



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 04/09/2018
Tracking No.: 185164

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG

OPERATOR INFORMATION

Operator Name: JAGGED PEAK ENERGY LLC Operator No.: 429574
Operator Address: 1401 LAWRENCE ST STE 1800 DENVER, CO 80202-0000

WELL INFORMATION

API No.: 42-495-33771 County: WINKLER
Well No.: 2H RRC District No.: 08
Lease Name: UTL 4443-21 Field Name: PHANTOM (WOLFCAMP)
RRC Lease No.: 49661 Field No.: 71052900
Location: Section: 45, Block: 21, Survey: UNIVERSITY LAND, Abstract:

Latitude: Longitude:
This well is located 7.2 miles in a SW
direction from WINK,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Initial Potential
Type of completion: New Well
Well Type: Producing Completion or Recompletion Date: 11/17/2017

Type of Permit	Date	Permit No.
Permit to Drill, Plug Back, or Deepen	12/09/2016	820982
Rule 37 Exception		
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

COMPLETION INFORMATION

Spud date: 12/10/2016	Date of first production after rig released: 11/17/2017
Date plug back, deepening, recompletion, or drilling operation commenced: 12/10/2016	Date plug back, deepening, recompletion, or drilling operation ended: 01/16/2017
Number of producing wells on this lease in this field (reservoir) including this well: 3	Distance to nearest well in lease & reservoir (ft.): 645.0
Total number of acres in lease: 640.70	Elevation (ft.): 2751 GL
Total depth TVD (ft.): 11649	Total depth MD (ft.): 22152
Plug back depth TVD (ft.):	Plug back depth MD (ft.):
Was directional survey made other than inclination (Form W-12)? Yes	Rotation time within surface casing (hours): 83.2
Recompletion or reclass? No	Is Cementing Affidavit (Form W-15) attached? Yes
Type(s) of electric or other log(s) run: Gamma Ray (MWD)	Multiple completion? No
Electric Log Other Description:	
Location of well, relative to nearest lease boundaries	Off Lease : Yes
of lease on which this well is located: 385.0 Feet from the West Line and 1107.0 Feet from the South Line of the UTL 4443-21 Lease.	

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

Field & Reservoir	Gas ID or Oil Lease No.	Well No.	Prior Service Type
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PACKET: N/A

W2:	N/A
FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:	
GAU Groundwater Protection Determination	Depth (ft.): 950.0 Date: 12/19/2017
SWR 13 Exception	Depth (ft.):

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION	
Date of test: 12/30/2017	Production method: Flowing
Number of hours tested: 24	Choke size: 24
Was swab used during this test? No	Oil produced prior to test: 40988.00
PRODUCTION DURING TEST PERIOD:	
Oil (BBLs): 1523.00	Gas (MCF): 1219
Gas - Oil Ratio: 800	Flowing Tubing Pressure: 2218.00
Water (BBLs): 2221	
CALCULATED 24-HOUR RATE	
Oil (BBLs): 1523.0	Gas (MCF): 1219
Oil Gravity - API - 60.: 42.0	Casing Pressure: 2218.00
Water (BBLs): 2221	

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
1	Surface	13 3/8	17 1/2	996			C	700	1356.5	0	Circulated to Surface
2	Intermediate	9 5/8	12 1/4	7266		7266	C-POZ/H	875	2079.0	4041	Calculation
3	Intermediate	9 5/8	12 1/4	4041	4041		C	1185	4082.0	0	Circulated to Surface
4	Intermediate	7	8 3/4	12178			C/H	695	2207.4	0	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	4 1/2	6	10804	22141	HSLD	785	1193.0	10804	Calculation

TUBING RECORD			
Row	Size (in.)	Depth	Size (ft.)
1	4 1/2	10804	

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 11858	21925.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed?		Yes	
Is well equipped with a downhole actuation sleeve?		Yes	
If yes, actuation pressure (PSIG):		14160.0	
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:		15290	
Actual maximum pressure (PSIG) during hydraulic fracturing:		10335	
Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)?		Yes	
Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
1	Fracture	19,815,052 PROPPANT /32,357,040 GALLONS CLEAN	11858 21925

