



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 12/18/2019
Tracking No.: 222028

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

OPERATOR INFORMATION

Operator Name: ABRAXAS PETROLEUM CORPORATION Operator No.: 003125
Operator Address: 18803 MEISNER DR SAN ANTONIO, TX 78258-0000

WELL INFORMATION

API No.: 42-475-37766 County: WARD
Well No.: 101H RRC District No.: 08
Lease Name: WOODBERRY 3 Field Name: PHANTOM (WOLFCAMP)
RRC Lease No.: 52646 Field No.: 71052900
Location: Section: 98, Block: F, Survey: G&MMB&A, Abstract: 52

Latitude: 31.559502 Longitude: -103.138410
This well is located 1.85 miles in a NW
direction from PYOTE,
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: 07/31/2019

Type of Permit Date Permit No.
Permit to Drill, Plug Back, or Deepen 12/12/2018 847614
Rule 37 Exception
Fluid Injection Permit
O&G Waste Disposal Permit
Other:

COMPLETION INFORMATION

Spud date: 02/16/2019 Date of first production after rig released: 07/31/2019
Date plug back, deepening, recompletion, or drilling operation commenced: 02/16/2019 Date plug back, deepening, recompletion, or drilling operation ended: 04/21/2019
Number of producing wells on this lease in this field (reservoir) including this well: 2 Distance to nearest well in lease & reservoir (ft.): 306.0
Total number of acres in lease: 640.70 Elevation (ft.): 2653 GL
Total depth TVD (ft.): 10906 Total depth MD (ft.): 16249
Plug back depth TVD (ft.): Plug back depth MD (ft.): 16151
Was directional survey made other than inclination (Form W-12)? Yes Rotation time within surface casing (hours): 147.5
Is Cementing Affidavit (Form W-15) attached? Yes
Recompletion or reclass? No Multiple completion? No
Type(s) of electric or other log(s) run: Other
Electric Log Other Description: LWD GR
Location of well, relative to nearest lease boundaries Off Lease : No
of lease on which this well is located: 330.0 Feet from the South Line and
200.0 Feet from the West Line of the
WOODBERRY 3 Lease.

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

Field & Reservoir Gas ID or Oil Lease No. Well No. Prior Service Type

PACKET: N/A

W2:	N/A		
FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:			
GAU Groundwater Protection Determination	Depth (ft.):	1400.0	Date: 11/08/2018
SWR 13 Exception	Depth (ft.):		

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION			
Date of test: 08/27/2019		Production method: Pumping	
Number of hours tested: 24		Choke size: 36/64	
Was swab used during this test? No		Oil produced prior to test: 14094.00	
PRODUCTION DURING TEST PERIOD:			
Oil (BBLS): 859.00		Gas (MCF): 1027	
Gas - Oil Ratio: 1195		Flowing Tubing Pressure: 880.00	
Water (BBLS): 2842			
CALCULATED 24-HOUR RATE			
Oil (BBLS): 859.0		Gas (MCF): 1027	
Oil Gravity - API - 60.: 40.8		Casing Pressure: 0.00	
Water (BBLS): 2842			

CASING RECORD											
Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Stage 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	1475			C	1230	2702.0	0	Circulated to Surface
2	Intermediate	10 3/4	12 1/4	4890			C	555	1269.0	2846	Calculation
3	Intermediate	10 3/4	12 1/4	4890	2846		C	535	1161.5	777	Calculation
4	Intermediate	7 5/8	9 7/8	11090			H	460	1177.0	7491	Calculation
5	Intermediate	7 5/8	9 7/8	11090	7491		H	400	992.0	320	Calculation

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 1/2	6 3/4	10199	16240	POZ / H	490	662.0	10199	Calculation

TUBING RECORD			
Row	Size (in.)	Depth (ft.)	Packer Depth (ft.)/Type
1	2 7/8	10407	10396 / AS-1X

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 11102	16151.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed?		Yes	
Is well equipped with a downhole actuation sleeve?		No	
If yes, actuation pressure (PSIG):			
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:		11000	
Actual maximum pressure (PSIG) during hydraulic fracturing:		10220	
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	FRAC W/ 11,583,070 #'S PROPPANT & 280,795 BBLS FLUID	11102 16151

