API NUMBER: 137 26984

Horizontal Hole Oil & Gas

**OKLAHOMA CORPORATION COMMISSION**
**OIL & GAS CONSERVATION DIVISION**
**P.O. BOX 52000**
**OKLAHOMA CITY, OK 73152-2000**
**(Rule 165:10-3-1)**

Approval Date: 01/03/2013
Expiration Date: 07/03/2013

PERMIT TO DRILL

WELL LOCATION: Sec: 21 Twp: 2N Rge: 4W County: STEPHENS

SPOT LOCATION: SW NE NE SE FEET FROM QUARTER: FROM **SOUTH** FROM **EAST**

SECTION LINES: **2100** **540**

**Lease Name: BRANCH** **Well No: 3H-16X** **Well will be 540 feet from nearest unit or lease boundary.**

**Operator Name: NEWFIELD EXPL MIDCONTINENT INC** Telephone: 9188781290 OTC/OCC Number: 20944 0

NEWFIELD EXPL MIDCONTINENT INC
1 WILLIAMS CTR STE 1900
TULSA, OK 74172-0162

ROYCE CONDIT
P.O. BOX 429
SEMINOLE TX 79360

Formation(s) (Permit Valid for Listed Formations Only):

| | Name | Depth | | Name | Depth |
|---|---|---|---|---|---|
| 1 | MISSISSIPPIAN | 14833 | 6 | | |
| 2 | SYCAMORE | 14995 | 7 | | |
| 3 | WOODFORD | 15139 | 8 | | |
| 4 | HUNTON | 15389 | 9 | | |
| 5 | | | 10 | | |

Spacing Orders: 592371, 602383, 605705

Location Exception Orders: 605990

Increased Density Orders: 605539, 605638

Pending CD Numbers: 201206338, 201206337, 201206350

Special Orders:

Total Depth: 23185 Ground Elevation: 1216 **Surface Casing: 1500** Depth to base of Treatable Water-Bearing FM: 710

Under Federal Jurisdiction: No Fresh Water Supply Well Drilled: No Surface Water used to Drill: Yes

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 5000 Average: 3000

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit **is** located in a Hydrologically Sensitive Area.

**Category of Pit: C**

**Liner not required for Category: C**

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

Approved Method for disposal of Drilling Fluids:

D. One time land application -- (REQUIRES PERMIT) PERMIT NO: 12-22224

H. SEE MEMO

This permit does not address the right of entry or settlement of surface damages.
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

PIT 2 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: OIL BASED

Chlorides Max: 300000 Average: 200000

Is depth to top of ground water greater than 10ft below base of pit? Y

Within 1 mile of municipal water well? N

Wellhead Protection Area? N

Pit **is** located in a Hydrologically Sensitive Area.

**Category of Pit: C**

**Liner not required for Category: C**

Pit Location is AP/TE DEPOSIT

Pit Location Formation: TERRACE

HORIZONTAL HOLE 1

Sec 16 Twp 2N Rge 4W County STEPHENS

Spot Location of End Point: NW NE NE NE

Feet From: NORTH 1/4 Section Line: 50

Feet From: EAST 1/4 Section Line: 440

Depth of Deviation: 14759

Radius of Turn: 630

Direction: 1

Total Length: 7436

Measured Total Depth: 23185

True Vertical Depth: 15389

End Point Location from Lease,
Unit, or Property Line: 50

| Additional Surface Owner | Address | City, State, Zip |
|---|---|---|
| PAUL L. MCCULLISS | P.O. BOX 3248 | LITTLETON, CO 80161 |
| GEORGE G. VAUGHT, JR. | P.O. BOX 13557 | DENVER, CO 80201 |

Notes:

| Category | Description |
|---|---|
| DEEP SURFACE CASING | 1/2/2013 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING |
| EXCEPTION TO RULE - 605990 | 1/2/2013 - G75 - (I.O.) 16-2N-4W<br>X165:10-3-28(C)(2)(B) WDFD (BRANCH 3H-16X)<br><600' FROM EXISTING AND/OR PROPOSED WELL<br>NEWFIELD EXPLOR. MID-CONT., INC.<br>12-28-2012 |
| INCREASED DENSITY - 605539 | 1/2/2013 - G75 - 21-2N-4W<br>X602383 WDFD<br>5 WELLS<br>NEWFIELD EXPLOR. MID-CONT. INC.<br>12-17-2012 |
| INCREASED DENSITY - 605638 | 1/2/2013 - G75 - 16-2N-4W<br>X592371 WDFD<br>5 WELLS<br>NEWFIELD EXPLOR. MID-CONT. INC.<br>12-18-2012 |
| MEMO | 1/2/2013 - G71 - PIT 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, WBM & OBM CUTTINGS CAPTURED IN CONCRETE-LINED PIT, SOLIDIFIED, AND BURIED ON SITE; PIT 2 - OBM TO VENDOR |

