



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS MANAGEMENT

| DEP USE ONLY                |           |
|-----------------------------|-----------|
| Auth. No.<br><b>1296553</b> | APS No. # |
| Site No.                    | PF No.    |
| Client No.                  | SF No.    |

NOV 20 2019

## APPLICATION FOR INACTIVE WELL STATUS

DEPSWDO

|                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|--------------------------------|
| Well Operator<br><b>Oil &amp; Gas</b><br>Chevron Appalachia, LLC                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DEP Client ID No.<br>279986                                                                            |                                                                                                                                                 | Well Permit or Registration No.<br>37-051-24669 |                                |
| Address<br>700 Cherrington Parkway                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        | Well Farm Name<br>Kovach B                                                                                                                      | Well No.<br>M08H                                | Serial No.<br>MCLS 37-051-0015 |
| City<br>Coraopolis                                                                                                                                                                                                                   | State<br>PA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Zip Code<br>15108                                                                                      | County<br>Fayette                                                                                                                               | Municipality<br>German Twp.                     |                                |
| Telephone No.<br>412-865-3489                                                                                                                                                                                                        | Fax No.<br>412-865-2403                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Bond Instrument No.<br>019029612                                                                       | Is this an application for annual extension of inactive status? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No             |                                                 |                                |
|                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        | Check here if this application is being submitted for conditional inactive status in association with longwall mining: <input type="checkbox"/> |                                                 |                                |
| <b>Condition of the Well</b>                                                                                                                                                                                                         | Describe in detail how the condition of the well satisfies the criteria for approval of inactive status. See 25 Pa. Code §§ 78/78a.102(i), (2)(i) or (ii) and (3). Use additional sheets if necessary. If available, attach well records, driller's logs, and other information describing well casing, cement, equipment, and any other pertinent information. Note that if this application is being submitted in conformance with DEP Technical Guidance Document 800-0810-004 <i>Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells</i> , the Well Record/Completion Report may be referenced for all well construction information, and all tubing and annular pressures should be at 0 prior to adjacent longwall mining encroaching within 1,500 feet of the well location. Finally, all annuli should be open to the atmosphere and the inactivation procedure may be referenced under the section titled "Other information about the well's condition." |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| Well Type: <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Combination Oil & Gas <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| Casing Diameters:<br>30"                                                                                                                                                                                                             | Casing Lengths:<br>64'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Type and amount of cement (sacks) used for surface casing:<br>1118 sacks of Class A                    |                                                                                                                                                 |                                                 |                                |
| 20"                                                                                                                                                                                                                                  | 628'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Tubing or Production Casing Pressure (current): N/A                                                    | If an oil well, state the depth to fluid in the surface casing: N/A                                                                             |                                                 |                                |
| 13-3/8"                                                                                                                                                                                                                              | 726'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Annulus Pressure (current - between tubing or production casing and surface casing):<br>N/A            |                                                                                                                                                 |                                                 |                                |
| 9-5/8"                                                                                                                                                                                                                               | 2590'                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| Tubing or production casing diameter: n/a                                                                                                                                                                                            | Tubing or production casing length: n/a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Are all annuli open to atmosphere? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                                                                                                                                 |                                                 |                                |
| Other information about the well's condition:<br>Well was drilled to a depth of 6,000'. No tubing or production casing present.                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| <b>Future Use of the Well</b>                                                                                                                                                                                                        | Describe a viable plan in accordance with 25 Pa. Code §78/78a.102(4) explaining the intended use of the well within a reasonable time. Provide the information requested below and any other information necessary for DEP to make a determination on inactive status for this well. Note that if this application is being submitted in conformance with DEP Technical Guidance Document 800-0810-004 <i>Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells</i> , the following text may be entered under the section regarding the future plan for the well: "Return well to production subsequent to final panel extraction when mining is at least 1,500 feet beyond well in chain pillar, as per re-entry procedure and TGD."                                                                                                                                                                                                                                |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| Provide certification that one of the following applies (check one):<br><input checked="" type="checkbox"/> Significant reserves remain in place and I plan to return the well to production.                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| Provide estimate of reserves: MMcf: Bbls:                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| The well will be used for: <input type="checkbox"/> Disposal <input type="checkbox"/> Storage <input type="checkbox"/> Observation <input type="checkbox"/> Injection - Recovery <input type="checkbox"/> Other (describe)           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |
| This well will be returned to use in: Month: 10 Year: 2024                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                        |                                                                                                                                                 |                                                 |                                |

State your plan for future use of the well.

Drilling activities are planned to return to this well in October 2024. Completions activities will follow shortly after allowing for production of the well later in the year.

### Conditional Inactive Status Checklist

For unconventional wells drilled in anticipated chain pillar locations that are being temporarily inactivated to accommodate planned, adjacent longwall mining, please provide the items included in the checklist below in addition to this application. More specific information about these items is detailed in DEP Technical Guidance Document 800-0810-004 *Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells*.

Please include the following items with the inactive status application:

- ☐ Temporary Well Inactivation Procedure   
 ☐ Temporary Inactivation Well Schematic   
 ☐ General Specifications for Cements/Gels  
☐ Current Well Record and Completion Report   
 ☐ Well Location Plat   
 ☐ Electrical/Mechanical Well Logs  
☐ Graphical Production History Summary   
 ☐ Well Re-entry Procedure   
 ☐ Post-mining Well Long-term Monitoring Procedure

Provide additional details, if necessary.