FORMATION RECORD					
Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
RUSTLER	Yes	2000.0	2000.0	Yes	CEMENTED BEHIND
YATES	No			No	NOT DEPOSITED IN THIS BASIN
SEVEN RIVERS	No			No	NOT DEPOSITED IN THIS BASIN
QUEEN	No			No	NOT DEPOSITED IN THIS BASIN
GLORIETA	No			No	NOT DEPOSITED IN THIS BASIN
SAN ANDRES - HIGH FLOWS, H2S, CORROSIVE	No			No	NOT DEPOSITED IN THIS BASIN
HOLT	No			No	NOT DEPOSITED IN THIS BASIN
CLEARFORK	No			No	NOT DEPOSITED IN THIS BASIN
DELAWARE	Yes	4880.0	4892.0	Yes	CEMENTED BEHIND
TUBB	No			No	NOT DEPOSITED IN THIS BASIN
WICHITA ALBANY	No			No	NOT DEPOSITED IN THIS BASIN
CHERRY CANYON	Yes	5738.0	5749.0	Yes	CEMENTED BEHIND
WADDELL	No			No	NOT DEPOSITED IN THIS BASIN
BONE SPRINGS	Yes	8038.0	8050.0	Yes	CEMENTED BEHIND
1ST BONE SPRING	Yes	8038.0	8050.0	Yes	CEMENTED BEHIND
2ND BONE SPRING	Yes	8976.0	8994.0	Yes	CEMENTED BEHIND
3RD BONE SPRING	Yes	9935.0	9947.0	Yes	CEMENTED BEHIND
WOLFCAMP	No			No	BELOW TD
MONTOYA	No			No	BELOW TD
PENNSYLVANIAN	No			No	BELOW TD
ATOKA	No			No	BELOW TD
FUSSELMAN	No			No	BELOW TD
DEVONIAN	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)?					Yes
Is the completion being downhole commingled (SWR 10)?					No

REMARKS
THIS WELL IS PRODUCING FROM THE 3RD BONE SPRING FORMATION

RRC REMARKS
<p>PUBLIC COMMENTS:</p> <p>[RRC Staff 2019-12-16 13:36:46.835] EDL=5000 feet, max acres=704, PHANTOM (WOLFCAMP) oil or gas well;</p> <p>take points: 11102-16151 feet</p> <p>CASING RECORD :</p> <p>TUBING RECORD:</p> <p>KOP IS 10,203'</p> <p>H-9 FILED ONLINE - TRACKING #824</p> <p>COULD NOT GET W-15'S TO UPLOAD AS ONE DOCUMENT</p> <p>PRODUCING/INJECTION/DISPOSAL INTERVAL :</p> <p>ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :</p> <p>POTENTIAL TEST DATA:</p>

OPERATOR'S CERTIFICATION	
Printed Name: Scarlet Holguin	Title: Regulatory Clerk
Telephone No.: (210) 757-9844	Date Certified: 10/09/2019



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: ABRAXAS PETROLEUM CORP.
Cementor Name: C&J Energy Service

Operator P-5 No.: 003125
Cementor P-5 No.: 120531

WELL INFORMATION

District No.: 08
Well No.: #101H
Lease Name: WOODBERRY 3
Field Name: Phantom (Wolfcamp)
County: WARD
API No.: 475-37766
Drilling Permit No.: 847614
Lease No.:
Field No.: 71052900

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☒ Surface ☐ Intermediate ☐ Liner ☐ Production
Drilled hole size (in.): 17 1/2"
Size of casing in O.D. (in.): 13 3/8"
Casing weight (lbs/ft) and grade: 48 # 5-55
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☒ YES ☐ NO If no for surface casing, explain in Remarks.
Hrs. waiting on cement before drill-out: 8
Depth of drilled hole (ft.): 1475'
Setting depth shoe (ft.): 1475'
Est. % wash-out or hole enlargement: 20%
No. of centralizers used: 6 (4 Turbolizers)
Top of liner (ft.):
Setting depth liner (ft.):
Calculated top of cement (ft.): 0
Cementing date: 2/17/2019

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1005	CLASS C	SEE REMARKS	2401	3703
2	225	CLASS C	SEE REMARKS	301	459
3					
Total	1230			2702	4162

