

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

API NUMBER: 003 23255

Approval Date: 05/23/2016  
Expiration Date: 11/23/2016

Horizontal Hole Oil & Gas

PERMIT TO DRILL

WELL LOCATION: Sec: 16 Twp: 25N Rge: 12W County: ALFALFA  
SPOT LOCATION:  SW  SW  SE  SW FEET FROM QUARTER: FROM SOUTH FROM WEST  
SECTION LINES: 273 1550

Lease Name: KASSIK 21-25-12 Well No: 1H Well will be 273 feet from nearest unit or lease boundary.

Operator Name: CHESAPEAKE OPERATING LLC Telephone: 4059353425; 4059358 OTC/OCC Number: 17441 0

CHESAPEAKE OPERATING LLC  
PO BOX 18496  
OKLAHOMA CITY, OK 73154-0496

LOIS KASSIK C/O NEAL HOFFMAN  
13593 STATE HWY 8  
CARMEN OK 73726

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

Name	Depth	Name	Depth
1 MISSISSIPPIAN	5978	6	
2		7	
3		8	
4		9	
5		10	

Spacing Orders: 609102 Location Exception Orders: 639924 Increased Density Orders: 639923  
651888 651887

Pending CD Numbers:

Special Orders:

Total Depth: 11200 Ground Elevation: 1393 **Surface Casing: 620** Depth to base of Treatable Water-Bearing FM: 370

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

PIT 1 INFORMATION

Type of Pit System: CLOSED Closed System Means Steel Pits

Type of Mud System: WATER BASED

Chlorides Max: 25000 Average: 8000

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: 16-30612  
H. CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST

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.

HORIZONTAL HOLE 1

Sec 21 Twp 25N Rge 12W County ALFALFA

Spot Location of End Point: SE SE SW SW

Feet From: SOUTH 1/4 Section Line: 165

Feet From: WEST 1/4 Section Line: 1000

Depth of Deviation: 5671

Radius of Turn: 464

Direction: 182

Total Length: 4800

Measured Total Depth: 11200

True Vertical Depth: 6032

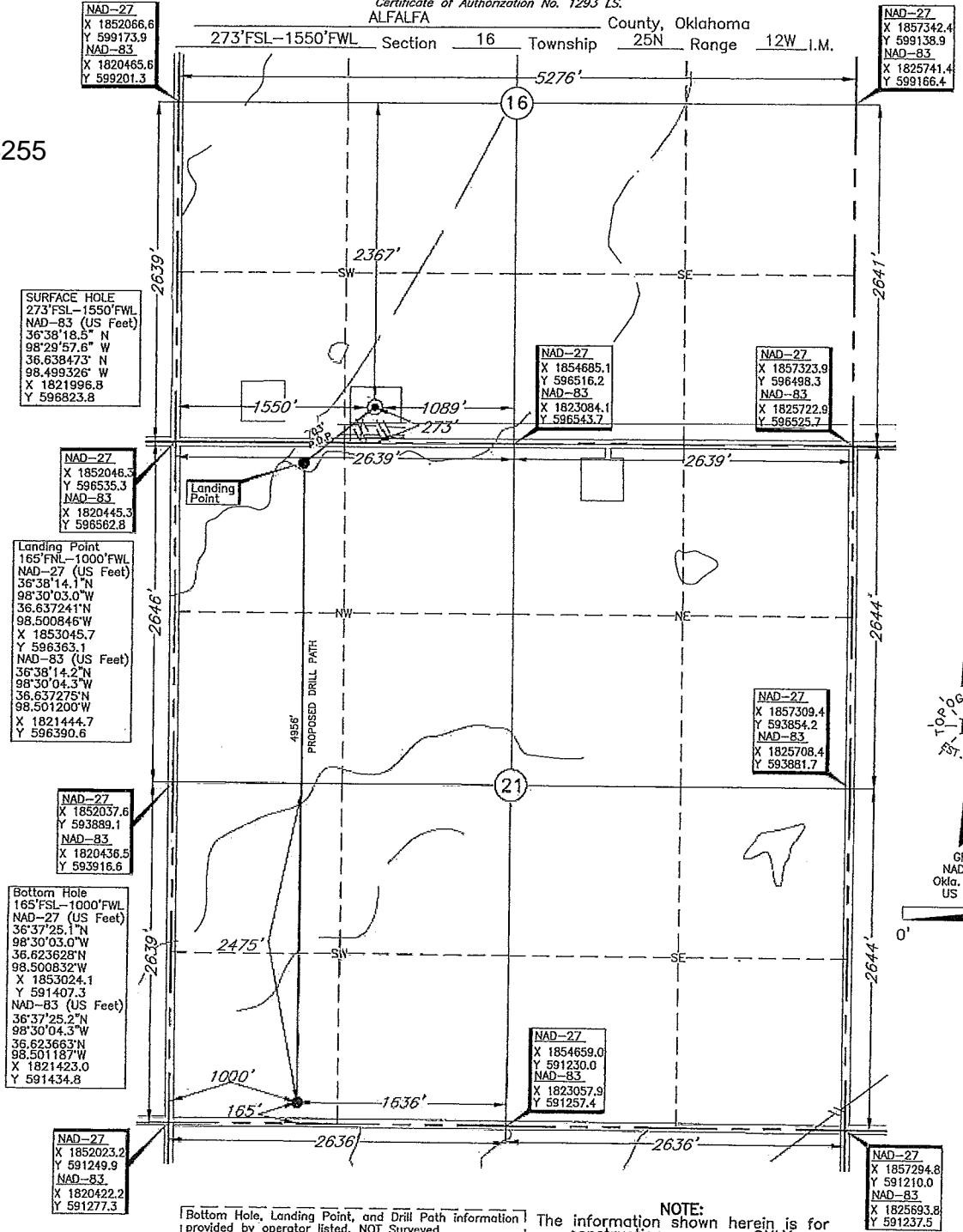
End Point Location from Lease,  
Unit, or Property Line: 165