FORMATION RECORD					
Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
RUSTLER - POSSIBLE FLOW; POSSIBLE USABLE QUALITY W	Yes	760.0	760.0	Yes	ESTIMATE NOT LOGGED
COLBY-QUEEN	Yes	3085.0	3085.0	Yes	ESTIMATE NOT LOGGED
YATES	Yes	2775.0	2775.0	Yes	ESTIMATE NOT LOGGED
QUEEN-SEVEN RIVERS	Yes	3085.0	3085.0	Yes	ESTIMATE NOT LOGGED
SAN ANDRES - HIGH FLOWS, H2S, CORROSIVE	Yes	4035.0	4035.0	Yes	ESTIMATE NOT LOGGED
HOLT	Yes	4685.0	4685.0	Yes	ESTIMATE NOT LOGGED
DELAWARE	Yes	4685.0	4685.0	Yes	ESTIMATE NOT LOGGED
GLORIETA	Yes	5285.0	5285.0	Yes	ESTIMATE NOT LOGGED
CLEARFORK	Yes	5510.0	5510.0	Yes	ESTIMATE NOT LOGGED
WICHITA ALBANY	Yes	6760.0	6760.0	Yes	ESTIMATE NOT LOGGED
BRUSHY CANYON	Yes	7330.0	7335.0	Yes	ESTIMATE NOT LOGGED
CHERRY CANYON	Yes	6930.0	6935.0	Yes	ESTIMATE NOT LOGGED
CANYON	Yes	8430.0	8435.0	Yes	ESTIMATE NOT LOGGED
BONE SPRINGS	Yes	9426.0	9436.0	Yes	CASED
MONTOYA	Yes	10740.0	10800.0	Yes	ESTIMATE NOT LOGGED
WADDELL	Yes	11900.0	12000.0	Yes	ESTIMATE NOT LOGGED
WOLFCAMP	Yes	11397.0	11526.0	Yes	CASED/TARGET
ATOKA	No			No	BELOW TD
STRAWN	No			No	BELOW TD
PENNSYLVANIAN	No			No	BELOW TD
MISSISSIPPIAN	No			No	BELOW TD
DEVONIAN	No			No	BELOW TD
SILURIAN	No			No	BELOW TD
FUSSELMAN	No			No	BELOW TD
ELLENBURGER	No			No	BELOW TD
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
KOP: 10,900'

RRC REMARKS	
PUBLIC COMMENTS: [RRC Staff 2018-03-06 13:23:09.789] EDL=10067 feet, max acres=704, PHANTOM (WOLFCAMP) oil or gas well	
CASING RECORD :	
TUBING RECORD:	
PRODUCING/INJECTION/DISPOSAL INTERVAL :	
ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :	
POTENTIAL TEST DATA:	

OPERATOR'S CERTIFICATION	
Printed Name: Lauren Walsh	Title: Regulatory Specialist
Telephone No.: (720) 215-3634	Date Certified: 04/04/2018

**RAILROAD COMMISSION OF TEXAS**

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: Jagged Peak Energy LLC Operator P-5 No.: 429574
Cementer Name: Compass Cementing LLC Cementer P-5 No.: 160789

WELL INFORMATION

District No.: 08 County: Winkler
Well No.: 2H API No.: 42-495-33771 Drilling Permit No.: 820982
Lease Name: UTL 4443-21 Lease No.:
Field Name: Phantom (Wolfcamp) Field No.: 71052900

I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☒ Surface ☐ Intermediate ☐ Liner ☐ Production

Drilled hole size (in.): 17.5 Depth of drilled hole (ft.): 1000' Est. % wash-out or hole enlargement: 30%

Size of casing in O.D. (in.): 13.375 Casing weight (lbs/ft) and grade: 48#/H-40 No. of centralizers used: 3

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☒ YES ☐ NO If no for surface casing, explain in Remarks. Setting depth shoe (ft.): 996' Top of liner (ft.):
Setting depth liner (ft.):

Hrs. waiting on cement before drill-out: > 24 hrs Calculated top of cement (ft.): surface Cementing date: 12/12/2016

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	450	C	See Remarks	1021.5	1470
2	250	C	Calcium Chloride, C-45	335	479
3					
Total	700			1356.5	1949

II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ 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? ☐ YES ☐ 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: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement/DV tool ☐ 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? ☐ YES ☐ 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							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							


REMARKS

Lead additives: Gel, C-45, C-40P, Salt, Kol Seal

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.

Travis Riecks, Service supervisor

Compass Cementing



Name and title of cementer's representative

Cementing Company

Signature

10013 West County Rd 157, Midland, TX, 79706

432-561-5970

12/13/2016

Address

City, State, Zip Code

Tel: Area Code

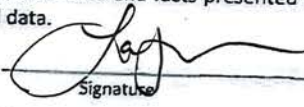
Number

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.

Laura Haynes

drilling technician



Typed or printed name of operator's representative

Title

Signature

1401 Lawrence, Suite 1700

Denver, CO 80202

720-215-3711

1/29/2018

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.