### Signature of Applicant (Well Operator)

Signature  Date 11/7/2019  
 Print or type signer's name and title:  
Branden Weimer / Senior Permitting Advisor

### DEP USE

☐ Approved    ☒ Denied    Date 12/31/19  
 by (DEP Manager): 

Form



**pennsylvania**  
DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF OIL AND GAS MANAGEMENT

**Well Record**  
**(Unconventional Operators Only)**

| DEP USE ONLY        |                 |
|---------------------|-----------------|
| Site ID             | Client Id       |
| Primary Facility Id | Sub Facility Id |

**WELL INFORMATION**

|                                          |                               |                             |                                                    |                                           |                             |                |
|------------------------------------------|-------------------------------|-----------------------------|----------------------------------------------------|-------------------------------------------|-----------------------------|----------------|
| Well Operator<br>Chevron Appalachia, LLC |                               | DEP ID#<br>279986           | US Well No. (API No.)<br><b>37-051-24669-00-00</b> |                                           | Farm Name<br>Kovach B       | Well #<br>M08H |
| Address<br>700 Cherrington Parkway       |                               | Latitude (DD)<br>39. 919197 | NAD 83                                             | Project Number                            | Serial #<br>MCLS 37-051-005 |                |
| City<br>Coraopolis                       | State<br>PA                   | Zip<br>15108                | Municipality<br>German Twp                         |                                           | County<br>Fayette           |                |
| Phone<br>412-865-3489                    | Email<br>balambie@chevron.com | Borrow Pit                  |                                                    | USGS 7.5 min. quadrangle map<br>New Salem | Section<br>4                |                |

Check the appropriate Submission: ☒ Original Well Record ☐ Amended Well Record

|                             |                                                                                                                                                                 |                                            |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Well Type                   | <input checked="" type="checkbox"/> Gas                                                                                                                         | Wellbore Conditioning:<br><br>SEE ATTACHED |
| Well Orientation            | <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Deviated from Vertical (Top & Side views & Deviation Survey must be attached)             |                                            |
| Drill Method(s)             | <input checked="" type="checkbox"/> Rotary – Air 1278' <input type="checkbox"/> Rotary – Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other |                                            |
| Drilling Started 10/31/2018 | Surface Elev. 1278 ft. GW Depth 628 ft.                                                                                                                         |                                            |
| Drilling Complete           | True Vertical Depth 6514 ft. Depth of DFGW 724 ft.                                                                                                              |                                            |
| Date Well Completed         | Total Measured Depth 6523 ft. DFGW decided by: 5                                                                                                                |                                            |

**CEMENT**

|                                                                                                                |                                                                                                 |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Cement returned on surface casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No         | If No, provide depth to top of cement and method used to determine:                             |
| Cement returned on coal protective casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | If No, provide depth to top of cement and method used to determine: <input type="checkbox"/> NA |
| Cement returned on intermediate casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    | If No, provide depth to top of cement and method used to determine: <input type="checkbox"/> NA |

| Casing String                           | Type/Class of Cement<br>(Lead/Tail) | Slurry<br>Temp F° | Amount of Cement (sks) (Lead/Tail/Total) | WOC<br>hrs | WT PPG | Yld #/sk | Gas Migration<br>Controls Used                                                                                             |
|-----------------------------------------|-------------------------------------|-------------------|------------------------------------------|------------|--------|----------|----------------------------------------------------------------------------------------------------------------------------|
| Conductor                               | / Class A                           | 60 °              | / /                                      | 8          |        |          | What controls were used if any<br>(additives/ hardware. Specify type and<br>depth applicable).<br><br>Fluid Loss Additives |
| Surface                                 | / Class A                           | 60 °              | / 1118 / 1118                            | 8          | 15.6   | 1.19     |                                                                                                                            |
| Coal Protective                         | / Class A                           | 60 °              | / 187 / 187                              | 8          | 15.6   | 1.19     |                                                                                                                            |
| Grout Job #1                            | / Class A                           | 60 °              | / 681 / 681                              | 8          | 15.6   | 1.20     |                                                                                                                            |
| Grout Job #2                            | / Class A                           | 60 °              | / 206 / 206                              | 8          | 15.6   | 1.20     |                                                                                                                            |
| Intermediate                            | / Class A                           | 60 °              | / 964 / 964                              | 8          | 15.6   | 1.19     |                                                                                                                            |
| If additional strings<br>attach form(s) |                                     |                   | Total 3156                               |            |        |          |                                                                                                                            |

**CASING AND TUBING**

| Hole<br>Size | Pipe<br>Size | Wt.<br>#/ft. | Grade Casing<br>/ Tubing Type | Thread /<br>Weld –<br>New/ Used | Amount in<br>Well (ft.) | CO | R | Hardware - Baskets / Packer / Centralizers<br>(Total/String)<br>Type Size Depth | Date Run   |
|--------------|--------------|--------------|-------------------------------|---------------------------------|-------------------------|----|---|---------------------------------------------------------------------------------|------------|
| 36           | 30           | 218.82       | X-52                          | T - N                           | 64                      | US | Y | SEE ATTACHED CASING SUMMARY                                                     | 10/30/2018 |
| 26           | 20           | 94           | J-55                          | T - N                           | 628                     | IT | Y | SEE ATTACHED CASING SUMMARY                                                     | 12/14/2018 |
| 17-1/2       | 13-3/8       | 54.50        | J-55                          | T - N                           | 726                     | US | Y | SEE ATTACHED CASING SUMMARY                                                     | 12/15/2018 |
| 12-1/4       | 9-5/8        | 40           | L-80                          | T - N                           | 2590                    | US | Y | SEE ATTACHED CASING SUMMARY                                                     | 4/3/2019   |
|              |              |              |                               | T - N                           |                         | US | Y | SEE ATTACHED CASING SUMMARY                                                     |            |

If any casing is welded, provide the name(s) of the welder(s):

**PLUG-BACK/WELLBORE ALTERATION**

| Fill Material & Plugs | Depth |    | Date | Casing & Tubing |        |      |
|-----------------------|-------|----|------|-----------------|--------|------|
|                       | From  | To |      | Size            | Pulled | Left |
|                       |       |    |      |                 |        |      |
|                       |       |    |      |                 |        |      |
|                       |       |    |      |                 |        |      |
|                       |       |    |      |                 |        |      |

