



RAILROAD COMMISSION OF TEXAS

Form G-1

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Status: Approved
Date: 12/14/2015
Tracking No.: 145620

GAS WELL BACK PRESSURE TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG

OPERATOR INFORMATION

Operator Name: WYCO OIL & GAS LLC **Operator No.:** 945368
Operator Address: PO BOX 12367 ODESSA, TX 79768-2367

WELL INFORMATION

API No.: 42-495-30460 **County:** WINKLER
Well No.: 1 **RRC District No.:** 08
Lease Name: UNIVERSITY "21-34" **Field Name:** APOLLO (UPPER MORROW)
RRC Gas ID No.: 237045 **Field No.:** 03293750
Location: Section: 34, Block: 21, Survey: UNIVERSITY LANDS, Abstract: U74
Latitude: **Longitude:**
This well is located 3.86 **miles in a** SOUTHWEST
direction from WINK,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Reclass Producing to Injection
Type of completion: Other/Recompletion
Well Type: Active UIC **Completion or Recompletion Date:** 05/04/2015

Type of Permit	Date	Permit No.
Permit to Drill, Plug Back, or Deepen Rule 37 Exception	05/30/2008	649830
Fluid Injection Permit		
O&G Waste Disposal Permit	02/10/2015	14913
Other:		

COMPLETION INFORMATION

Spud date: 04/27/2015 **Date of first production after rig released:** 05/04/2015
Date plug back, deepening, recompletion, or drilling operation commenced: 04/27/2015 **Date plug back, deepening, recompletion, or drilling operation ended:** 05/04/2015
Number of producing wells on this lease in this field (reservoir) including this well: 0 **Distance to nearest well in lease & reservoir (ft.):**
Total number of acres in lease: 1.00 **Elevation (ft.):** 2771 RKB
Total depth TVD (ft.): 17760 **Total depth MD (ft.):**
Plug back depth TVD (ft.): 6280 **Plug back depth MD (ft.):**
Was directional survey made other than inclination (Form W-12)? Yes **Rotation time within surface casing (hours):**
Is Cementing Affidavit (Form W-15) attached? No
Recompletion or reclass? Yes **Multiple completion?** No
Type(s) of electric or other log(s) run: None
Electric Log Other Description:
Location of well, relative to nearest lease boundaries of lease on which this well is located: 208.7 Feet from the North **Off Lease:** No
208.7 Feet from the East **Line and**
UNIVERSITY "21-34" **Lease.**

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.

<u>Field & Reservoir</u>	<u>Gas ID or Oil Lease No.</u>	<u>Well No.</u>	<u>Prior Service Type</u>
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G1: N/A
 PACKET APOLLO (UPPER MORROW) 237045 1 Producing

FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:

GAU Groundwater Protection Determination Depth (ft.): 1275.0 Date: 11/25/2013
 SWR 13 Exception Depth (ft.):

GAS MEASUREMENT DATA

Date of test: Gas measurement method(s):
 Gas production during test (MCF): 0
 Was the well preflowed for 48 hours? Yes

Run No.	Line size	Orif. or Choke Size (in.)	24 hr. Coeff. Orif. Or Choke (in.)	Static Pm or Choke (in.)	Diff (hw)	Flow Temp (°F)	Temp. (Ftf)	Gravity (Fg)	Compress (Fpv)	Volume (MCF/day)
1										0.0

FIELD DATA AND PRESSURE CALCULATIONS

Gravity (dry gas): Gravity (liquid hydrocarbons) (Deg. API):
 Gas-Liquid Hydro Ratio (CF/Bbl): Gravity (mixture): Gmix=
 Avg. shut in temp. (°F): Bottom hole temp. and depth: °F@ FT

Run No.	Time of Run (Min.)	Choke Size (in.)	Wellhead Pressure (PSIA)	Wellhead Flow Temp (°F)
SHUT-IN	0			