- 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.
- 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).
- 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_floc=&p_tloc=&p_ploc=&pg=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_floc=&p_tloc=&p_ploc=&pg=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.
- 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.
- 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/DV tool.
- 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.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



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Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: JAGGED PEAK Energy LLC

Operator P-5 No.: 429574

Cementer Name: Compass Well Services LLC

Cementer P-5 No.: 169789

WELL INFORMATION

District No.: 08

County: Winkler

Well No. 2H

API No.: 42-495-33771

Drilling Permit No.: 820982

Lease Name: UTL 4443-21

Lease No.:

Field Name: Phantom (Wolfcamp)

Field No.: 71052900

I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☐ 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? ☐ YES ☐ 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: ☐ Surface ☒ Intermediate ☐ Production ☐ Tapered production ☒ Multi-stage cement shoe ☐ Multiple parallel strings

Drilled hole size (in.): 12 1/4

Depth of drilled hole (ft.): 7318

Est. % wash-out or hole enlargement: 30%

Size of casing in O.D. (in.): 9 5/8

Casing weight (lbs/ft) and grade: 40 J-55

No. of centralizers used: 0

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? ☐ YES ☒ NO

Setting depth shoe (ft.): 7266

Hrs. waiting on cement before drill-out: N/A

Calculated top of cement (ft.): 4041

Cementing date: 12/24/2016

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	540	C/POZ	SEE REMARKS	1684	4472
2	335	H	SEE REMARKS	395	1150
3					
Total	875			2079	5822

III. CASING CEMENTING DATA

Type of casing: ☐ Surface ☒ Intermediate ☐ Production ☐ Tapered production ☒ Multi-stage cement/DV tool ☐ Multiple parallel strings

Drilled hole size (in.): 12 1/4

Depth of drilled hole (ft.): 7318

Est. % wash-out or hole enlargement: 30%

Size of casing in O.D. (in.): 9 5/8

Casing weight (lbs/ft) and grade: 40 J-55

No. of centralizers used: 0

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? ☒ YES ☐ NO

Setting depth tool (ft.): 4041

Hrs. waiting on cement before drill-out: > 24 hrs

Calculated top of cement (ft.): 0

Cementing date: 12/24/2016

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1095	C/POZ	SEE REMARKS	3963	10525
2	90	C	SEE REMARKS	119	316
3					
Total	1185			4082	10841

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							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

1ST STAGE: BENTONITE 10%, C47B .10%, C41P .25%, CITRIC ACID .15%, CSA1000 .15%, STE 6%, SALT .78#/SK, KOLSEAL 5#/SK, TAIL-C20 .30%, C51 .10%, C41P .25% 2ND STAGE LEAD: BENTONITE 10%, C45 2%, C47B .20%, C41P .25%, CSA1000 .15%, STE 6%, SALT 9.06#/SK, KOLSEAL 5#/SK, GYPSEAL 5#/SK, TAIL-C20 .05%, C51 .05%, C41P .25%, 155 BBLs OF CEMENT TO SURFACE ON 2ND STAGE

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.

Rob Elliott Cement Supervisor

COMPASS CEMENTING

Name and title of cementer's representative

Cementing Company

Signature

10013 W. CNTY RD 157

MIDLAND, TX

79706

325-387-2940

12/24/2016

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.

Laura Haynes

drilling technician

Typed or printed name of operator's representative

Title

Signature

1401 Lawrence St., Suite 1700

Denver, CO 80202

720-215-3711

1/30/2018

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.

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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=&pg=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=&pg=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.
- 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.
- 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/DV tool.
- 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.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: Jagged Peak Energy LLC Operator P-5 No.: 429574
Cementer Name: Compass Cementing Services LLC Cementer P-5 No.: 169789

WELL INFORMATION

District No.: 08 County: Winkler
Well No.: 2H API No.: 42-495-33771 Drilling Permit No.: 820982
Lease Name: UTL 4443-21 Lease No.:
Field Name: Phantom (Wolfcamp) Field No.: 71052900

I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☐ Surface ☒ Intermediate ☐ Liner ☐ Production

Drilled hole size (in.): 8.75 Depth of drilled hole (ft.): 12195 Est. % wash-out or hole enlargement: 15%

Size of casing in O.D. (in.): 7 Casing weight (lbs/ft) and grade: 32#p-110 No. of centralizers used: 0

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☒ YES ☐ NO If no for surface casing, explain in Remarks. Setting depth shoe (ft.): 12178 Top of liner (ft.):
Setting depth liner (ft.):

