

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

API NUMBER: 011 23714

Approval Date: 12/29/2016

Expiration Date: 06/29/2017

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 01 Twp: 16N Rge: 10W County: BLAINE
SPOT LOCATION: FEET FROM QUARTER: FROM NORTH FROM EAST
SECTION LINES: 224 387

Lease Name: STARK Well No: 2H-1LMX Well will be 224 feet from nearest unit or lease boundary.
Operator Name: NEWFIELD EXPLORATION MID-CON INC Telephone: 2816742521; 9188781 OTC/OCC Number: 20944 0

NEWFIELD EXPLORATION MID-CON INC
4 WATERWAY AVE STE 900
THE WOODLANDS, TX 77380-3197

SANFORD E. STARK
24175 E. 996 RD.
WEATHERFORD OK 73096

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

	Name	Depth	Name	Depth
1	MISSISSIPPIAN	9078	6	
2	WOODFORD	9659	7	
3			8	
4			9	
5			10	

Spacing Orders: 646146
645785

Location Exception Orders:

Increased Density Orders:

Pending CD Numbers: 201605543
201605544
201605541
201605542

Special Orders:

Total Depth: 19799 Ground Elevation: 1223 Surface Casing: 1500 Depth to base of Treatable Water-Bearing FM: 330

Under Federal Jurisdiction: No

Fresh Water Supply Well Drilled: No

Surface Water used to Drill: No

PIT 1 INFORMATION

Type of Pit System: ON SITE

Type of Mud System: AIR

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 not located in a Hydrologically Sensitive Area.

Category of Pit: 4

Liner not required for Category: 4

Pit Location is NON HSA

Pit Location Formation: CHICKASHA

Mud System Change to Water-Based or Oil-Based Mud Requires an Amended Intent (Form 1000).

Approved Method for disposal of Drilling Fluids:

A. Evaporation/dewater and backfilling of reserve pit.

B. Solidification of pit contents.

F. Haul to Commercial soil farming facility: Sec. 6 Twn. 2N Rng. 4W Cnty. 137 Order No: 617361

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: WATER BASED

Chlorides Max: 8000 Average: 5000

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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: CHICKASHA

PIT 3 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 not located in a Hydrologically Sensitive Area.

Category of Pit: C

Liner not required for Category: C

Pit Location is NON HSA

Pit Location Formation: CHICKASHA

HORIZONTAL HOLE 1

Sec 12 Twp 16N Rge 10W County BLAINE

Spot Location of End Point: SE SW SE SE

Feet From: SOUTH 1/4 Section Line: 50

Feet From: EAST 1/4 Section Line: 936

Depth of Deviation: 8973

Radius of Turn: 477

Direction: 185

Total Length: 10077

Measured Total Depth: 19799

True Vertical Depth: 9659

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

Notes:

Category

Description

DEEP SURFACE CASING

12/28/2016 - G71 - APPROVED; NOTIFY OCC FIELD INSPECTOR IMMEDIATELY FOR ANY LOSS OF CIRCULATION OR FAILURE TO CIRCULATE CEMENT TO SURFACE ON CONDUCTOR OR SURFACE CASING

HYDRAULIC FRACTURING

12/28/2016 - G71 - OCC 165:10-3-10 REQUIRES: 1) THE CHEMICAL DISCLOSURE OF HYDRAULIC FRACTURING INGREDIENTS FOR ALL WELLS BE REPORTED TO FRACFOCUS USING THE FOLLOWING LINK [HTTP://FRACFOCUS.ORG/](http://fracfocus.org/) WITH NOTICE GIVEN 48 HOURS IN ADVANCE OF FRACTURING TO THE LOCAL OCC DISTRICT OFFICE; AND, 2) PRIOR TO COMMENCEMENT OF FRACTURING OPERATIONS FOR HORIZONTAL WELLS, NOTICE ALSO GIVEN FIVE BUSINESS DAYS IN ADVANCE TO OFFSET OPERATORS WITH WELLS COMPLETED IN THE SAME COMMON SOURCE OF SUPPLY WITHIN 1/2 MILE.

This permit does not address the right of entry or settlement of surface damages.

011 23714 STARK 2H-1LMX

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.