CASING RECORD

Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
2	Intermediate	10 3/4	12 1/4	11700	4204		H	623	1162.0	0	Circulated to Surface
1	Surface	13 3/8	17 1/2	4448			HCL&C	6300	12216.0	0	Circulated to Surface
3	Intermediate	10 3/4	12 1/4	11700	7004		H	851	1477.0	0	Circulated to Surface
4	Intermediate	10 3/4	12 1/4	11700			H&C	1170	1803.0	7004	Circulated to Surface

LINER RECORD

Row	Liner Size (in.)	Hole Size (in.)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	5	9 7/8	11310	17760	H	1005	1788.9	1375 2	Cement Evaluation Log

TUBING RECORD

Row	Size (in.)	Depth Size (ft.)	Packer Depth (ft.)/Type
1	2 7/8	5012	5012 / ARROW MODEL H

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
1	No	L 5090	6217

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.

Was hydraulic fracturing treatment performed? No

Is well equipped with a downhole actuation sleeve? No
 If yes, actuation pressure (PSIG):

Production casing test pressure (PSIG) prior to hydraulic fracturing treatment: Actual maximum pressure (PSIG) during hydraulic fracturing:

Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)? No

Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)	
1	Acid	10000 GALS 15% NEFE HCL PLUS 8000 LBS GRS AS DIVERTER	5090.0	6217.0
2	Cast Iron Bridge Plug	CIBP CAPPED WITH 20' OF CEMENT	10630.0	10652.0
3	Cast Iron Bridge Plug	CIBP CAPPED WITH 20' OF CEMENT	6280.0	6302.0

FORMATION RECORD

Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
RUSTLER - POSSIBLE FLOW; POSSIBLE USABLE QUALITY W	Yes	1690.0		Yes	ISO BY SURF CSG, PROD CSG, CMT
COLBY-QUEEN	No	2900.0		No	NOT PRESENT
YATES	No	3200.0		No	NOT PRESENT
QUEEN-SEVEN RIVERS	No	3400.0		No	NOT PRESENT
SAN ANDRES - HIGH FLOWS, H2S, CORROSIVE HOLT	No	4400.0		No	NOT PRESENT
DELAWARE	Yes	4930.0		Yes	ISO BY PROD CSG
GLORIETA	No	5600.0		No	NOT PRESENT
CLEARFORK	No	6200.0		No	NOT PRESENT
WICHITA ALBANY	No	6850.0		No	NOT PRESENT
BRUSHY CANYON	Yes	7213.0		Yes	ISO BY PROD CSG, CMT
CHERRY CANYON	Yes	6302.0		Yes	ISO BY PROD CSG
CANYON	No	8400.0		No	NOT PRESENT
BONE SPRINGS	Yes	8590.0		Yes	ISO BY PROD CSG, CMT
MONTOYA	Yes	17674.0		Yes	ISO BY LINER, CMT
WADDELL	No	11000.0		No	NOT PRESENT
WOLFCAMP	Yes	11220.0		Yes	ISO BY PROD CSG, LINER, CIBP, CMT
ATOKA	Yes	13396.0		Yes	ISO BY LINER, CMT
STRAWN	No	14800.0		No	NOT PRESENT
PENNSYLVANIAN	No	15500.0		No	NOT PRESENT
MISSISSIPPIAN	Yes	15182.0		Yes	ISO BY LINER, CMT
DEVONIAN	Yes	16850.0		Yes	ISO BY LINER, CIBP, CMT
SILURIAN	Yes	17022.0		Yes	ISO BY LINER, CMT
FUSSELMAN	Yes	17376.0		Yes	ISO BY LINER, CIBP, CMT
ELLENBURGER	No	21400.0		No	NOT PRESENT

Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)? No
 Is the completion being downhole commingled (SWR 10)? No

REMARKS

RRC REMARKS

PUBLIC COMMENTS:

CASING RECORD :

TUBING RECORD:

PRODUCING/INJECTION/DISPOSAL INTERVAL :

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :

PLUGBACK OF DRY HOLE DRILLED BY MONSANTO IN 1976, RE-ENTERED BY NOBLE OPERATING IN 2008. PLUGS ABOVE FUSSELMAN AND DEVONIAN SET & REPORTED BY NOBLE OPERATING PREVIOUSLY. SET CIBP CAPPED WITH 20' OF CMT AT 10650' & 6300'. NEW PLUGS AND PRODUCTION CSG HELD 1000 PSI FOR 30 MIN. MIDLAND RRC JOB # 5766

GAS MEASUREMENT DATE REMARK:

OPERATOR'S CERTIFICATION

Printed Name: Susan Perkins

Title: Consultant

Telephone No.: (512) 772-1555

Date Certified: 11/16/2015



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

Cementer: Fill in shaded areas.
Operator: Fill in other items.