Notes:

Category	Description
HYDRAULIC FRACTURING	5/20/2016 - 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 <a href="http://fracfocus.org/">HTTP://FRACFOCUS.ORG/</a> 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.
INCREASED DENSITY - 639923	5/20/2016 - G60 - 21-25N-12W X609102 MSSP 2 WELLS CHESAPEAKE OPERATING, LLC. 4-24-15
INCREASED DENSITY - 651887	5/20/2016 - G60 - EXT 639923 UNTIL 4-24-17
LOCATION EXCEPTION - 639924	5/20/2016 - G60 - (I.O.) 21-25N-12W X609102 MSSP COMPL. INT. NCT 165' FSL, NCT 165' FNL, NCT 560' FWL CHESAPEAKE OPERATING, LLC. 4-24-15
LOCATION EXCEPTION - 651888	5/20/2016 - G60 - EXT 639924 UNTIL 4-27-17
SPACING - 609102	5/20/2016 - G60 - (640) 21-25N-12W VAC 243391 MSSLM, OTHERS AMD/REFORM OTHERS EXT OTHER EXT 590902 MSSP EST OTHER

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API: 003-23255



[Bottom Hole, Landing Point, and Drill Path information provided by operator listed, NOT Surveyed.] NOTE: The information shown herein is for construction purposes ONLY.

Operator: CHESAPEAKE OPERATING, L.L.C.

Lease Name: KASSIK 21-25-12

Well No.: 1H

**ELEVATION:**

1395' Gr. at pad NAVD-88

1394' Gr. at pad NGVD-29

Topography & Vegetation Location fell on existing level pad area.

Good Drill Site? Yes Reference Stakes or Alternate Location Stakes Set None

Best Accessibility to Location From South off county road

Distance & Direction

from Hwy Jct or Town From Carmen, Ok, go ±4 miles North on black top road, then ±2 miles West to the SW Cor. of Sec. 16-T25N-R12W

DATUM: NAD-27  
 LAT: 36°38'18.4"N  
 LONG: 98°29'56.3"W  
 LAT: 36.638441° N  
 LONG: 98.498970° W  
 STATE PLANE  
 COORDINATES: (US Feet)  
 ZONE: OK NORTH  
 X: 1853598.3  
 Y: 596707.1

Date of Drawing: May 20, 2016  
 Invoice # 261011A Date Staked: May 20, 2016 JGW

**CERTIFICATE:**

I, Thomas L. Howell an Oklahoma Licensed Land Surveyor and an authorized agent of Topographic Land Surveyors of Oklahoma, do hereby certify to the information shown herein.

Thomas L. Howell  
 Oklahoma Lic. No. 1433