## LOG OF FORMATIONS

US Well No. (API No.): 37-051-24669-00-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

| Formation Name<br>or Lithology | Top<br>(feet) | Bottom<br>(feet) | Gas at<br>(feet) | Oil at<br>(feet) | Water at<br>(fresh / brine; ft.) | Source of Data |
|--------------------------------|---------------|------------------|------------------|------------------|----------------------------------|----------------|
| Waynesburg Coal                | 315           | 319              |                  |                  |                                  | Geology        |
| Pittsburgh Coal                | 664           | 678              |                  |                  | F 628                            | Geology        |
|                                |               |                  |                  |                  | F 724                            | Geology        |
| Salt Sand                      | 1590          | 1788             |                  |                  |                                  | Geology        |
| Mauch Chunk                    | 1788          | 1947             |                  |                  |                                  | Geology        |
| Big Lime                       | 1947          | 2032             |                  |                  |                                  | Geology        |
| Loyalhanna                     | 2032          | 2082             |                  |                  |                                  | Geology        |
| Burgoon                        | 2082          | 2231             |                  |                  |                                  | Geology        |
| Shenango                       | 2231          | 2306             |                  |                  |                                  | Geology        |
| Squaw                          | 2306          | 2539             |                  |                  |                                  | Geology        |
| Murraysville                   | 2539          | 2638             |                  |                  | B 2625                           | Geology        |
| Gantz                          | 2638          | 3233             |                  |                  |                                  | Geology        |
| Upper Bayard                   | 3233          | 3291             |                  |                  |                                  | Geology        |
| Chadokoin                      | 3291          | 4516             |                  |                  |                                  | Geology        |
| Bradford Base                  | 4516          | 5617             |                  |                  |                                  | Geology        |
| 5 <sup>th</sup> Elk            | 5617          |                  |                  |                  |                                  | Geology        |

If no show of oil, gas or water, explain why:

## WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

| Casing Source                                       | Cementing Company                                | Hardware Supplier                                 | Logging Company                                 |
|-----------------------------------------------------|--------------------------------------------------|---------------------------------------------------|-------------------------------------------------|
| Name<br><b>Tenaris Global Services U.S.A. Corp.</b> | Name<br><b>BJ Services</b>                       | Name<br><b>Summit Energy Services, Inc.</b>       | Name<br><b>Stratagraph NE Inc</b>               |
| Address<br><b>3 Penn Center Boulevard, #124</b>     | Address<br><b>3415 Millennium Boulevard SE</b>   | Address<br><b>PO Box 34210</b>                    | Address<br><b>116 Ellsworth Avenue</b>          |
| City - State - Zip<br><b>Pittsburgh, PA 15276</b>   | City - State - Zip<br><b>Massillon, OH 44646</b> | City - State - Zip<br><b>Fort Worth, TX 76172</b> | City - State - Zip<br><b>Marietta, OH 45750</b> |
| Phone<br><b>412-620-6388</b>                        | Phone<br><b>330-830-2978</b>                     | Phone<br><b>817-645-5000</b>                      | Phone<br><b>740-373-3091</b>                    |

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78a and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78a.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| Driller                     |     | Well Operator's Signature                                                                     | DEP USE ONLY               |  |
|-----------------------------|-----|-----------------------------------------------------------------------------------------------|----------------------------|--|
| Name<br><b>SEE ATTACHED</b> | Rig |                                                                                               | Reviewed by:               |  |
| Address                     |     |            | Comments:                  |  |
| City - State - Zip          |     |                                                                                               |                            |  |
| Phone                       |     |                                                                                               |                            |  |
|                             |     | Printed Name / Title:<br><b>Bernard A. Lambie /</b><br><b>Regulatory Compliance Team Lead</b> | Date:<br><b>11/18/2019</b> |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                         |                            |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------|----------------------------|----------------|
| Well Operator<br>Chevron Appalachia, LLC                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DEP ID#<br>279986 | Well API #<br><b>37-051-24669-00-00</b> | Well Farm Name<br>Kovach B | Well #<br>M08H |
| <p style="text-align: center;"><b>Wellbore Conditioning:</b></p> <p><b>Surface:</b> pump 25 bbl of 8.6 ppg gel spacer, pump 10 bbl of 8.33 ppg freshwater</p> <p><b>Surface/Coal Protective:</b> pump 25 bbl of 8.6 ppg gel spacer, pump 5 bbl of 8.3 ppg freshwater</p> <p><b>Grout Job #1:</b> no conditioning</p> <p><b>Grout Job #2:</b> no conditioning</p> <p><b>Intermediate:</b> pump 25 bbl of 8.6 ppg gel spacer, pump 10 bbl of 8.3 ppg freshwater</p> <p><b>Production:</b></p> |                   |                                         |                            |                |

|                                          |                   |                                  |                            |                |
|------------------------------------------|-------------------|----------------------------------|----------------------------|----------------|
| Well Operator<br>Chevron Appalachia, LLC | DEP ID#<br>279986 | Well API #<br>37-051-24669-00-00 | Well Farm Name<br>Kovach B | Well #<br>M08H |
|------------------------------------------|-------------------|----------------------------------|----------------------------|----------------|

|                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|
| <b>WELL SERVICE COMPANIES</b><br>(Provide the name, address, and telephone number of all well service companies involved.) |
|----------------------------------------------------------------------------------------------------------------------------|