Hrs. waiting on cement before drill-out: > 24 hrs Calculated top of cement (ft.): 0 Cementing date: 1/2/2017

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	535	c	SEE BELOW	2016.95	10976
2	160	H	SEE BELOW	190.4	1205
3					
Total	695			2207.35	12181

II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ 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? ☐ YES ☐ 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: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement/DV tool ☐ 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? ☐ YES ☐ 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							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

slurry 1: 60:40:10(class c, lafarge poz, gel), .15% c-47b, .5% c-41p, .3% citric acid, .05% c-19, .1% csa-1000, 6% ste, 8#/sk sfa, 8#/sk kol seal, 5#/sk gyp seal. 2nd slurry: 100% class h, .3% c-20, .1% c-51, .25% c-41p,

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.

Michael Walls, Service supervisor

Compass Cementing



Name and title of cementer's representative

Cementing Company

Signature

10013 West County Rd 157, Midland, TX, 79706

432-561-5970

1-2-2017

Address

City, State, Zip Code

Tel: Area Code

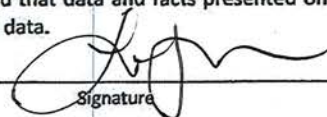
Number

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.

Laura Haynes

drilling technician



Typed or printed name of operator's representative

Title

Signature

1401 Lawrence St., Suite 1700

Denver, CO 80202

720-215-3711

1/30/2018

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.

- 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.
- 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).
- 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=&pg=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=&pg=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.
- 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.
- 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/DV tool.
- 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.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: JAGGED PEAK Energy LLC	Operator P-5 No.: 429574
Cementer Name: COMPASS CEMENTING SERVICES	Cementer P-5 No.: 1697891

WELL INFORMATION

District No.: 08	County: Winkler	
Well No.: 2H	API No.: 42-495-33771	Drilling Permit No.: 820982
Lease Name: UTL 4443-21	Lease No.:	
Field Name: Phantom (Wolfcamp)	Field No.: 71052900	

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Liner <input type="checkbox"/> Production		
Drilled hole size (in.): 6	Depth of drilled hole (ft.): 22,144'	Est. % wash-out or hole enlargement: 20%
Size of casing in O.D. (in.): 4.5	Casing weight (lbs/ft) and grade: #13.5/GBCD	No. of centralizers used: 0
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 22,141'	Top of liner (ft.): 10804
		Setting depth liner (ft.): 22141
Hrs. waiting on cement before drill-out: N/A	Calculated top of cement (ft.): 10804	Cementing date: 1/15/2017

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	785	HSLD	SEE REMARKS	1193	11331
2					
3					
Total	785			1193	11331

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.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight (lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used 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.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight (lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used 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							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

C20,C47B,C41P,CSA1000,STE

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.

ROB ELLIOTT CEMENTING SUPERVISOR

COMPASS CEMENTING SERVICE

Name and title of cementer's representative
10013 WEST COUNTY RD 157

Cementing Company

Signature

MIDLAND, TX 79706 432-561-5970

1/15/2017

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.

Laura Haynes

drilling technician

Signature

Typed or printed name of operator's representative

Title

1401 Lawrence, Suite 1700

Denver, CO 80202

720-215-3711

1/29/2018

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.

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- 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).
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- 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.
- 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/DV tool.
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- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

Tracking No.: 185164

This facsimile L-1 was generated electronically from data submitted to the RRC.

Instructions

When to File Form L-1:

- with Forms G-1, W-2, and GT-1 for new and deepened gas, oil, and geothermal wells
- with Form W-3 for plugged dry holes
- when sending in a log which was held under a request for confidentiality and the period for confidentiality has not yet expired.

When is Form L-1 NOT required:

- with Forms W-2, G-1, and GT-1 filed for injection wells, disposal wells, water supply wells, service wells, re-test wells, re-classifications, and plugbacks of oil, gas or geothermal wells
- with Form W-3 for plugging of other than a dry hole

Where to File Form L-1:

- with the appropriate Commission district office

Filling out Form L-1:

- Section I and the signature section must be filled out for all wells
- complete only the appropriate part of Section II

Type of log required:

- any wireline survey run for the purpose of obtaining lithology, porosity, or resistivity information
- no more than one such log is required but it must be of the subject well
- if such log is NOT run on the subject well, do NOT substitute any other type of log; just select Section II, Part A below

SECTION I. IDENTIFICATION

Operator Name: JAGGED PEAK ENERGY LLC	District No. 08	Completion Date: 11/17/2017
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 820982	
Lease Name UTL 4443-21	Lease/ID No. 49661	Well No. 2H
County WINKLER	API No. 42- 495-33771	