This permit does not address the right of entry or settlement of surface damages.
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

| Category | Description |
| --- | --- |
| PENDING CD - 201206337 | 1/2/2013 - G75 - (I.O.) 21-2N-4W<br>X602383 MSSP, WDFD, HNTN<br>SHL NCT 1320 FSL, NCT 330 FEL<br>COMPL. INT. NCT 0 FNL, NCT 1320 FSL, NCT 330 FEL<br>NO OP. NAMED<br>REC 12-3-2012 (JOHNSON) |
| PENDING CD - 201206338 | 1/2/2013 - G75 - (I.O.) 16-2N-4W<br>X592371 SCMR, WDFD, HNTN<br>COMPL. INT. NCT 0 FSL, NCT 165 FNL, NCT 330 FEL<br>NO OP. NAMED<br>REC 12-3-2012 (JOHNSON) |
| PENDING CD - 201206350 | 1/2/2013 - G75 - (I.O.) 21-2N-4W<br>X165:10-3-28(C)(2)(B) WDFD (BRANCH 3H-16X<br><600' FROM EXISTING AND/OR PROPOSED WELL<br>NEWFIELD EXPLOR. MID-CONT., INC.<br>REC 12-3-2012 (JOHNSON) |
| SPACING - 592371 | 1/2/2013 - G75 - (640) 16-2N-4W<br>EXT OTHER<br>EXT 582855 SCMR, WDFD, HNTN, OTHERS |
| SPACING - 602383 | 1/2/2013 - G75 - (640) 21-2N-4W<br>EXT 595488 MSSP<br>EXT 596943 WDFD, HNTN, OTHERS<br>EXT OTHERS |
| SPACING - 605705 | 1/2/2013 - G75 - (I.O.) 16 & 21-2N-4W<br>EST MULTIUNIT HORIZONTAL WELL (BRANCH 3H-16X)<br>X592371 SCMR, WDFD, HNTN 16-2N-4W<br>X602383 MSSP, WDFD, HNTN 21-2N-4W<br>66% 16-2N-4W<br>34% 21-2N-4W<br>NEWFIELD EXPLOR. MID-CONT. INC.<br>12-19-2012 |

This permit does not address the right of entry or settlement of surface damages.
The duration of this permit is SIX MONTHS, except as otherwise provided by Rule 165: 10-3-1.
Rule 165: 10-3-4 (c) (7) (e) - The Operator shall give 24 Hours notice by telephone to the appropriate District Office of the Conservation Division as to when Surface Casing will be run.

Newfield Exploration Mid-Continent, Inc.
One Williams Center; Suite 1900
Tulsa, OK 741729
918-582-2690
Fax: 918-732-1787

NEWFIELD

December 19, 2012

Oklahoma Corporation Commission
Oil & Gas Conservation Division
P.O. Box 52000-[redacted]
Oklahoma City, Oklahoma 73152-2000

API 137-26984

ATTN: Manager of the Technical Services Department

RE: Liner Variance Request
Branch 3H-16X
Stephens County, Oklahoma

Dear Sir:

We are requesting a variance to the liner requirements for the burial of oil-based cuttings (OBC) as stated in rules of the Oklahoma Corporation Commission (OCC). We intend to bury the OBC from the above mentioned well using Scott Environmental Services Inc.'s (SESI) stabilization and solidification process, Duro$^{SM}$. Specifically, the request for a variance is because the chosen process cannot be practically carried out under current Oklahoma rules due to the rules stating that OBC burial requires a geomembrane liner but the rules do not allow stirring within geomembrane lined pits.