| Driller                                  |     | Driller                                    |                  | Driller                                            |     |
|------------------------------------------|-----|--------------------------------------------|------------------|----------------------------------------------------|-----|
| Name<br><b>Rocky Mountain Drilling</b>   | Rig | Name<br><b>Highlands Drilling LLC</b>      | Rig<br><b>14</b> | Name<br><b>Precision Drilling Holdings Company</b> | Rig |
| Address<br>185 North Vernal Ave, Suite 2 |     | Address<br>900 Virginia Street East        |                  | Address<br>10350 Richmond Avenue, Suite 700        |     |
| City - State - Zip<br>Vernal, UT 84078   |     | City - State - Zip<br>Charleston, WV 25301 |                  | City - State - Zip<br>Houston, TX 77042            |     |
| Phone<br>435-789-3320                    |     | Phone<br>304-380-0114                      |                  | Phone<br>713-435-6100                              |     |
| Portion Drilled<br>0'- 61'               |     | Portion Drilled<br>61'- 6523'              |                  | Portion Drilled<br>'                               |     |

| Cementing Company  | Cementing Company  | Cementing Company  |
|--------------------|--------------------|--------------------|
| Name               | Name               | Name               |
| Address            | Address            | Address            |
| City - State - Zip | City - State - Zip | City - State - Zip |
| Phone              | Phone              | Phone              |

| Casing Source      | Casing Source      | Casing Source      |
|--------------------|--------------------|--------------------|
| Name               | Name               | Name               |
| Address            | Address            | Address            |
| City - State - Zip | City - State - Zip | City - State - Zip |
| Phone              | Phone              | Phone              |



# Wellbore Details

|                                    |                                         |                                               |                                       |                  |
|------------------------------------|-----------------------------------------|-----------------------------------------------|---------------------------------------|------------------|
| Well Name<br>Kovach B M08H         | Lease                                   | Field Name<br>Shamrock                        | Business Unit<br>Appalachian Mountain |                  |
| Ground Elevation (ft)<br>1,278.00  | Original RKB Elevation (ft)<br>1,302.00 | Current RKB Elevation<br>1,302.00, 12/11/2018 | Mud Line Elevation (ft)               | Water Depth (ft) |
| Current KB to Ground (ft)<br>24.00 | Current KB to Mud Line (ft)             | Current KB to Csg Flange (ft)                 | Current KB to Tubing Head (ft)        |                  |

## Logs

|          |                 |                       |                     |        |
|----------|-----------------|-----------------------|---------------------|--------|
| Type     | Logging Company | Date                  | Planned?            | Cased? |
| Wellbore | Job             | Depth Top (MD) (ftKB) | Bottom Depth (ftKB) |        |

Comment

## Wellbores

|                                |                                  |                                |                                 |
|--------------------------------|----------------------------------|--------------------------------|---------------------------------|
| Wellbore Name<br>Original Hole | Parent Wellbore<br>Original Hole | Directional Type<br>Horizontal | Start Depth (MD) (ftKB)<br>0    |
| Alt Wellbore Identifier        | TAML Classification<br>N/A       | TAML Functionality             | Casing Configuration<br>Class 3 |
| Bottom Hole Legal Location     | Wellbore UWI<br>370512466900     | Wellbore ChevNo<br>PP8717-00   | Vertical Section Direction (°)  |

## Wellbore Sections

| Hole Size (in) | Start Date       | End Date         | Act Top (ftKB) | Act Btm (ftKB) | Prop Top (ftKB) | Prop Btm (ftKB) |
|----------------|------------------|------------------|----------------|----------------|-----------------|-----------------|
| 8 1/2          |                  |                  |                |                | 7,000.0         | 13,988.0        |
| 36             | 10/31/2018 12:15 | 11/1/2018 00:00  | 0.0            | 61.0           | 64.0            | 292.0           |
| 26             | 12/12/2018 01:30 | 12/14/2018 14:30 | 61.0           | 643.0          | 40.0            | 648.0           |
| 17 1/2         | 12/14/2018 14:30 | 12/16/2018 00:00 | 643.0          | 777.0          | 648.0           | 778.0           |
| 12 1/4         | 3/31/2019 04:00  | 4/4/2019 01:00   | 777.0          | 2,625.0        | 778.0           | 2,625.0         |
| 8 3/4          | 4/4/2019 01:00   | 4/7/2019 15:00   | 777.0          | 6,523.0        | 2,625.0         | 7,000.0         |

## Kick Offs & Key Depths

|      |                  |                            |                  |                        |        |
|------|------------------|----------------------------|------------------|------------------------|--------|
| Date | Type<br>Kick Off | Point or Interval<br>Point | Top Depth (ftKB) | Depth Top (TVD) (ftKB) | Method |
| Date | Type<br>Toe      | Point or Interval<br>Point | Top Depth (ftKB) | Depth Top (TVD) (ftKB) | Method |
| Date | Type<br>Heel     | Point or Interval<br>Point | Top Depth (ftKB) | Depth Top (TVD) (ftKB) | Method |

## Last 5 PBTD's

| Type | Date | PBTD (ftKB) | Depth (TVD) (ftKB) | Method | Com |
|------|------|-------------|--------------------|--------|-----|
|      |      |             |                    |        |     |

## Geologic Horizons

| Formation Name | Prog Top (TVD SS)<br>Override (ft(ely)) | Prog Top (TVD) (ftKB) | Prog Btm (TVD SS)<br>Override (ft(ely)) | Prog Btm (TVD) (ftKB) | Drill Top MD (ftKB) | Drill Btm MD (ftKB) |
|----------------|-----------------------------------------|-----------------------|-----------------------------------------|-----------------------|---------------------|---------------------|
|                |                                         |                       |                                         |                       |                     |                     |

## Directional Surveys

|                    |                  |                        |               |                                     |
|--------------------|------------------|------------------------|---------------|-------------------------------------|
| Description        | Date             | Definitive?            | Planned?      | Job                                 |
| Azimuth Tie In (°) | MD Tie In (ftKB) | Inclination Tie In (°) | NSTie In (ft) | EW Tie In (ft)<br>TVD Tie In (ftKB) |
| Comment            |                  |                        |               |                                     |