SECTION II. LOG STATUS (Complete either A or B)

☐ A. BASIC ELECTRIC LOG NOT RUN☒ B. BASIC ELECTRIC LOG RUN. (Select one)

- ☒ 1. Confidentiality is requested and a copy of the header for each log that has been run on the well is attached.
- ☐ 2. Confidentiality already granted on basic electric log covering this interval (applicable to deepened wells only).
- ☐ 3. Basic electric log covering this interval already on file with Commission (applicable to deepened wells only).
- ☐ 4. Log attached to (select one):

☐ (a) Form L-1 (this form). If the company/lease name on log is different from that shown in Section I, please enter name on log here: _____

Check here if attached log is being submitted after being held confidential. ☐

☐ (b) Form P-7, Application for Discovery Allowable and New Field Designation.

☐ (c) Form W-4, Application for Multiple Completion:

Lease or ID No(s). _____

Well No(s). _____

Lauren Walsh

Signature

JAGGED PEAK ENERGY LLC

Name (print)

Regulatory Specialist

Title

(720) 215-3634

Phone

04/04/2018

Date

-FOR RAILROAD COMMISSION USE ONLY-



Radial Cement Bond Gamma Ray CCL Log

Company Jagged Peak Energy, LLC. Well UTL 4443-21 #2H Field Phantom (Wolfcamp) County Winkler State Texas	Company Jagged Peak Energy, LLC.		
	Well UTL 4443-21 #2H		
	Field Phantom (Wolfcamp)		
	County Winkler State Texas		
Location:		API # : 42-495-33771	Other Services Temp
SEC 1107' FSL & 385' FWL TWP Section 45, Block 21 RGE University Land Survey			
Permanent Datum		Ground Level	Elevation
Log Measured From		KB 27' APD	
Drilling Measured From		KB	
		Elevation 2751'	K.B. 2778' D.F. 2776' G.L. 2751'

Date	2/18/2017	
Run Number	One	
Depth Driller	-	
Depth Logger	10778'	
Bottom Logged Interval	10775'	
Top Log Interval	Surface	
Open Hole Size	-	
Type Fluid	Water	
Density / Viscosity	-	
Max. Recorded Temp.	-	
Estimated Cement Top	6588'	
Time Well Ready	On Arrival	
Time Logger on Bottom	See Log	
Equipment Number	WL - 825	
Location	Midland, Texas	
Recorded By	Braden Vaughan	
Witnessed By	-	

Borehole Record				Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To
Casing Record		Size	Wgt/Ft	Top	Bottom		
Surface String							
Prot. String							
Production String							
Liner							

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

*****Thank You For Choosing Capitan Corporation*****

Primary Log On Well

Main Pass 5" = 100'



**RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION
CERTIFICATE OF COMPLIANCE STATEWIDE RULE 36**

FORM H-9
12/12/77

FILE WITH
DISTRICT OFFICE
IN TRIPLICATE

1. Operator				2. Operator Number (See Instruction 13)				3. RRC Dist.							
4. Street or P. O. Box No.				5. City				6. State				7. Zip Code			
8. Name of Lease, Facility or Operation				9. Field or Area Name				10. County							
11. General Operation Type - Circle One:								Other Explanation							
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><u>A - Oil Field Production</u> B - Gas Field Production</p> <p>C - Pipeline or Gathering Sys. D - Gasoline Plant</p> <p>E - Drilling or Workover F - Sweetening Unit</p> <p>G - Combination (explain) H - Other (explain)</p> </div> </div>															
12. RRC ID# of Operation(s) to be Covered by This Certificate				Type ID Code (See Instruction 12)		Indicate if Filing for Storage Facility Only YES NO		13. Hydrogen Sulfide Concentration _____ PPM				14. Maximum Escape Volume _____ MCF/Day			
								15. 100 PPM Radius of Exposure (ROE) _____ Ft.				16. 500 PPM Radius of Exposure (ROE) _____ Ft.			
								17. Operation is Existing New <input type="checkbox"/> <input type="checkbox"/>				18. Modification Resulting in Certificate Change Yes No <input type="checkbox"/> <input type="checkbox"/>			
								19. Workover or Drilling Well with 100 PPM ROE Greater than 3000' feet on Rule 36 Certified Well/Lease				Yes No <input type="checkbox"/> <input type="checkbox"/>			
								20. Previous Certificate Number if Available (For Amended Certificates) _____							
								21. The 100 PPM ROE includes any part of a public area except a public road				Yes No <input type="checkbox"/> <input type="checkbox"/>			
								22. The 500 PPM ROE includes any part of a public road				Yes No <input type="checkbox"/> <input type="checkbox"/>			
								23. Injection of fluid containing Hydrogen Sulfide (See Instruction 14)				Yes No <input type="checkbox"/> <input type="checkbox"/>			
								24. Date (or Depth) of Compliance with all applicable provisions of Rule 36 ____/____/19____ Mo Day Year							
								Depth of Compliance for Drilling Operation _____ Ft. from Surface							
25. Contingency Plan Location of Plan (See Instruction 15)												Has been prepared Yes No <input type="checkbox"/> <input type="checkbox"/>			
26. Location of data used to prepare this certificate (See Instruction 15)															
CERTIFICATE															
I declare under penalties prescribed in Section 91.143, Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision, and that I am qualified to make this certification by virtue of my training and experience, and by my analysis of the operation being certified, or by the analysis of qualified person working under my supervision, and that the data and facts stated therein are true, correct, and complete, to the best of my knowledge.															
Representative of Company				Title				Phone No.				Date			

