

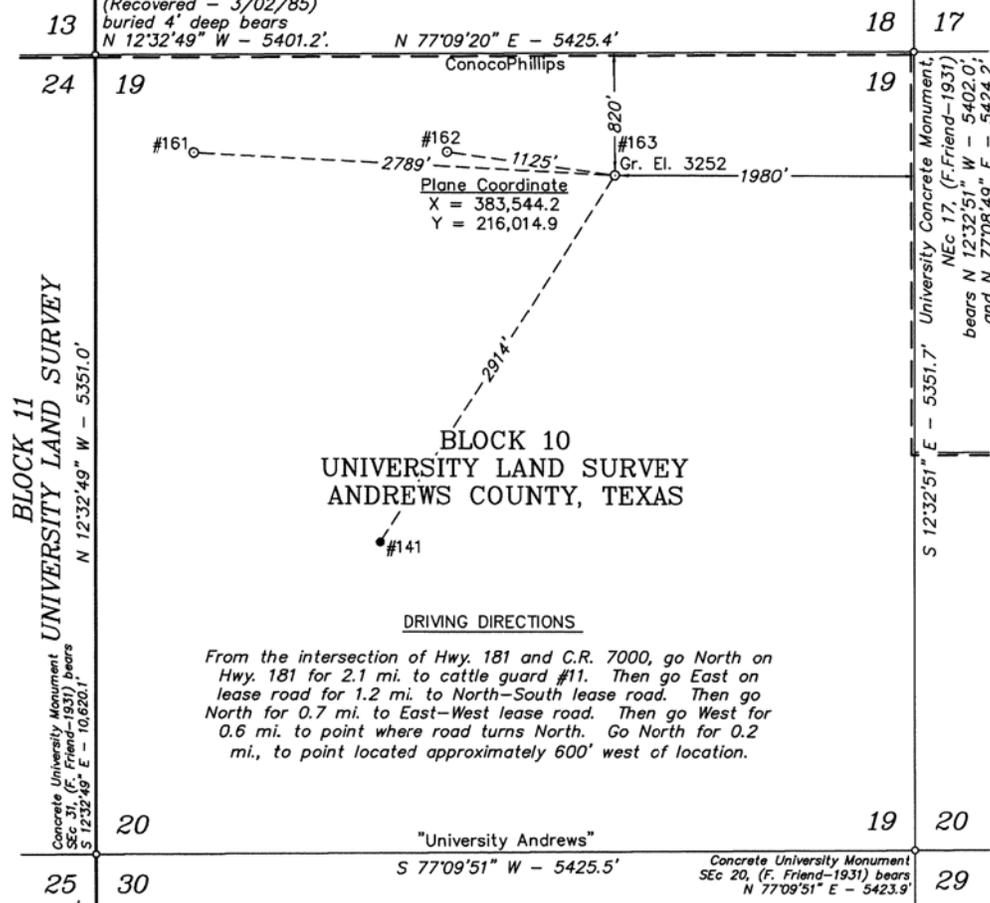
RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION
SWR #13 Formation Data

ANDREWS (003) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
YATES	2,500	3,200		1	12/17/2013
SEVEN RIVERS	3,000	3,000		2	12/17/2013
QUEEN	3,600	4,800		3	12/17/2013
GRAYBURG	3,100	5,000		4	12/17/2013
SAN ANDRES	3,700	5,300	CO2 flood, high flows, H2S, corrosive	5	12/17/2013
HOLT	5,000	5,500		6	12/17/2013
GLORIETA	5,100	6,000		7	12/17/2013
TUBB	6,100	6,300		8	12/17/2013
CLEARFORK	5,600	7,600		9	12/17/2013
PERMIAN DETRITAL	7,800	7,900		10	12/17/2013
LEON	7,900	7,900		11	12/17/2013
WICHITA ALBANY	6,500	8,100		12	12/17/2013
SPRABERRY	7,300	8,600		13	12/17/2013
DEAN	9,200	9,500		14	12/17/2013
WOLFCAMP	7,500	9,900		15	12/17/2013
CANYON	8,600	10,200		16	12/17/2013
PENNSYLVANIAN	8,700	10,200		17	12/17/2013
MCKEE	8,300	10,600		18	12/17/2013
STRAWN	8,800	11,000		19	12/17/2013
FUSSELMAN	8,400	11,900		20	12/17/2013
DEVONIAN	7,600	12,500		21	12/17/2013
SILURIAN	8,000	12,500		22	12/17/2013
ELLENBURGER	7,900	13,900		23	12/17/2013