CEMENTING REPORT

OPERATOR INFORMATION

Operator Name: WYCO Oil & Gas LLC	Operator P-5 No.: 946368
Cementer Name: Dabig Wireline	Cementer P-5 No.:

WELL INFORMATION

District No.: 8	County: Winkler	
Well No.: 1	API No.: 42-495-30480	Drilling Permit No.: 604023
Lease Name: University 21-34	Lease No.: 237045	
Field Name: Apollo (Upper Morrow)	Field No.: 03293-760	

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:			
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:			
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO if no for surface casing, explain in Remarks.		Setting depth shoe (ft.):	Top of liner (ft.):		
			Setting depth liner (ft.):		
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:			
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

II. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:			
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:			
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:	Lower:	Upper:	Lower:		
Tapered string size of casing in O.D. (in.)		Tapered string casing weight (lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:	Lower:	Upper:	Lower:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth shoe (ft.):			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:			
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

III. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:			
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:			
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:	Lower:	Upper:	Lower:		
Tapered string size of casing in O.D. (in.)		Tapered string casing weight (lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:	Lower:	Upper:	Lower:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth tool (ft.):			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:			
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date	04/29/2015	04/29/2015					
Size of hole or pipe (in.)	9.75" ID	9.75" ID					
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)	10650	6300					
Amount of cement on top of CIBP (ft.)	25'20"	25'20"					
Sacks of cement used	9	9					
Slurry volume pumped (cu. ft.)	11	11					
Calculated top of plug (ft.)	10630	6280					
Measured top of plug, if tagged (ft.)		6275					
Slurry weight (lbs/gal)							
Class/type of cement	Type 2	Type 2					
Perforate and squeeze (YES/NO)	no	no					

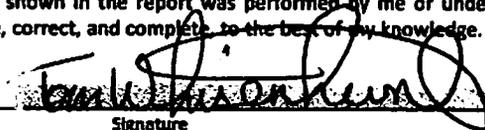
REMARKS

Set CIBP at 10650 on wireline, Dumped 20 ft cement (9 sacks) in 3 runs w/RL dump bailer. Tested casing & plug to 1000 psi for 30 min, OK. Set CIBP at 6300 on wireline. Dumped 20 ft cement (9 sacks) in 3 runs w/RL dump bailer. Tested casing & plug to 1000 psi for 30 min, OK. Next day tag top plug @ 6275 w/ tubing.

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Tom Whisenhunt, Corp Sales

Dialog Wireline



Name and title of cementer's representative	Cementing Company	Signature
2403 Garden City Hwy, Midland, Tx 79701	432-684-4707	04/30/2015
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Kevin A. Myers

Consultant



Typed or printed name of operator's representative	Title	Signature
303 S. Terrell Street, Midland, Tx 79701	432-413-4322	04/30/2015
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- A. What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.
The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- B. How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- C. Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&p_tac=1&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&p_tac=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- D. Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- E. Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/OV tool.
- F. Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- G. Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

CHRISTI CRADDICK, CHAIRMAN
BARRY T. SMITHERMAN, COMMISSIONER
DAVID PORTER, COMMISSIONER



GIL BUJANO, P.E.
DIRECTOR, OIL AND GAS DIVISION
NORMAN GEARHART, P.G.
MANAGER, GROUNDWATER ADVISORY UNIT

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

October 17, 2014

WYCO Oil & Gas LLC
P O Box 12367
Odessa, TX 79768

Attn: Kevin A. Myers

Re: Application to Dispose of Oil and Gas Waste by Injection (RRC Form W-14)
WYCO Oil & Gas LLC, University 21-34 #1, API # 495-30460
1320' FNL & 1320' FEL, Section 34, Block 21, UL Survey
Winkler County, Texas (D-81) (SC-6141)