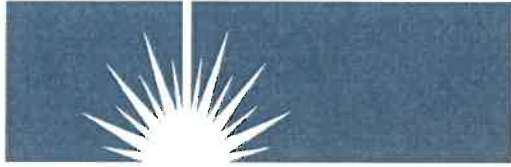
Category	Description
INTERMEDIATE CASING	12/28/2016 - G71 - DUE TO THE KNOWN POTENTIAL RISK OF ENCOUNTERING AN OVER-PRESSURED ZONE IN THE MORROW SERIES IN THIS AREA, THE TECHNICAL MANAGER RECOMMENDS SETTING AN INTERMEDIATE STRING OF CASING IMMEDIATELY ABOVE THE MORROW SERIES
MEMO	12/28/2016 - G71 - PIT 2 & 3 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, WBM & OBM CUTTINGS CAPTURED IN CONCRETE-LINED PIT, SOLIDIFIED, AND BURIED ON SITE; PIT 3 - OBM TO VENDOR
PENDING CD - 201605541	12/28/2016 - G75 - 1-16N-10W X646146 MSSP 7 WELLS NO OP. NAMED REC 12-20-2016 (JOHNSON)
PENDING CD - 201605542	12/28/2016 - G75 - 12-16N-10W X645785 MSSP 7 WELLS NO OP. NAMED REC 12-20-2016 (JOHNSON)
PENDING CD - 201605543	12/28/2016 - G75 - (I.O.) 1 & 12-16N-10W EST MULTIUNIT HORIZONTAL WELL X646146 MSSP, WDFD 1-16N-10W X645785 MSSP, WDFD 12-16N-10W (WDFD ASSOCIATED COMMON SOURCE OF SUPPLY TO MSSP) 50% 1-16N-10W 50% 12-16N-10W NO OP. NAMED REC 12-20-2016 (JOHNSON)
PENDING CD - 201605544	12/28/2016 - G75 - (I.O.) 1 & 12-16N-10W X646146 MSSP, WDFD 1-16N-10W X645785 MSSP, WDFD 12-16N-10W X165:10-3-28(C)(2)(B) MAY BE CLOSER THAN 600' TO ANOTHER WELL BORE SHL (12-16N-10W) SE4 ** COMPL. INT (12-16N-10W) NCT 165' FSL, NCT 0' FNL, NCT 850' FEL ++ COMPL. INT. (1-16N-10W) NCT 0' FSL, NCT 165' FNL, NCT 850' FEL ++ NO OP. NAMED REC 12-20-2016 (JOHNSON)
	** ITD HAS SHL NE4 1-16N-10W; TO BE CORRECTED AT HEARING FOR FINAL ORDER LOCATION EXCEPTION PER OPERATOR
	++ ITD HAS LATERAL DRILLED IN OPPOSITE DIRECTION; TO BE CORRECTED AT HEARING FOR FINAL ORDER LOCATION EXCEPTION PER OPERATOR
SPACING - 645785	12/28/2016 - G75 - (640)(HOR) 12-16N-10W EST MSSP, WDFD, OTHER POE TO BHL (MSSP) NCT 660' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL (COEXIST SP. ORDER # 151344 MSSNC, MNNG, MSSSD)
SPACING - 646146	12/28/2016 - G75 - (640)(HOR) 1-16N-10W EST MSSP, WDFD, OTHER POE TO BHL (MSSP) NCT 660' FB POE TO BHL (WDFD) NCT 165' FNL & FSL, NCT 330' FEL & FWL (COEXIST SP. ORDER # 151344 MSSNC, MNNG, MSSSD; COEXIST WDFD LEASE BASIS)

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



Newfield Exploration Mid-Continent Inc.