II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ Multiple parallel strings
Drilled hole size (in.):
Size of casing in O.D. (in.):
Casing weight (lbs/ft) and grade:
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? YES ☐ NO ☐
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.):
Setting depth shoe (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.):
Size of casing in O.D. (in.):
Casing weight (lbs/ft) and grade:
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? YES ☐ NO ☐
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.):
Setting depth shoe (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 SLURRY 100% CJ912+0.25% PPS CJ600 +2.0% CJ031

TAIL SLURRY 100% CJ912 +1.0% CJ110

CIRCULATED 150 BBLs CEMENT 352 SKS

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

JESUS LOPEZ

Name and title of cementer's representative

C&J Energy Services

Cementing Company

Signature

185 FM 1934

Address

PECOS TX 79772

City, State, Zip Code

(580) 721-1448

Tel: Area Code Number

2/17/2019

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

Scarlet Holguin

Typed or printed name of operator's representative

Title

Regulatory Clerk

Signature

18803 Meisner Dr. San Antonio TX 78258

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),

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 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

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 787112967).

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 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

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-

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

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.



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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: ABRAXAS PETROLEUM CORP.

Operator P-5 No.: 003125

Cementer Name: C&J Energy Service

Cementer P-5 No.: 120531

WELL INFORMATION

District No.: 08

County: Ward

Well No.: 101H

API No.: 0475-37766

Drilling Permit No.: 847614

Lease Name: Woodberry 3

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.):

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.): 4890

Est. % wash-out or hole enlargement: 15%

Size of casing in O.D. (in.): 10 3/4"

Casing weight (lbs/ft) and grade: 45.5# J-55

No. of centralizers used: 27 (4 Turbolizers)

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 ☒

Hrs. waiting on cement before drill-out: 8

Calculated top of cement (ft.): 2846

Setting depth shoe (ft.):

Cementing date: 3/6/2019

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	470	C	SEE REMARKS	1156	1750
2	85	C	SEE REMARKS	113	300
3					
Total	555			1269	2050

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.): 4890

Est. % wash-out or hole enlargement:

Size of casing in O.D. (in.): 10 3/4"

Casing weight (lbs/ft) and grade: 45.5# J-55

No. of centralizers used: 27 (4 Turbolizers)

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 ☒

Hrs. waiting on cement before drill-out: 8

Calculated top of cement (ft.): 777'

Setting depth shoe (ft.): DV Tool @ 2846'

Cementing date: 3/6/2019

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	450	C	SEE REMARKS	1048.5	1750
2	85	C	SEE REMARKS	113	300
3					
Total	535			1161.5	2050

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 Lead: 50% Class C + 50% Pozzolan Extender + 10% Bentonite + 0.3% Solid Antifoam + 0.4% Anhydrous Sodium Metasilicate + 0.5 PPS Fibrous LCM + 5% Salt
 2nd Tail: 100% Class C + 0.25% LT Retarder
 2nd Lead: 100% Class C + 2% Anhydrous Sodium Metasilicate
 2nd Tail: 100% Class C

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

RANDY CASTILLE

Name and title of cementer's representative

C&J Energy Services
Cementing Company

Randy Castille
Signature

185FM 1934
Address

PECOS TX 79902
City, State, Zip Code

580-721-1448
Tel: Area Code Number

3/6/2019
Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I have knowledge

Scarlet Holguin

Typed or printed name of operator's representative

Regulatory Clerk
Title

Scarlet Holguin
Signature

18803 Meisner Dr. San Antonio TX 78258
Address City, State, Zip Code

(210) 757-9844
Tel: Area Code Number

9/19/2019
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),

- 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 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
- 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 78712-967).
- 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 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
- 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-
- 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
- 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: ABRAXAS PETROLEUM CORP.
Cementer Name: C&J Energy Service

Operator P-5 No.: 003125
Cementer P-5 No.: 120531

WELL INFORMATION

District No.: 08
Well No.: 101H
County: WARD
Lease Name: WOODBERRY 3
Field Name: Phantom (Wolfcamp)
API No.: 42-475-37766
Lease No.:
Drilling Permit No.: 847614
Field No.: 71052900