RAILROAD COMMISSION USE ONLY

This operation and the equipment used therein is approved on the basis of the above certification and is subject to further Commission audit for compliance with the required provisions of Statewide Rule 36. This approval may be cancelled if investigation determines that the operation does not comply with the provisions of Statewide Rule 36.

APPROVED BY: _____

DATE: _____

REMARKS:

CERTIFICATION NUMBER: _____

CERTIFICATE OF POOLING AUTHORITY

Revised 05/2001

P-12

1. Field Name(s)	2. Lease/ID Number (if assigned)	3. RRC District Number
4. Operator Name	5. Operator P-5 Number	6. Well Number
7. Pooled Unit Name	8. API Number	9. Purpose of Filing
10. County	11. Total acres in pooled unit	<input type="checkbox"/> Drilling Permit (W-1) <input type="checkbox"/> Completion Report

DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

TRACT/PLAT IDENTIFIER	TRACT NAME	ACRES IN TRACT (See inst. #7 below)	INDICATE UNDIVIDED INTERESTS	
			UNLEASED	NON-POOLED
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>

CERTIFICATION:

I declare under penalties prescribed pursuant to the Sec. 91.143, Texas Natural Resources Code, that I am authorized to make the foregoing statements and that the information provided by me or under my direction on this Certificate of Pooling Authority is true, correct, and complete to the best of my knowledge.

Lauren Walsh
 Signature _____ Print Name _____
 Title _____ E-mail (if available) _____ Date _____ Phone _____

INSTRUCTIONS — Reference: Statewide Rules 31, 38 and 40

- When two or more tracts are pooled to form a unit to obtain a drilling permit, file completion paperwork, or reform a pooled unit pursuant to Rule 38(d)(3) the operator must file an original Certificate of Pooling Authority and certified plat.
- The certified plat shall designate each tract with an outline and a tract identifier. The tract identifier on the plat shall correspond to the tract identifier and associated information listed on the Certificate.
- If within an individual tract, a non-pooled and/or unleased interest exists, indicate by checking the appropriate box.
- If the Purpose of Filing is to obtain a drilling permit, in box #1 list all applicable fields separately or enter "All Fields" if the Certificate pertains to all fields requested on Form W-1.
- If the Purpose of Filing is to file completion paperwork, enter the applicable field name in box #1 for the completion.
- Identify the drill site tract with an * to the left of the tract identifier.
- The total number of acres in the pooled unit in #11 should equal the total of all acres in the individual tracts listed.

RAILROAD COMMISSION OF TEXAS

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

Form P-16

Page 1

Rev. 01/2016

Acreage Designation

SECTION I. OPERATOR INFORMATION

Operator Name:	Operator P-5 No.:
Operator Address:	

SECTION II. WELL INFORMATION

District No.:	County:	Purpose of Filing: <input type="checkbox"/> Drilling Permit Application (Form W-1) <input type="checkbox"/> Completion Report (Form G-1/W-2)
Well No.:	API No.:	
Total Lease Acres:	Drilling Permit No.:	
Lease Name:	Lease No.:	
Field Name:	Field No.:	

Filer is the owner or lessee, or has been authorized by the owner or lessee, of all or an undivided portion of the mineral estate under each tract for which filer is listed as operator below. For all leases operated by other entities, the number of assigned acres shown are reflected on current Commission records or the filer has been authorized by the current operator to change the assigned acreage of that operator as shown below.