## Survey Data

| Date | MD (ftKB) | Incl (°) | Azm (°) | TVD (ftKB) | VS (ft) | NS (ft) | EW (ft) | DLS (°/100ft) | Method | Survey Company |
|------|-----------|----------|---------|------------|---------|---------|---------|---------------|--------|----------------|
|      |           |          |         |            |         |         |         |               |        |                |

## Zones

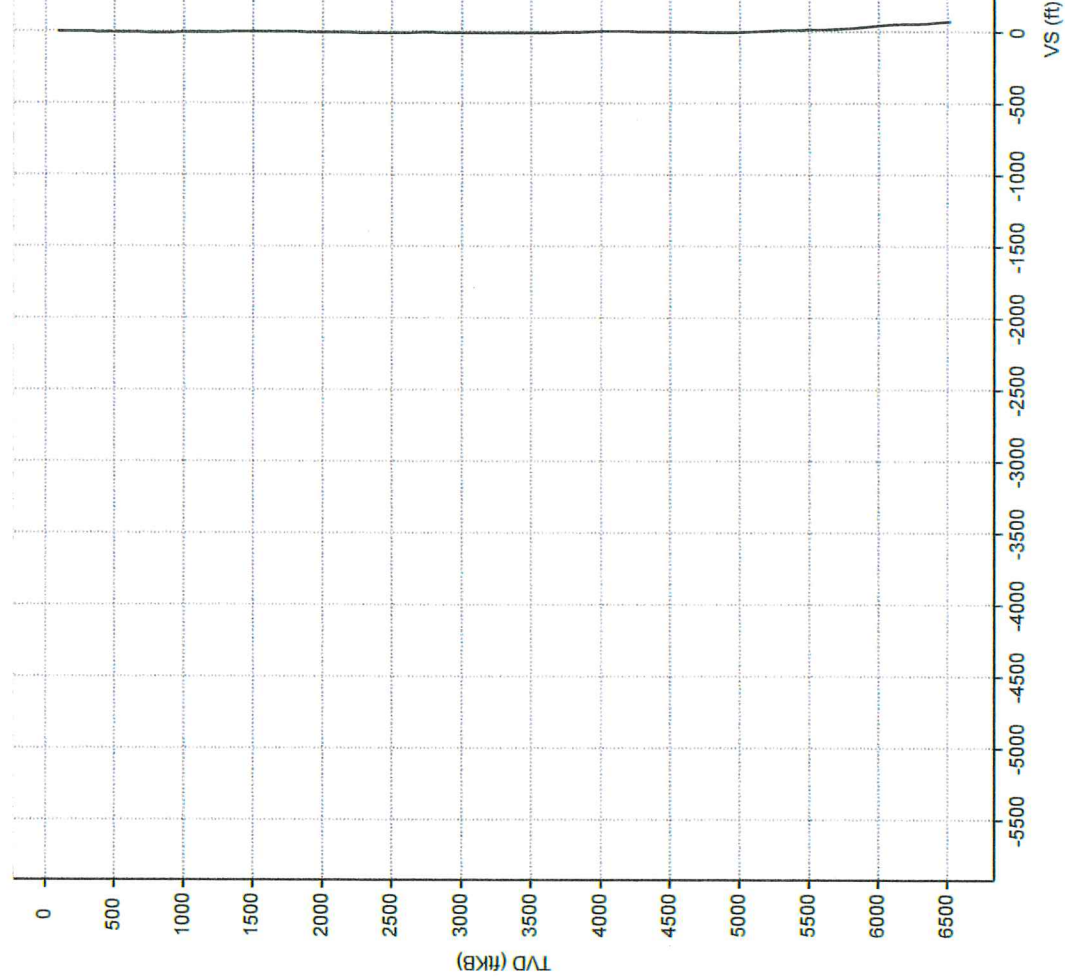
| Zone Name | Top (ftKB) | Btm (ftKB) | Zone Comp Method | Completion ChevNo | Completion UWI | Completion License No. |
|-----------|------------|------------|------------------|-------------------|----------------|------------------------|
|           |            |            |                  |                   |                |                        |



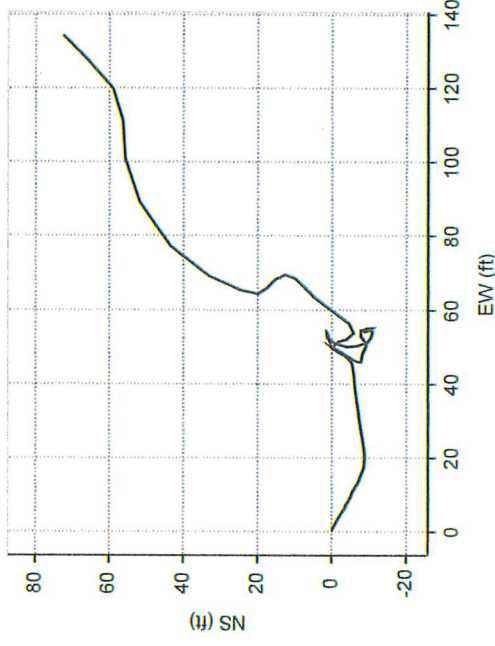
# Directional Plot

|                                |                                |                        |                                            |                              |                              |
|--------------------------------|--------------------------------|------------------------|--------------------------------------------|------------------------------|------------------------------|
| Well Name<br>Kovach B M08H     | Lease                          | Field Name<br>Shamrock | Business Unit<br>Appalachian Mountain      | Surface UWI<br>3705124669    | Surface ChevNo<br>PP8717     |
| Wellbore Name<br>Original Hole | Directional Type<br>Horizontal | Top Depth (ftKB)       | Total Depth of Wellbore (ftKB)<br>6,523.00 | Wellbore UWI<br>370512466900 | Wellbore ChevNo<br>PP8717-00 |