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☐ Production
Drilled hole size (in.):
Size of casing in O.D. (in.):
Casing weight (lbs/ft) and grade:
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.): 9 7/8"
Depth of drilled hole (ft.): 11,090'
Est. % wash-out or hole enlargement: 15%
Size of casing in O.D. (in.): 7 5/8"
Casing weight (lbs/ft) and grade: 29.7 # HCL 80
No. of centralizers used: 64 (16 Turbolaters)
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? ☒ YES ☐ NO
Setting depth shoe (ft.): 11,090'
Hrs. waiting on cement before drill-out: 8
Calculated top of cement (ft.): 7491'
Cementing date: 4/8/2019

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	360	H	SEE REMARKS	1058	4934
2	100	H	SEE REMARKS	119	331
3					
Total	460			1177	5265

III. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☒ Multi-stage cement/DV tool ☐ Multiple parallel strings
Drilled hole size (in.): 9 7/8"
Depth of drilled hole (ft.): 11,090'
Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.): 7 5/8"
Casing weight (lbs/ft) and grade: 29.7 # HCL 80
No. of centralizers used: 64 (16 Turbolaters)
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? ☒ YES ☐ NO
Setting depth shoe (ft.): DY Tool @ 7491'
Hrs. waiting on cement before drill-out: 8
Calculated top of cement (ft.): 320'
Cementing date: 4/8/2019

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	295	H	SEE REMARKS	867	4043
2	105	H	SEE REMARKS	125	575
3					
Total	400			992	4618

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 LEAD:: 50:50:CJ010-87:CJ916+10%CJ020+.25#/SKCJ5600+.3%CJX157011+.55%CJ210K+1%CJ031+5%CJ111

1ST STAGE TAIL:: CJ916+.2%CJX157011+.1%CJ210K+.1%CJ547+.15%CJ504

2ND STAGE LEAD:: 50:50:CJ010-87:CJ916+10%CJ020+.25#/SKCJ5600+.3%CJX157011+.55%CJ210K+1%CJ031+5%CJ111

2ND STAGE TAIL:: CJ916+.2%CJX157011+.1%CJ504

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

CHRIS MORENO, SERVICE SUPERVISOR

Name and title of cementer's representative

C&J Energy Services

Cementing Company

Signature

185 FM 1934

Address

PECOS, TX, 79772

City, State, Zip Code

(580)721-1448

Tel: Area Code Number

4/8/2019

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

Scarlet Holguin

Typed or printed name of operator's representative

Regulatory Clerk

Title

Signature

18803 Meisner Dr. San Antonio TX 78258

Address

City, State, Zip Code

(210) 757-9844

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),

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 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

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 787112967).

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 To plug and abandon a well, operators must use only cements approved by the Commission's Director of Field Operations in accordance with SWR 14

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-

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

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.



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: ABRAXAS PETROLEUM CORP.
Cementer Name: C&J Energy Service

Operator P-5 No.: 003125
Cementer P-5 No.: 120531

WELL INFORMATION

District No.: 08
Well No.: 101H
Lease Name: WOODBERRY 3
Field Name: Phantom (Wolfcamp)
County: WARD TX
API No.: 8475-37766
Lease No.:
Drilling Permit No.: 847614
Field No.: 71052900

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☐ Surface ☐ Intermediate ☒ Liner ☐ Production
Drilled hole size (in.): 6 3/4"
Depth of drilled hole (ft.): 16,249'
Size of casing in O.D. (in.): 5 1/2"
Casing weight (lbs/ft) and grade: 23# P 110
Est. % wash-out or hole enlargement: 15%
No. of centralizers used: 142 Turbolators
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.): 16,240'
Top of liner (ft.): 10,199'
Setting depth liner (ft.): 16,240'
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.): 10,199'
Cementing date: 4/21/2019

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	490	35% : 65% POZ : CLASS H	REMARK 1	662	6901
2					
3					
Total	490			662	6901

II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement sho ☐ 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:
Tapered string size of casing in O.D. (in.)
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? 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 too ☐ 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:
Tapered string size of casing in O.D. (in.)
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? 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					

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

REMARK 1= 35% POZ + 65% CLASS H + 6.0% BENTONITE + 0.2% SOLID ANTI FOAM + 0.25% LT/MT RETARDER + 0.2% LT FLUID LOSS + 0.3% FLUID LOSS GAS MIGRATION.