SECTION III. LISTING OF ALL WELLS IN THE APPLIED-FOR FIELD ON THE SAME ACREAGE AS THE LEASE, POOLED UNIT, OR UNITIZED TRACT DESIGNATED IN SECTION II ABOVE BY FILER

[illegible]

Total Well Count >			< A. Total Assigned Horiz. Acreage		< C. Total Assigned Acreage
			< Total Remaining Horiz. Acreage		< Total Remaining Acreage
			< B. Total Assigned Vert./Dir. Acreage		
			< Total Remaining Vert./Dir. Acreage		

SECTION IV. REMARKS / PURPOSE OF FILING (see instructions)

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Attach Additional Pages As Needed. ☐ No additional pages ☐ Additional Pages: _____ (No. of additional pages)

CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that this report was prepared by me or under my supervision or direction, that I am authorized to make this report, and that the information contained in this report is true, correct, and complete to the best of my knowledge.

Lauren Walsh

Signature	Name and title (type or print)	Email (include email address <i>only</i> if you affirmatively consent to its public release)
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Address	City,	State,	Zip Code	Tel: Area Code	Number	Date: mo. day yr.
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GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 06 December 2016**GAU Number:** 164094**Attention:** JAGGED PEAK ENERGY LLC
1125 17TH STREET SUITE
DENVER, CO 80202**Operator No.:** 429574**API Number:**
County: WINKLER
Lease Name: UTL 4443-21
Lease Number:
Well Number: 2H
Total Vertical Depth: 12000
Latitude: 31.663580
Longitude: -103.212297
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U85; Block-21; Section-45

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

The interval from the land surface to the base of the Allurossa, which is estimated to occur at a depth of 950 feet, must be protected.

Please send Gamma Ray/Porosity log of this well when it is available.

This recommendation is applicable to all wells within a radius of 200 feet of this location.

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

This determination is based on information provided when the application was submitted on 12/06/2016. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or gau@rrc.texas.gov.

Groundwater Advisory Unit, Oil and Gas Division

Block 21, University Lands Survey Winkler County, Texas

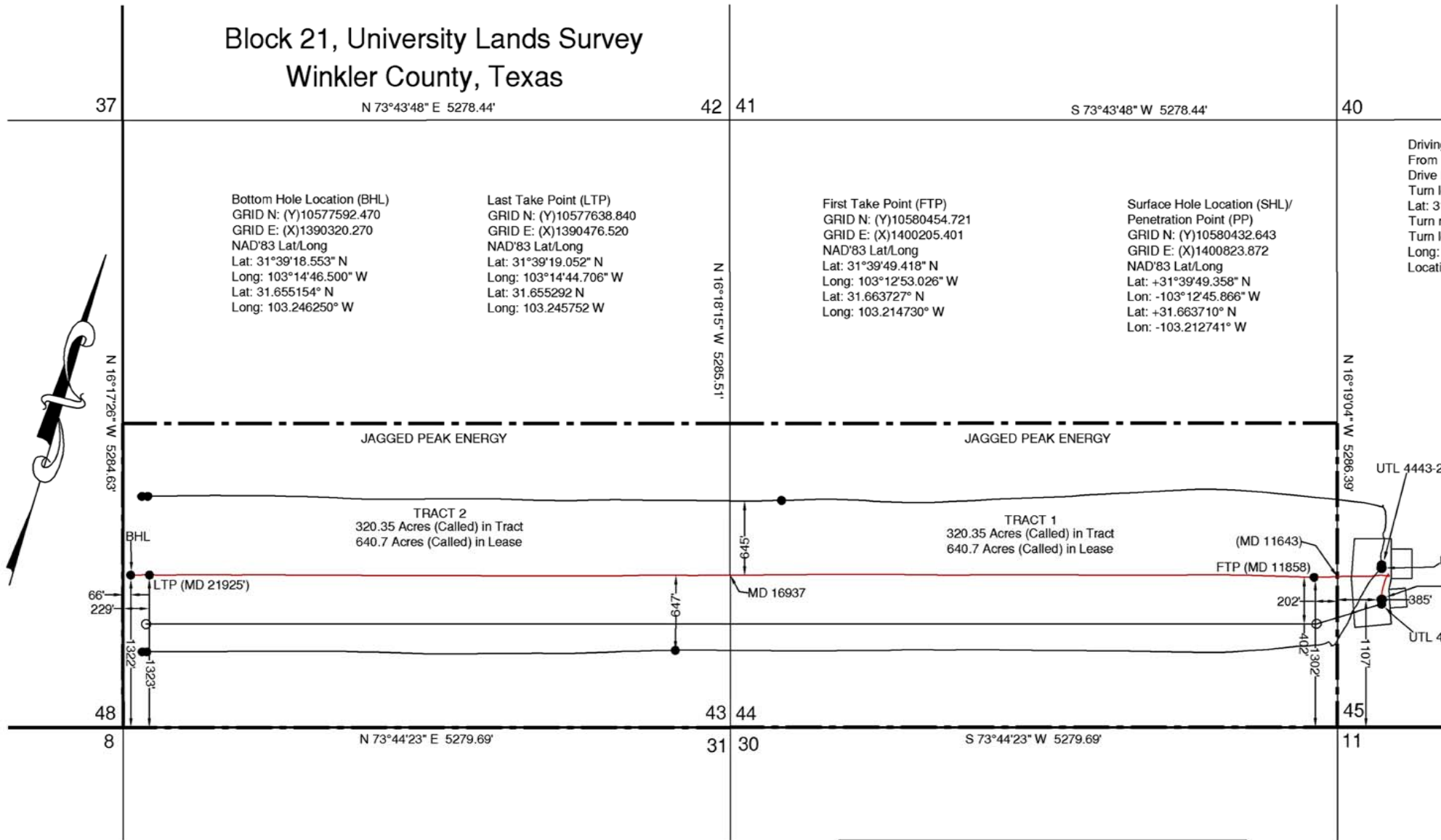
Driving Directions to Location:
From intersection of Hwy 115 and I-20 in Pyote, Texas;
Drive North on Hwy 115, 10.9 miles to Little Joe Road;
Turn left (West) on to Little Joe Road, drive 3.6 miles to a lease road at
Lat: 31°39'42.92", Long: 103°12'22.75";
Turn right (North) on to lease road, drive 0.2 miles to lease road;
Turn left (West) on to lease road, drive 0.3 miles to Lat: 31°39'46.36",
Long: 103°12'45.30";
Location is right (North) 305 feet.

