.D.W. | FILE NO. 8030 | DATE 10-14-13 | CADD FILE: 8030REC-SNEEZY.dwg |
|--------------------|------------------|------------------|----------------------------------|

TOPO SECTION OF CENTER POINT 7.5'
USGS TOPO QUADRANGLE