Mr. Myers:

This letter is in response to your referenced application for a Railroad Commission of Texas permit to dispose of oil and gas waste into strata in the depth interval from 4996 to 6220 feet. Our review of the data contained in the application and of other available geologic data indicates that, if otherwise compliant with Railroad Commission rules, using this disposal well to inject oil and gas waste into this subsurface stratum will not endanger fresh water in the area.

The base of usable-quality groundwater is estimated to occur at a depth of 1275 feet. The base of USDW is also estimated at a depth of 1275 feet. If you have any questions about this letter, please contact me by telephone at (512) 463-2980, by e-mail at jack.oswalt@rrc.state.tx.us, or in writing at the address shown on the letterhead (specify Mail Code 455-14 on the first line of the address).

Sincerely,

A handwritten signature in black ink, appearing to read "Jack M. Oswalt".

Digitally signed by Jack Oswalt
DN: c=US, st=TEXAS, l=Austin, o=Railroad
Commission of Texas, cn=Jack Oswalt,
email=jack.oswalt@rrc.state.tx.us
Date: 2014.10.17 15:37:18 -0500

Jack M. Oswalt, P.G.
Geologist, Groundwater Advisory Unit



W14_945368_49530460_D81_20141017

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date **November 25, 2013**

GAU File No.: SC- **6141**

***** EXPEDITED APPLICATION *****

API Number **49530460**

Attention: **TYLER WALVOORD**

RRC Lease No. **237045**

SC_809924_49530460_237045_6141.pdf

**SPINDLETOP DRILLING CO
12850 SFURLING RD
STE 200
DALLAS TX 75230**

--Measured--

1320 ft FEL

1320 ft FNL

MRL:SECTION

Digital Map Location	
X-coord/Long	103.19848
Y-coord/Lat	31.70629
Datum	83
Zone	

P-5# 809924

County **WINKLER**

Lease & Well No. **UNIVERSITY #21-34**

Purpose **P&A**

Location **SUR-UL, BLK-21, SEC-34, --[TD=17760], [RRC 8],**

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Texas Railroad Commission recommends:

The base of usable-quality water that must be protected is estimated to occur at a depth of 1275 feet below the land surface. Moreover, the water contained in the interval from the land surface to a depth of 600 feet must be isolated from water in underlying beds.

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is intended for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

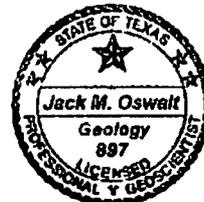
If you have any questions, please contact us at 512-463-2741, gau@rrc.state.tx.us, or by mail

Sincerely,


 Digitally signed by Jack Oswalt
 DN: cn=US, st=TEXAS, o=Austin, ou=Railroad
 Commission of Texas, ou=Groundwater
 Advisory Unit, cn=Jack Oswalt,
 email=jack.oswalt@rrc.state.tx.us
 Date: 2013.11.25 09:51:36 -0600