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

DANIEL MUNIZ / SERVICE SUPERVISOR

Name and title of cementer's representative

C&J Energy Services
Cementing Company

Signature

185 FM 1934

PECOS TX, 79772
City, State, Zip Code

(432) 755-4999

Tel: Area Code Number

4/21/2019

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

Typed or printed name of operator's representative

Scarlet Holquin
18803 Meisner Dr. San Antonio TX 78258

City, State, Zip Code

Title

Regulatory Clerk

(202) 757-9844

Tel: Area Code Number

Signature

9/19/2019
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).

- 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 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
- 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 787112967).
- 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 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
- 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-
- 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
- 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.

Tracking No.: 222028

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: ABRAXAS PETROLEUM CORPORATION	District No. 08	Completion Date: 07/31/2019
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 847614	
Lease Name WOODBERRY 3	Lease/ID No. 52646	Well No. 101H
County WARD	API No. 42- 475-37766	

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). _____

Scarlet Holguin

Signature

Name (print)

Regulatory Clerk

Title

(210) 757-9844

Phone

09/18/2019

Date

-FOR RAILROAD COMMISSION USE ONLY-

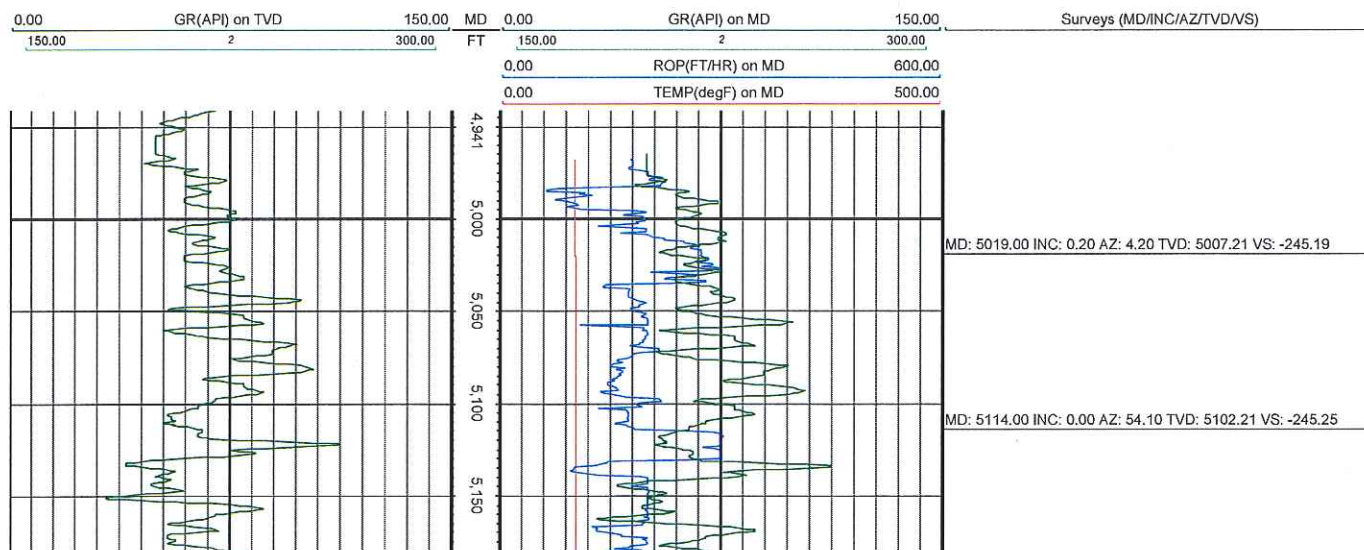
**Premier Directional Drilling**

5611 Baird Court
Houston, Texas 77041
281-673-4000

Woodberry 3 101H**Scale 1":100' - MD****04/18/19 6:09 PM****Oper. Company:** Abraxas Petroleum Corporation**Well:** Woodberry 3 101H**Field:** 3rd Bone Spring SS LO**Rig:** Patterson 228**Well ID:** 42-475-37766**Job Number:** M18545**State:** TX**County:** Ward**Country:** USA**Location:** Pyote**PBHL:** 16249.00**Last Svy MD:** 16181.00**Last Calc. Date:** 04/18/19**Calculation Method:** Minimum Curvature**Declination:** 8.56