The above list may not be all inclusive, and may also include formations that do not intersect all wellbores. Formation "TOP" information listed reflects an estimated range based on geologic variances across the county. To clarify, the "Deep Top" is not the bottom of the formation; it is the deepest depth at which the "TOP" of the formation has been or might be encountered. This is a dynamic list subject to updates and revisions. It is the operator's responsibility to make sure that at the time of spudding the well the most current list is being referenced. Refer to the RRC website at the following address for the most recent information.
<http://www.rrc.state.tx.us/oil-gas/compliance-enforcement/rule-13-geologic-formation-info>

Found University Concrete Monument with 1" X 5' pipe set in 3" Iron Pipe (Recovered - 3/02/85) buried 4' deep bears N 12°32'49" W - 5401.2'



**BLOCK 10
UNIVERSITY LAND SURVEY
ANDREWS COUNTY, TEXAS**

DRIVING DIRECTIONS

From the intersection of Hwy. 181 and C.R. 7000, go North on Hwy. 181 for 2.1 mi. to cattle guard #11. Then go East on lease road for 1.2 mi. to North-South lease road. Then go North for 0.7 mi. to East-West lease road. Then go West for 0.6 mi. to point where road turns North. Go North for 0.2 mi., to point located approximately 600' west of location.

**BLOCK 11
UNIVERSITY LAND SURVEY**
N 12°32'49" W - 5351.0'
Concrete University Monument SEC 31, (F. Friend-1931) bears S 12°32'49" E - 10,620.1'

Concrete University Monument, SEC 17, (F. Friend-1931) bears N 12°32'51" W - 5402.0' and N 77°08'49" E - 5424.2'
S 12°32'51" E - 5351.7'

20 "University Andrews" 19 20
S 77°09'51" W - 5425.5'
Concrete University Monument SEC 20, (F. Friend-1931) bears N 77°09'51" E - 5423.9' 29

Date Surveyed: June 25, 2008
Weather: Hot & Clear

LEGEND

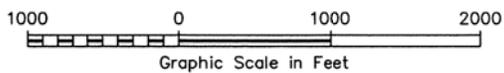
- - Denotes Proposed Well Location
- - Denotes Producing Well Location
- - Denotes Calculated Corner this Survey
- ==== - Denotes Unit Boundary Line

The University Andrews #163 is located approximately 16 miles Southwest of Andrews, Texas.

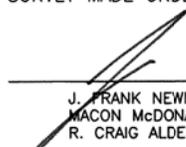
NOTE:

- 1) Plane Coordinates and Bearings shown hereon are Lambert Grid and Conform to the "Texas Coordinate System", Texas North Central Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.
- 2) Geodetic Coordinate shown hereon references the North American Datum of 1927, (Clarke Spheroid of 1866). Reference Stations - "ROSWELL" - CORS (DG6517), "SUMMERFIELD 1" - CORS (AJ1814) and "JAYTON" - CORS (AF9637).
- 3) See information filed in the office of this Surveyor which describes the reconstruction of this Section.

Geodetic Coordinate
Latitude = 32°08'59.69" N
Longitude = 102°43'28.85" W



I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE SURVEY MADE UNDER MY SUPERVISION.




J. FRANK NEWMAN TEXAS R.P.L.S. No. 5011
 MACON McDONALD TEXAS R.P.L.S. No. 4398
 R. CRAIG ALDERMAN TEXAS R.P.L.S. No. 5285

**WEST COMPANY
of Midland, Inc.**

110 W. LOUISIANA, STE. 110
MIDLAND TEXAS, 79701
(432) 687-0865 - (432) 687-0868 FAX

CONOCOPHILLIPS

Location of the
UNIVERSITY ANDREWS #163
820' FNL & 1980' FEL
Section 19, Block 10,
University Land Survey
Andrews County, Texas

Drawn By: ALC	Date: July 14, 2008
Scale: 1"=1000'	Field Book: 405/ 44-47
Revision Date:	Quadrangle: North Cowden NW
W.O. No: 2008-0747	Dwg. No.: 2008-0747