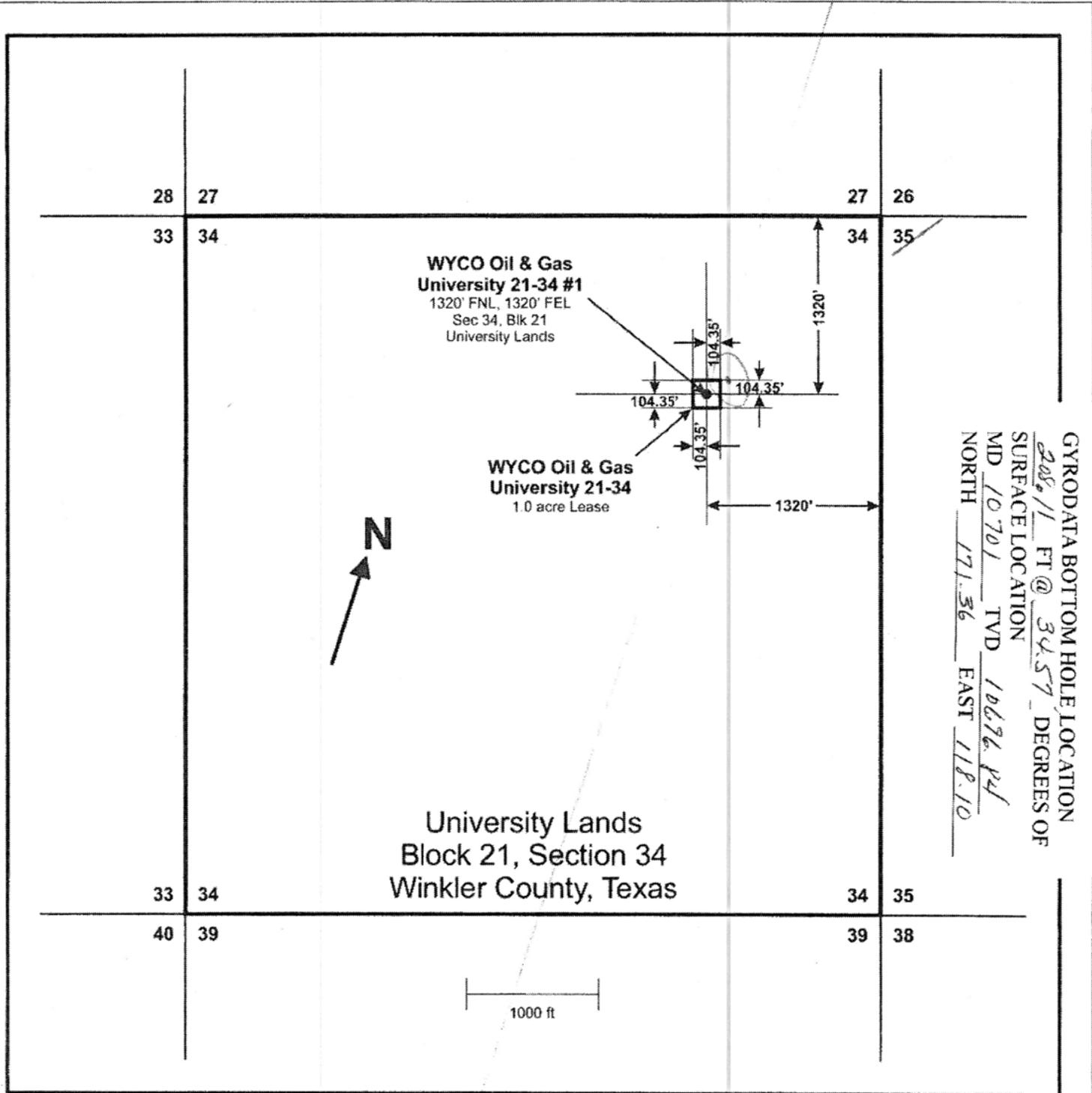
Jack M. Oswalt, P.G.

GEOLOGIST SEAL



Geologist Groundwater Advisory Unit
Oil & Gas Division

The seal appearing on this document was authorized by Jack M. Oswalt on 11/25/2013
Note: Alteration of this electronic document will invalidate the digital signature



GYRODATA BOTTOM HOLE LOCATION
 208° 11' FT @ 34.57 DEGREES OF
 SURFACE LOCATION
 MD 10701 TVD 10676.47
 NORTH 171.36 EAST 118.10

Operator: WYCO Oil & Gas LLC
 Lease Name: University 21-34
 Well Number: 1

Well Location Legal Description:
 1320' FNL, 1320' FEL, Section 34, Block 21, University Lands Survey, Winkler County, Texas

I hereby certify that the above is true and correct to the best of my knowledge and belief.

Kevin A. Myers
 Kevin A. Myers, Consulting Engineer

February 22, 2015
 Date