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	E1444	E1506	E1444	E1446	E1487
Bit Size	17.5	12.25	12.25	9.875	9.875
Cal Factor	12.39	10.24	11.33	9.93	9.71
Survey Offset	78.00	84.00	84.00	81.00	81.00
Gamma Offset	72.00	78.00	78.00	74.00	74.00
Resistivity Offset	0.00	0.00	0.00	0.00	0.00
Start Depth	108.00	1475.00	3138.00	4890.00	8386.00
StartDate	02/16/19	03/01/19	03/02/19	03/24/19	03/27/19
StartTime	09:10	04:45	19:10	17:45	19:15
EndDepth	1475.00	3138.00	4890.00	8386.00	8480.00
EndDate	02/17/19	03/02/19	03/04/19	03/27/19	03/28/19
EndTime	07:30	18:30	19:30	17:45	12:50
Mud Type	Brine	Brine	Brine	Brine	Brine
Mud Weight	8.7	9.8	9.8	10.2	10.2
Funnel Viscosity	38	28	28	28	28
Plastic Viscosity	4	1	1	1	1
Yield Point	7	1	1	1	1
Gel Strength	9	1	1	1	1
Solids Content	5	8	8	11	11
Sand Content	0	0	0	0	0
Mud Alkalinity	.01	.2	.2	.65	.65
Filtrate Alkalinity	.01	.2	.2	.65	.65
Chlorides	5000	112000	112000	172000	172000
Temperature		86	86	81	81
Non-Mag Above	26.39	26.39	26.39	26.39	26.39
Tool Run Data	Run #6	Run #7	Run #8	Run #9	Run #10
Tool S/N	E1487	E1258	E1535	E1258	E0269
Bit Size	9.875	9.875	9.875	9.875	6.75
Cal Factor	9.71	10.73	9.75	10.73	3
Survey Offset	81.00	81.00	81.00	66.00	67.00
Gamma Offset	74.00	74.00	74.00	60.00	61.00
Resistivity Offset	0.00	0.00	0.00	0.00	0.00
Start Depth	8480.00	8828.00	9125.00	10203.00	11090.00
StartDate	03/28/19	03/29/19	03/31/19	04/02/19	04/11/19
StartTime	13:10	14:50	12:45	06:25	02:54
EndDepth	8828.00	9125.00	10203.00	11090.00	13486.00
EndDate	03/29/19	03/30/19	04/02/19	04/04/19	04/14/19
EndTime	14:10	23:59	02:30	13:20	09:08
Mud Type	Brine	Brine	Brine	Brine	OBM
Mud Weight	10.2	10.2	10.2	10.3	11.5
Funnel Viscosity	28	28	28	28	63
Plastic Viscosity	1	1	1	1	21

Yield Point	1	1	1	1	12
Gel Strength	1	1	1	1	14
Solids Content	11	11	11	11.5	18
Sand Content	0	0	0	0	0
Mud Alkalinity	.65	.7	.7	.98	3.7
Filtrate Alkalinity	.65	.65	.65	.8	
Chlorides	172000	169000	169000	166000	43000
Temperature	81	90	90	90	90
Non-Mag Above	28.56	28.56	28.56	28.56	31.15
Tool Run Data	Run #11	Run #12	Run #13	Run #14	Run #15
Tool S/N	E0268	E0268			
Bit Size	6.75	6.75			
Cal Factor	2.94	2.94			
Survey Offset	68.00	67.00			
Gamma Offset	61.00	61.00			
Resisitivity Offset	0.00	0.00			
Start Depth	13846.00	15016.00			
StartDate	04/14/19	04/16/19			
StartTime	10:00	08:43			
EndDepth	15016.00	15019.00			
EndDate	04/16/19	04/17/19			
EndTime	07:25	01:25			
Mud Type	OBM	OBM			
Mud Weight	11.6	11.6			
Funnel Viscosity	61	61			
Plastic Viscosity	21	21			
Yield Point	12	12			
Gel Strength	18	18			
Solids Content	19.5	19.5			
Sand Content	0	0			
Mud Alkalinity	3	3			
Chlorides	46000	46000			
Temperature	92	90			
Non-Mag Above	31.15	31.15			
Hole Data			Casing Data		
Size	From	To	Size	From	To
17.5	0.00	1475.00	20	0.00	108.00
12.25	1475.00	4890.00	13.375	0.00	1475.00
9.875	4890.00	11090.00	10.75	0.00	4890.00
			7.625	0.00	11092.00
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, cost damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees.					