24 Water Way, Suite 900
The Woodlands, TX 77380

Regulatory Department
PHONE: 281-674-2521
FAX: 346-224-7026

December 20, 2016

API 011-23714

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

RE: Stark 2H-1LMX, 3H-1UMX, 4H-1LMX, 5H-1LMX, 6H-1LMX, 7H-1LMX, 8H-1LMX,
9H-1UMX & 10H-1LMX
Sec 1-16N-10W
Blaine County, OK

Dear Sir or Madam

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, DuroSM. 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 DuroSM 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 DuroSM material is at least 70 pounds per square inch (psi), or
2. No liner is required if the DuroSM material meets all of the following conditions:
 - a. A permeability of not more than 1×10^{-6} cm/sec;
 - b. A UCS of at least 35 psi; and
 - c. Concentrations in a leachate of the DuroSM 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. Chloride, 1750 mg/l;
 - iii. pH, 12.49 SU, plus a lower limit no less than 6;
 - iv. Arsenic, 5.00 mg/l;

- v. Barium, 100 mg/l;
- vi. Cadmium, 1.00 mg/l;
- vii. Chromium, 5.00 mg/l;
- viii. Lead, 5.00 mg/l;
- ix. Mercury, 0.20 mg/l;
- x. Selenium, 1.00 mg/l;
- xi. Silver, 5.00 mg/l;
- xii. Zinc, 5.00 mg/l; and
- xiii. Benzene, 0.5 mg/l.

The permeability value specified is the same as that required for a standard soil liner, so that in effect the DuroSM material becomes its own liner but is even more effective, because the low permeability extends throughout the bulk of the DuroSM material.

Conformance with the specified criteria is determined on laboratory samples made with a representative sample of the waste to be subjected to the DuroSM 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.

Respectfully,

Newfield Exploration, Mid-Continent Inc.



Evelyn P. Smith
Sr. Regulatory Specialists

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

API 011-23714

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

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.

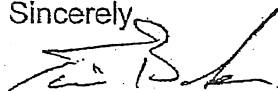
The TSD Manager will require operators to submit documentation in support of requests for variances. Variances to liner requirements for pits containing OBC are not effective until granted by the TSD Manager. If operators requesting variances to liner requirements for pits containing OBC fail to submit 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.

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

PERMIT PLAT

M & M Land Surveying, Inc.
Phone (580) 226-0446
520 E Street N.W.
Ardmore, OK 73401

API 011-23714

Company Name: **NEWFIELD EXPLORATION MID-CONTINENT INC.** Lease Name: STARK #2H-1 LMX
Section 1 Township 16 N Range 10 W, I.B.M, County of Blaine, State of Oklahoma
Elevation 1223' GROUND Good Location? YES
Original Location: 224'FNL - 387'FEL
Distance & Direction From Nearest Town: 15.8 miles WNW of Kingfisher

SURFACE LOCATION

DATUM: NAD27

LAT: 35° 53' 52.62"N

LONG: 98° 12' 28.17"W

LAT: 35.897949°N

LONG: 98.207826°W

STATE PLANE

COORDINATES: (US
SURVEY FEET)

ZONE: NORTH ZONE

Y (N): 326925.98

X (E): 1938444.71

DATUM: NAD83

LAT: 35° 53' 52.76"N

LONG: 98° 12' 29.41"W

LAT: 35.897990°N

LONG: 98.208169°W

STATE PLANE

COORDINATES: (US
SURVEY FEET)