In a letter dated November 15, 2010, Mr. Tim Baker confirmed that use of a Duro$^{SM}$ process had met the requirements of the Commission. It is requested that a variance be approved for this well site, provided that the following conditions are met:

1. A soil liner may be used instead of a geomembrane liner if the unconfined compressive strength (UCS) of the Duro$^{SM}$ material is at least 70 pounds per square inch (psi), or
2. No liner is required if the Duro$^{SM}$ material meets all of the following conditions:
    a. A permeability of not more than 1 x $10^{-6}$ cm/sec;
    b. A UCS of at least 35 psi; and
    c. Concentrations in a leachate of the Duro$^{SM}$ material according to EPA's SPLP procedure do not exceed the following values for the constituents named:
        i. Total Petroleum Hydrocarbons, 100 mg/l;
        ii. pH, 12.49 SU, plus a lower limit no less than 6;
        iii. Arsenic, 5.00 mg/l;
        iv. Barium, 100 mg/l;

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v. Cadmium, 1.00 mg/l;
vi. Chromium, 5.00 mg/l;
vii. Lead, 5.00 mg/l;
viii. Mercury, 0.20 mg/l;
ix. Selenium, 1.00 mg/l;
x. Silver, 5.00 mg/l;
xi. Zinc, 5.00 mg/l; and
xii. Benzene, 0.5 mg/l.

The permeability value specified in item 2(a) is the same as that required for a standard soil liner, so that in effect the Duro$^{SM}$ processed material becomes its own liner but is even more effective, because the low permeability extends throughout the bulk of the Duro$^{SM}$ material.

Conformance with the specified criteria is determined on laboratory samples made with a representative sample of the waste to be subjected to the Duro$^{SM}$ process. The results of the testing will be provided to the Pollution Abatement Department of the OCC.

Your prompt attention to this matter is appreciated.

Sincerely,

Daniele Burris

Daniele Burris
Regulatory Analyst

cc: WF
Geoffrey Nielsen

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Bob Anthony
Commissioner

Jeff Cloud
Commissioner

Dana Murphy
Commissioner

OKLAHOMA
# Corporation Commission

P.O. BOX 52000
OKLAHOMA CITY OKLAHOMA 73152-2000

255 Jim Thorpe Building
Telephone: (405)521-2302
FAX: (405)521-3099

OIL & GAS CONSERVATION DIVISION

Lori Wrotenbery, Director

November 15, 2010

J. Blake Scott
Scott Environmental Services, Inc.
P.O. Box 6215
Longview, Texas 75608

API 137-26984

RE: Requests for variances to liner requirements for pits used to contain oil-based cuttings

Dear Mr. Scott:

This is in response to your inquiry concerning the procedure by which operators of wells in the State of Oklahoma regulated by the Commission's Oil and Gas Conservation Division may request variances to liner requirements for pits used to contain oil-based cuttings (OBC). OAC 165:10-7-16(b)(1)(B)(iv) provides that any pit used to contain oil-based drilling fluids, cuttings and/or completion/fracture/workover fluids shall be required to have a geomembrane liner. OAC 165:10-7-16(b)(5) states that any variance from the liner requirements of OAC 165:10-7-16 may be granted by the Manager of the Technical Services Department after receipt of a written request and supporting documentation required by the Department. Operators must submit written requests for variances to liner requirements for pits used to contain OBC to the Commission's Technical Services Department (TSD) Manager as attachments to initial or amended OCC Form 1000 Applications to Drill, Recomplete or Reenter.

The TSD Manager will require operators to submit documentation in support of requests for variances. Variances to liner requirements for pits containing OBC are not effective until granted by the TSD Manager. If operators requesting variances to liner requirements for pits containing OBC fail to submit acceptable documentation to the TSD Manager, or if such variance requests are denied, then operators are required to deposit the solidified OBC in pits containing geomembrane liners and close the pits as required by OAC 165:10-7-16, or otherwise dispose of the solidified OBC in accordance with Commission rules.

If the processes employed by your company and any other entity demonstrate through the submission of laboratory analyses, chain of custody forms and any other documentation required by the TSD Manager that the solidified OBC for which a variance from the pit liner requirements is sought meet acceptable criteria, then the TSD Manager could approve such variance requests submitted by operators.

Your company has demonstrated in three separate trials to date that solidified OBC for which variances were sought by operators have met the criteria of the Technical Services Department for burying such materials in pits with no geomembrane liners.



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If you have any questions concerning the foregoing, please contact me at (405) 522-2763.

Sincerely,

Tim Baker
Manager, Pollution Abatement Department
Oklahoma Corporation Commission

Cc: Lori Wrotenbery, Ron Dunkin, Wayne Wright, Grant Ellis, Tony Cupp, Terry Grooms, Gayland Darity, Sally Shipley, Keith Thomas, Susan Conrad, Jim Hamilton, Connie Moore



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