## Vertical Section



## Plan



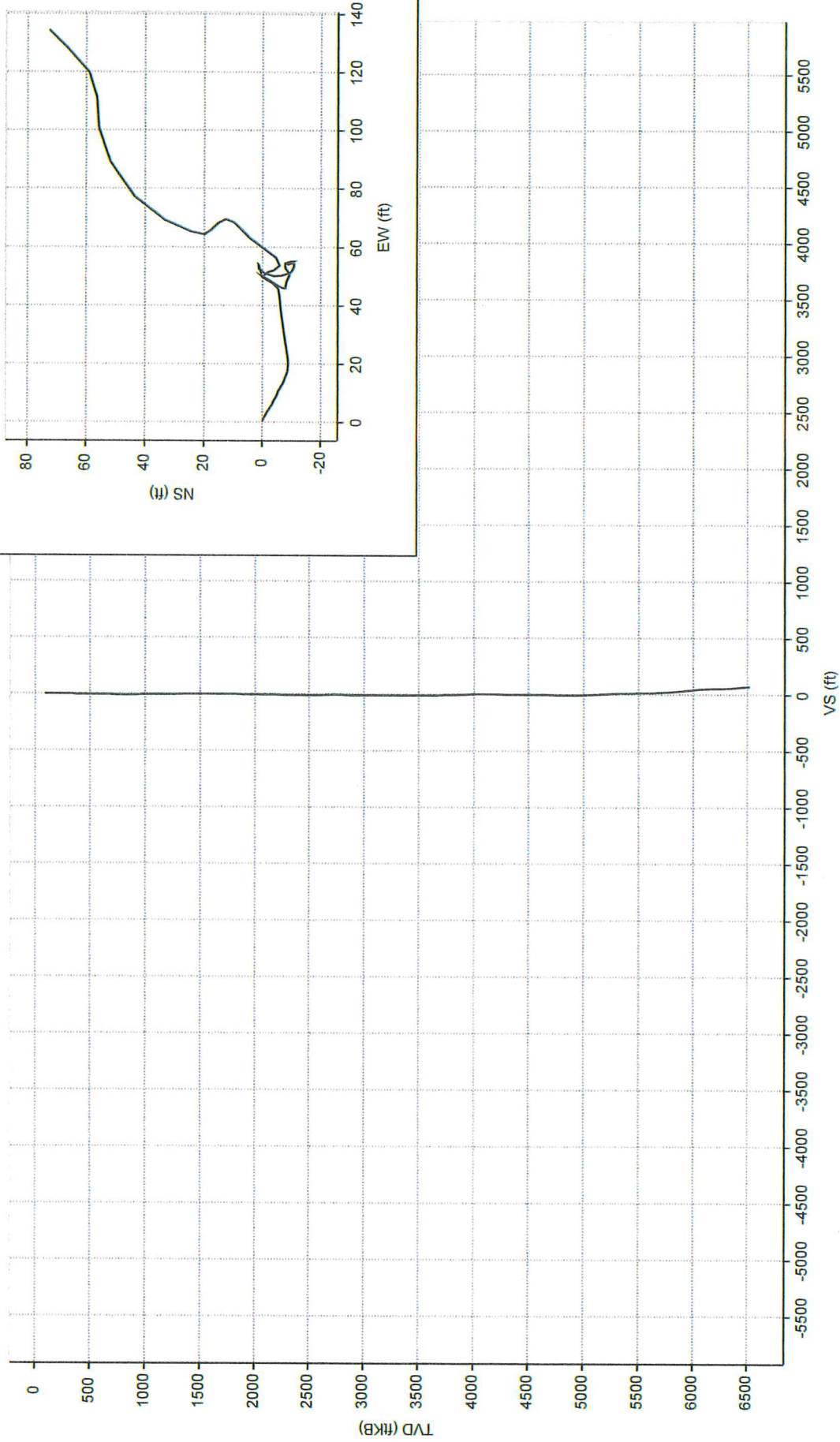
— VS vs TVD - Kovach B M08H - Original Hole



# Directional Plot

|                                |                                |                        |                                            |                              |                              |
|--------------------------------|--------------------------------|------------------------|--------------------------------------------|------------------------------|------------------------------|
| Well Name<br>Kovach B M08H     | Lease                          | Field Name<br>Shamrock | Business Unit<br>Appalachian Mountain      | Surface UWI<br>3705124669    | Surface ChevNo<br>PP8717     |
| Wellbore Name<br>Original Hole | Directional Type<br>Horizontal | Top Depth (ftKB)       | Total Depth of Wellbore (ftKB)<br>6,523.00 | Wellbore UWI<br>370512466900 | Wellbore ChevNo<br>PP8717-00 |

