API NUMBER: 011 23782

Straight Hole Stratigraphic Test

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

Approval Date: 04/17/2017
Expiration Date: 10/17/2017

PERMIT TO DRILL

WELL LOCATION: Sec: 28 Twp: 16N Rge: 13W County: BLAINE

SPOT LOCATION: SE SW SW SW FEET FROM QUARTER: FROM **SOUTH** FROM **WEST**
SECTION LINES: **283** **340**

Lease Name: THUMPER 28-16N-13W **Well No: 1H** **Well will be 283 feet from nearest unit or lease boundary.**

Operator Name: **PALOMA OPERATING CO INC** Telephone: 7136508509 OTC/OCC Number: 23932 0

PALOMA OPERATING CO INC
1100 LOUISIANA ST STE 5100
HOUSTON, TX 77002-5220

FERRIS JONES
ROUTE 1 BOX 235
FAY OK 73646

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

	Name	Depth		Name	Depth
1	MISSISSIPPI	11504	6		
2	WOODFORD	12400	7		
3			8		
4			9		
5			10		

Spacing Orders: No Spacing
Location Exception Orders:
Increased Density Orders:

Pending CD Numbers:
Special Orders:

Total Depth: 12500 Ground Elevation: 1793 **Surface Casing: 320** Depth to base of Treatable Water-Bearing FM: 270

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: 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** 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: 17-32228
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

Notes:

Category	Description
HYDRAULIC FRACTURING	4/7/2017 - 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/ 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
MEMO	4/7/2017 - G71 - PITS 1 & 2 - CLOSED SYSTEM=STEEL PITS PER OPERATOR REQUEST, PIT 2 - OBM RETURNED TO VENDOR, CUTTINGS PERMITTED PER DISTRICT
SPACING	4/17/2017 - G60 - N/A STRAT TEST

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.

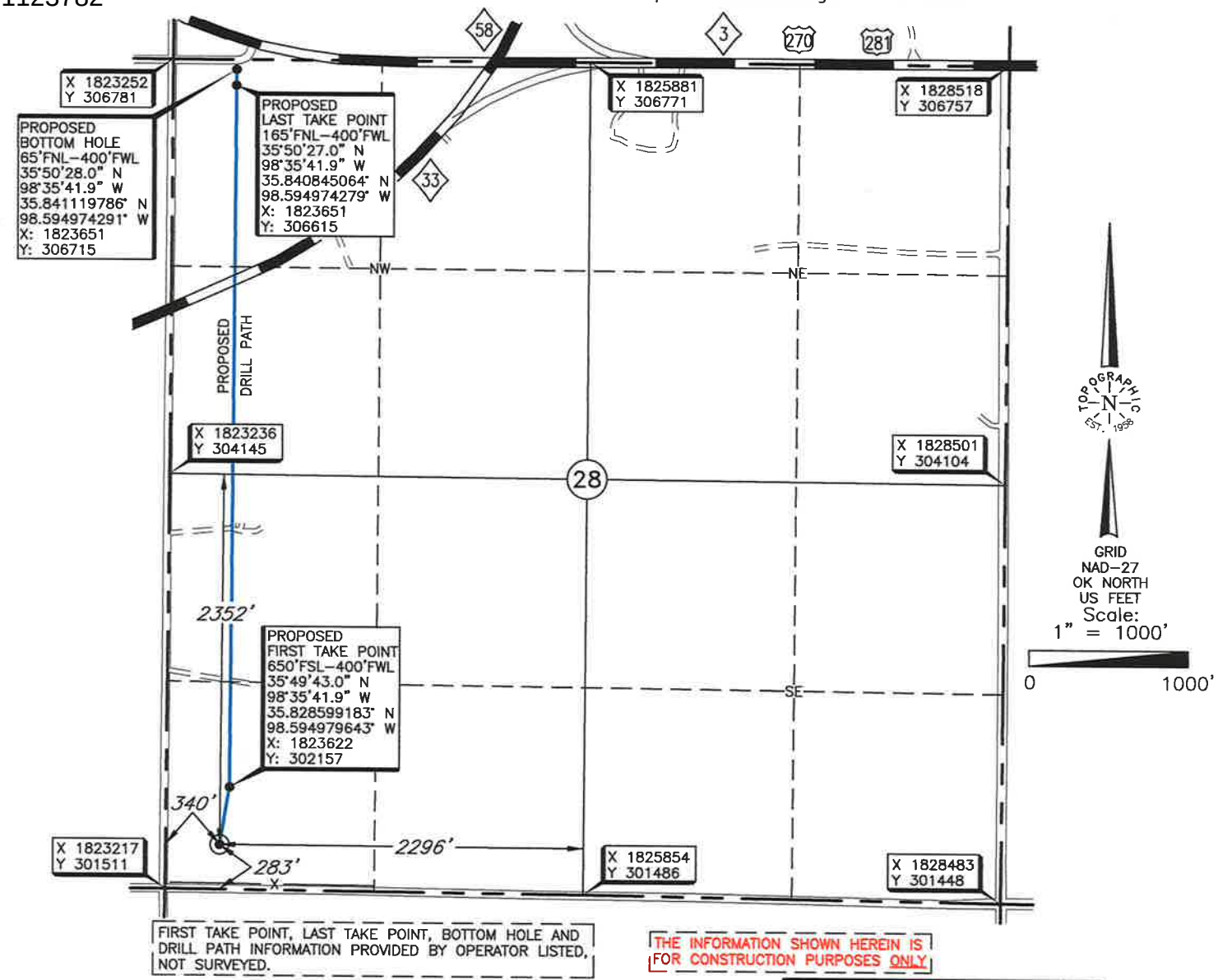
TOPOGRAPHIC LAND SURVEYORS OF OKLAHOMA

6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 * LOCAL (405) 843-4847 * OUT OF STATE (800) 654-3219
Certificate of Authorization No. 1293 LS

BLAINE County, Oklahoma

3501123782

283'FSL-340'FWL Section 28 Township 16N Range 13W I.M.



FIRST TAKE POINT, LAST TAKE POINT, BOTTOM HOLE AND DRILL PATH INFORMATION PROVIDED BY OPERATOR LISTED, NOT SURVEYED.

THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY

Operator: PALOMA OPERATING COMPANY, INC.

Lease Name: THUMPER 28-16N-13W Well No.: 1H

ELEVATION: 1793' Gr. at Stake

Topography & Vegetation Loc. fell in sloping pasture, ± 240' N. of fence.

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 the junction of St. Hwy 33/US Hwy 270 & US Hwy 281/St. Hwy 8 in Watonga, Oklahoma, go ± 10 miles West on St. Hwy 33/US Hwy 270, then ± 1 mile South to the Southwest Corner of Section 28, T16N-R13W.

This information was gathered with a GPS receiver with ±1 foot Horiz./Vert. accuracy.

DATUM: NAD-27
LAT: 35°49'39.3" N
LONG: 98°35'42.7" W
LAT: 35.827591502° N
LONG: 98.595183066° W

STATE PLANE
COORDINATES (US FEET):
ZONE: OK NORTH
X: 1823559
Y: 301791

Invoice # 269809 Date of Drawing: Mar. 9, 2017
Date Staked: Mar. 8, 2017 NMB

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 Reg. No. 1433

LICENSED PROFESSIONAL LAND SURVEYOR
THOMAS L. HOWELL
1433
3-9-17
OKLAHOMA