Bottom Hole Location (BHL)
GRID N: (Y)10577592.470
GRID E: (X)1390320.270
NAD'83 Lat/Long
Lat: 31°39'18.553" N
Long: 103°14'46.500" W
Lat: 31.655154° N
Long: 103.246250° W

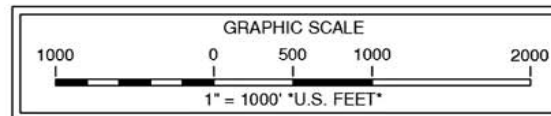
Last Take Point (LTP)
GRID N: (Y)10577638.840
GRID E: (X)1390476.520
NAD'83 Lat/Long
Lat: 31°39'19.052" N
Long: 103°14'44.706" W
Lat: 31.655292° N
Long: 103.245752° W

First Take Point (FTP)
GRID N: (Y)10580454.721
GRID E: (X)1400205.401
NAD'83 Lat/Long
Lat: 31°39'49.418" N
Long: 103°12'53.026" W
Lat: 31.663727° N
Long: 103.214730° W

Surface Hole Location (SHL)/
Penetration Point (PP)
GRID N: (Y)10580432.643
GRID E: (X)1400823.872
NAD'83 Lat/Long
Lat: +31°39'49.358" N
Lon: -103°12'45.866" W
Lat: +31.663710° N
Lon: -103.212741° W



WELL BORE LENGTHS	
SHL - PP/FTP	935.85'
PP/FTP - LTP	10129.01'
LTP - BHL	162.99'
SHL - BHL	11227.85'



Note: Well is located 7.2 miles Southwest of Wink, Texas.
Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.
Note: Coordinates shown herein are on The Texas Coordinate System of 1983, Central Zone.
Note: Location of the #1H FTP and BHL locations were obtained from the TRRC website.
Note: Well bore location determined from survey report provided by client.
Note: Location of surface hole is as-staked and was not re-surveyed for this plat.
Note: Bearings and distances are based on The Texas Coordinate System of 1983, Central Zone.
Note: Penetration Point & Bottom Hole Locations for the #1H were obtained from Texas RRC website.
Note: Example: (S-99999) indicates General Land Office file number.

November 16, 2016

161116JR-NRL

Revised: 1/16/2018-KRM
USGS Quadrangle Sheet: Wink South, Tex.

Railroad Commission Permit Plat

JAGGED PEAK ENERGY
UTL 4443-21 #2H (As-Drilled)
1107' FROM SOUTH LINE
385' FROM WEST LINE
UTL 4443-21 Lease
640.7 Acres being the S/2 of
Sections 43 & 44, Block 21
University Lands Survey
Winkler County, Texas

Scale: 1" = 1000'