## Vertical Section



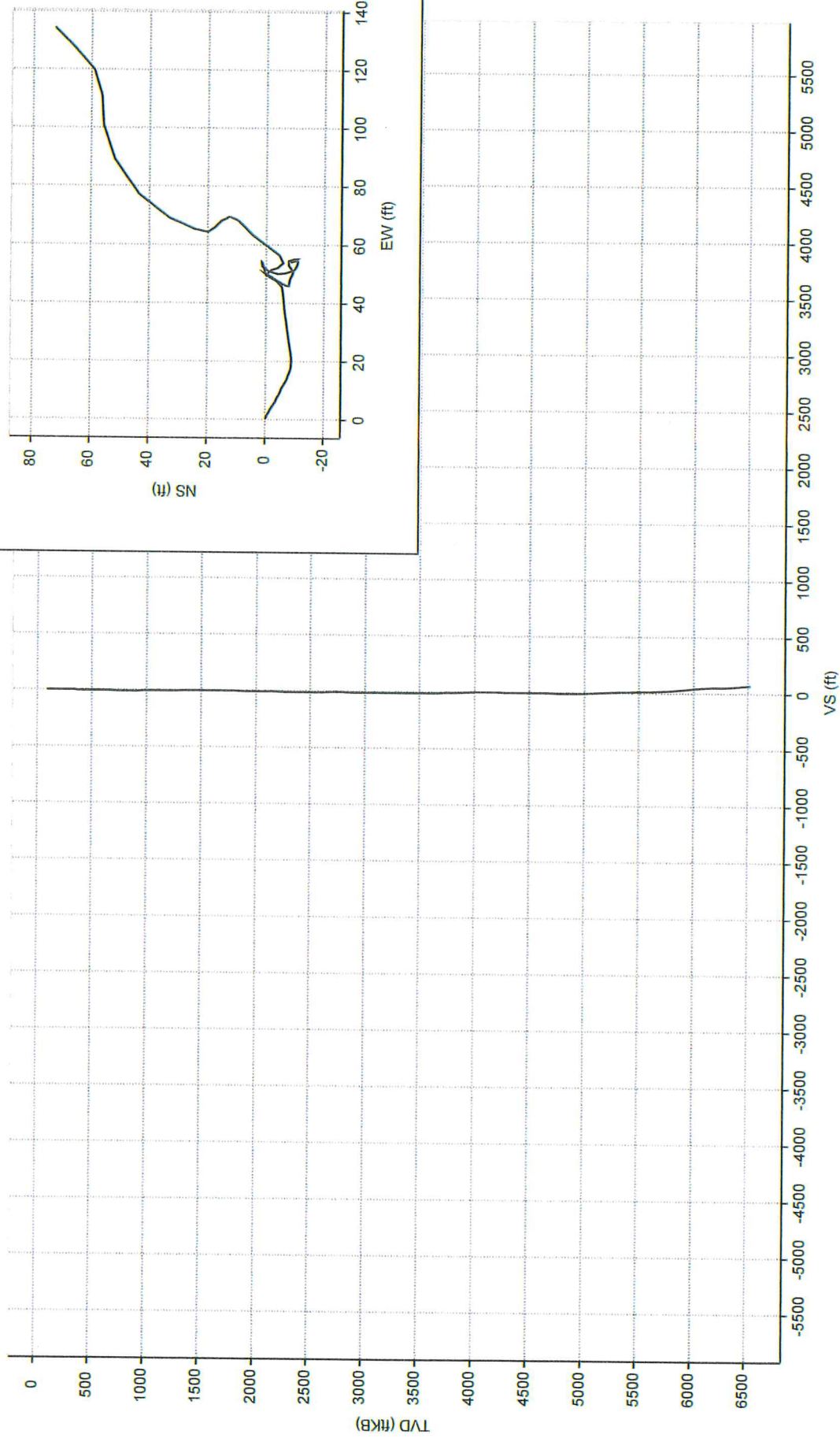
— VS vs TVD - Kovach B M08H - Original Hole



# Directional Plot

|                                |                                |                        |                                            |                              |                              |
|--------------------------------|--------------------------------|------------------------|--------------------------------------------|------------------------------|------------------------------|
| Well Name<br>Kovach B M08H     | Lease                          | Field Name<br>Shamrock | Business Unit<br>Appalachian Mountain      | Surface UWI<br>3705124669    | Surface ChevNo<br>PP8717     |
| Wellbore Name<br>Original Hole | Directional Type<br>Horizontal | Top Depth (ftKB)       | Total Depth of Wellbore (ftKB)<br>6,523.00 | Wellbore UWI<br>370512466900 | Wellbore ChevNo<br>PP8717-00 |

## Vertical Section



— VS vs TVD - Kovach B M08H - Original Hole



# Casing Summary

|                                   |                               |                                               |                        |                                       |                  |
|-----------------------------------|-------------------------------|-----------------------------------------------|------------------------|---------------------------------------|------------------|
| Well Name<br>Kovach B M08H        |                               | Lease                                         | Field Name<br>Shamrock | Business Unit<br>Appalachian Mountain |                  |
| Ground Elevation (ft)<br>1,278.00 | Original RKB (ft)<br>1,302.00 | Current RKB Elevation<br>1,302.00, 12/11/2018 |                        | Mud Line Elevation (ft)               | Water Depth (ft) |

## Production Casing, Planned?-Y, <depthbtm>ftKB

|                       |          |         |                    |            |       |                        |  |                       |                       |              |               |                  |  |
|-----------------------|----------|---------|--------------------|------------|-------|------------------------|--|-----------------------|-----------------------|--------------|---------------|------------------|--|
| Set Depth (MD) (ftKB) |          |         | Set Tension (kips) |            |       | String Nominal OD (in) |  | String Min Drift (in) |                       | Centralizers |               | Scratchers       |  |
| Jts                   | Item Des | OD (in) | ID (in)            | Wt (lb/ft) | Grade | Top Thread             |  | Top Depth (MD) (ftKB) | Btm Depth (MD) (ftKB) | Len (ft)     | P Burst (psi) | P Collapse (psi) |  |
|                       |          |         |                    |            |       |                        |  |                       |                       |              |               |                  |  |

## Conductor, Planned?-N, 64ftKB

|                             |              |                    |         |                              |       |                       |  |                       |                       |            |               |                  |
|-----------------------------|--------------|--------------------|---------|------------------------------|-------|-----------------------|--|-----------------------|-----------------------|------------|---------------|------------------|
| Set Depth (MD) (ftKB)<br>64 |              | Set Tension (kips) |         | String Nominal OD (in)<br>30 |       | String Min Drift (in) |  | Centralizers          |                       | Scratchers |               |                  |
| Jts                         | Item Des     | OD (in)            | ID (in) | Wt (lb/ft)                   | Grade | Top Thread            |  | Top Depth (MD) (ftKB) | Btm Depth (MD) (ftKB) | Len (ft)   | P Burst (psi) | P Collapse (psi) |
| 2                           | Casing Joint | 30                 | 29.250  | 218.82                       | X-52  |                       |  | 24                    | 64                    | 40.00      | 1,969.0       |                  |