ZONE: NORTH ZONE

Y (N): 326949.600

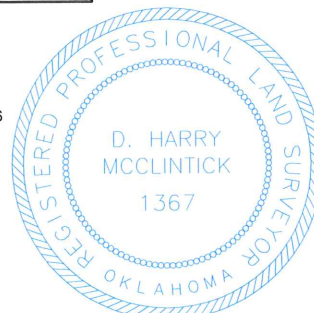
X (E): 1906844.679

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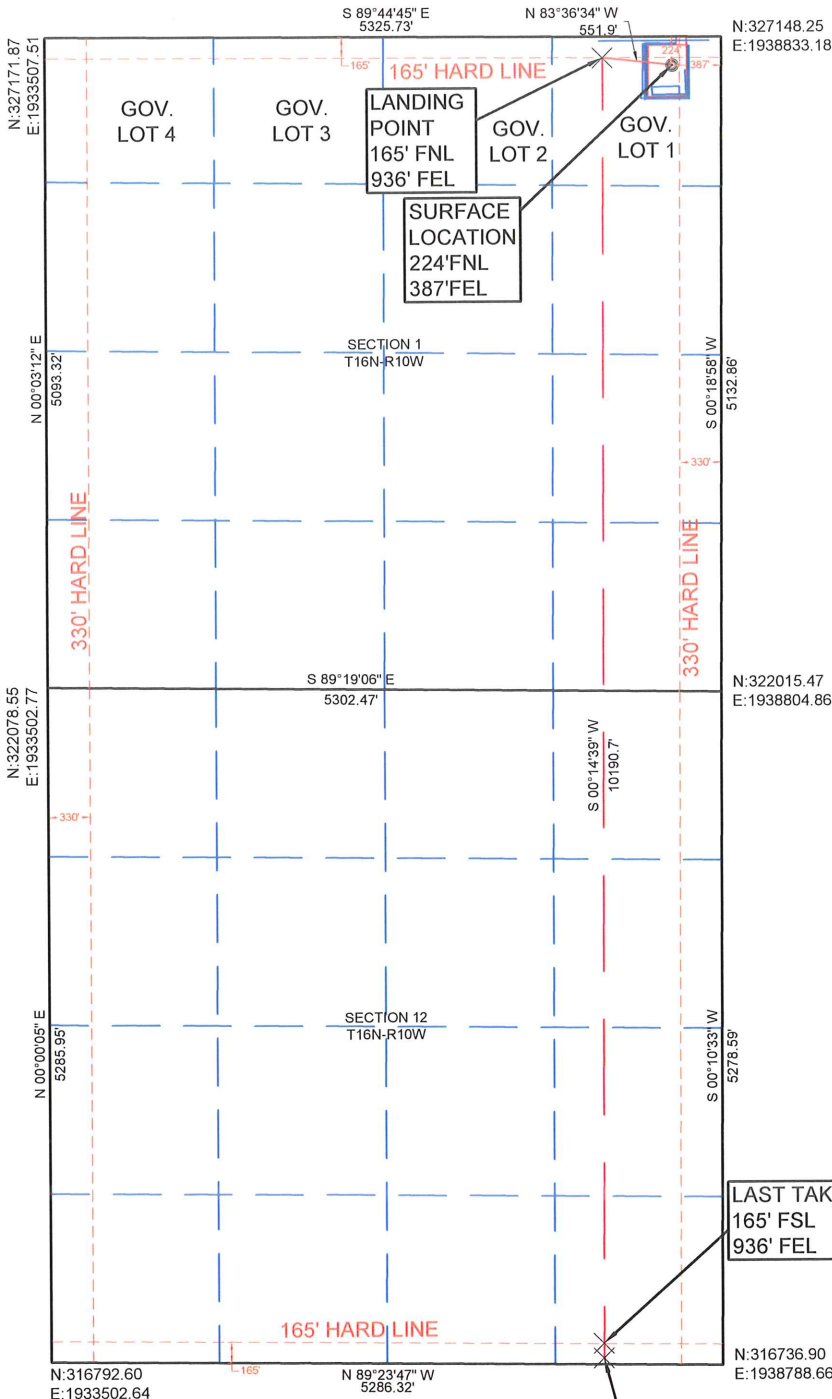
This location has been staked according to the best official survey records available to us. The metrical data shown hereon is for permitting the well location and the section location may or may not be field verified. Please review this plat and notify us immediately of any discrepancy.

CERTIFICATE:

I D. Harry McClintick a Registered Land Surveyor in the State Of Oklahoma, do hereby certify that the above described Well Location was surveyed and staked on the ground as shown and that said plat meets or exceeds the Oklahoma Minimum Technical Standards for the practice of land surveying as adopted by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors.



D. Harry McClintick
D. Harry McClintick
PLS. No.1367 CFEDS



SURVEY BY: M & M Land Surveying, Inc. ~ C.A. No. 3093 (LS)	
DRAWING BY: Bennett-Morris And Associates Land Surveying, P.C.	
© COPYRIGHT 2016 C.A. No. 5975 (LS) ~ Aaron L. Morris, RPLS	
PROJECT NUMBER:	SITE VISIT: (Explanation and Date)
16504	STAKING DATE: 12/14/2016
SHEET: 6 OF 10	DRAWING DATE: 12/16/2016