## Surface, Planned?-N, 628ftKB

|                              |                  |                    |         |                              |       |                                 |                       |                       |          |               |                  |
|------------------------------|------------------|--------------------|---------|------------------------------|-------|---------------------------------|-----------------------|-----------------------|----------|---------------|------------------|
| Set Depth (MD) (ftKB)<br>628 |                  | Set Tension (kips) |         | String Nominal OD (in)<br>20 |       | String Min Drift (in)<br>18.937 |                       | Centralizers<br>7     |          | Scratchers    |                  |
| Jts                          | Item Des         | OD (in)            | ID (in) | Wt (lb/ft)                   | Grade | Top Thread                      | Top Depth (MD) (ftKB) | Btm Depth (MD) (ftKB) | Len (ft) | P Burst (psi) | P Collapse (psi) |
| 1                            | Hanger           | 20                 | 19.125  | 94.00                        | J-55  | BTC                             | 31.2                  | 32.2                  | 1.00     | 2,110.0       | 520.0            |
| 1                            | Hanger Pup       | 20                 | 19.125  | 94.00                        | J-55  | BTC                             | 32.2                  | 37.2                  | 4.97     | 2,110.0       | 520.0            |
| 1                            | Casing Pup Joint | 20                 | 19.125  | 94.00                        | J-55  | BTC                             | 37.2                  | 47.7                  | 10.48    | 2,110.0       | 520.0            |
| 12                           | Casing Joint     | 20                 | 19.125  | 94.00                        | J-55  | BTC                             | 47.7                  | 541.5                 | 493.89   | 2,110.0       | 520.0            |
| 1                            | Float Collar     | 20                 | 19.125  | 94.00                        | J-55  | BTC                             | 541.5                 | 584                   | 42.46    | 2,110.0       | 520.0            |
| 1                            | Float Shoe       | 20                 | 19.125  | 94.00                        | J-55  | BTC                             | 584                   | 628                   | 44.00    | 2,110.0       | 520.0            |

## Intermediate Casing 1, Planned?-N, 726ftKB

|                              |               |                    |         |                                  |       |                       |  |                       |                       |            |               |                  |
|------------------------------|---------------|--------------------|---------|----------------------------------|-------|-----------------------|--|-----------------------|-----------------------|------------|---------------|------------------|
| Set Depth (MD) (ftKB)<br>726 |               | Set Tension (kips) |         | String Nominal OD (in)<br>13 3/8 |       | String Min Drift (in) |  | Centralizers<br>8     |                       | Scratchers |               |                  |
| Jts                          | Item Des      | OD (in)            | ID (in) | Wt (lb/ft)                       | Grade | Top Thread            |  | Top Depth (MD) (ftKB) | Btm Depth (MD) (ftKB) | Len (ft)   | P Burst (psi) | P Collapse (psi) |
| 1                            | Casing Hanger | 13 3/8             | 12.625  | 54.50                            | J-55  |                       |  | 30                    | 31.3                  | 1.27       |               |                  |
| 2                            | Hanger Pup    | 13 3/8             | 12.625  | 54.50                            | J-55  | BTC                   |  | 31.3                  | 38                    | 6.67       |               |                  |
| 15                           | Casing Joint  | 13 3/8             | 12.625  | 54.50                            | J-55  | BTC                   |  | 38                    | 644.5                 | 606.51     |               |                  |
| 1                            | Float Collar  | 13 3/8             | 12.625  | 54.50                            | J-55  | BTC                   |  | 644.5                 | 685                   | 40.55      |               |                  |
| 1                            | Float Shoe    | 13 3/8             | 12.625  | 54.50                            | J-55  | BTC                   |  | 685                   | 726                   | 40.97      |               |                  |

## Intermediate Casing 2, Planned?-Y, 2590ftKB

|                               |                  |                    |         |                                 |       |                       |                       |                       |          |               |                  |
|-------------------------------|------------------|--------------------|---------|---------------------------------|-------|-----------------------|-----------------------|-----------------------|----------|---------------|------------------|
| Set Depth (MD) (ftKB)<br>2590 |                  | Set Tension (kips) |         | String Nominal OD (in)<br>9 5/8 |       | String Min Drift (in) |                       | Centralizers<br>23    |          | Scratchers    |                  |
| Jts                           | Item Des         | OD (in)            | ID (in) | Wt (lb/ft)                      | Grade | Top Thread            | Top Depth (MD) (ftKB) | Btm Depth (MD) (ftKB) | Len (ft) | P Burst (psi) | P Collapse (psi) |
| 1                             | Casing Hanger    | 9 5/8              | 8.844   | 40.00                           | J-55  | Buttress Thread       | 27.6                  | 29.6                  | 2.00     |               |                  |
| 1                             | Casing Pup Joint | 9 5/8              | 8.844   | 40.00                           | L-80  | Buttress Thread       | 29.6                  | 34.3                  | 4.68     |               |                  |
| 1                             | Casing Pup Joint | 9 5/8              | 8.844   | 40.00                           | L-80  | Buttress Thread       | 34.3                  | 54.4                  | 20.10    |               |                  |
| 61                            | Casing Joint     | 9 5/8              | 8.844   | 40.00                           | L-80  | Buttress Thread       | 54.4                  | 2504.9                | 2,450.47 |               |                  |
| 1                             | Float Collar     | 9 5/8              | 8.844   | 40.00                           | L-80  | Buttress Thread       | 2504.9                | 2546.6                | 41.70    |               |                  |
| 1                             | Shoe Joint       | 9 5/8              | 8.835   | 40.00                           | L-80  | Buttress Thread       | 2546.6                | 2590                  | 43.44    |               |                  |