MD: 5114.00 INC: 0.00 AZ: 54.10 TVD: 5102.21 VS: -245.25

CERTIFICATE OF COMPLIANCE AND TRANSPORTATION AUTHORITY

P-4

This facsimile P-4 was generated electronically from data submitted to the RRC.

A certification of the automated data is available in the RRC's Austin office.

Tracking No.: 222028

1. Field name exactly as shown on proration schedule PHANTOM (WOLFCAMP)		2. Lease name as shown on proration schedule WOODBERRY 3																																													
3. Current operator name exactly as shown on P-5 Organization Report ABRAXAS PETROLEUM CORPORATION		4. Operator P-5 no. 003125	5. Oil Lse/Gas ID no 52646	6. County WARD	7. RRC district 08																																										
8. Operator address including city, state, and zip code 18803 MEISNER DR SAN ANTONIO, TX 78258		9. Well no(s) <i>(see instruction E)</i> 101H																																													
12. Purpose of Filing. (Complete section a or b below.) <i>(See instructions B and G)</i> a. Change of: <input type="checkbox"/> operator <input type="checkbox"/> oil or condensate gatherer <input type="checkbox"/> gas gatherer <input type="checkbox"/> gas purchaser <input type="checkbox"/> gas purchaser system code <input type="checkbox"/> field name from _____ <input type="checkbox"/> lease name from _____ --- OR --- b. New RRC Number for: <input checked="" type="checkbox"/> oil lease <input type="checkbox"/> gas well Due to: <input checked="" type="checkbox"/> new completion or recompletion <input type="checkbox"/> reclass oil to gas <input type="checkbox"/> reclass gas to oil <input type="checkbox"/> other well (specify) _____ <input type="checkbox"/> consolidation, unitization, or subdivision (oil lease only)		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other <i>(see instruction A)</i>		11. Effective Date 07/31/2019																																											
13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). <i>(See instruction G).</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">Gatherer</th> <th style="width: 5%;">Purchaser</th> <th style="width: 65%;">Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left <i>(Attach an additional sheet in same format if more space is needed)</i></th> <th style="width: 10%;">Purchaser's RRC Assigned System Code</th> <th style="width: 10%;">Percent of Take</th> <th style="width: 5%;">Full-well stream</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">X</td> <td></td> <td>ENERGY TRANSFER COMPANY(252017)</td> <td></td> <td style="text-align: center;">100.0</td> <td></td> </tr> <tr> <td></td> <td style="text-align: center;">X</td> <td>ENERGY TRANSFER COMPANY(252017)</td> <td style="text-align: center;">0001</td> <td style="text-align: center;">100.0</td> <td></td> </tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td></tr> </tbody> </table>						Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left <i>(Attach an additional sheet in same format if more space is needed)</i>	Purchaser's RRC Assigned System Code	Percent of Take	Full-well stream	X		ENERGY TRANSFER COMPANY(252017)		100.0			X	ENERGY TRANSFER COMPANY(252017)	0001	100.0																									
Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left <i>(Attach an additional sheet in same format if more space is needed)</i>	Purchaser's RRC Assigned System Code	Percent of Take	Full-well stream																																										
X		ENERGY TRANSFER COMPANY(252017)		100.0																																											
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14. Authorized OIL or CONDENSATE Gatherer(s). <i>(See instruction G).</i> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 85%;">Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First <i>(Attach an additional sheet in same format if more space is needed)</i></th> <th style="width: 15%;">Percent of Take</th> </tr> </thead> <tbody> <tr> <td>TARGA CRUDE PIPELINE LLC(836023)</td> <td style="text-align: center;">90.0</td> </tr> <tr> <td>TARGA CRUDE MARKETING LLC(836021)</td> <td style="text-align: center;">10.0</td> </tr> <tr><td></td><td></td></tr> </tbody> </table>						Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First <i>(Attach an additional sheet in same format if more space is needed)</i>	Percent of Take	TARGA CRUDE PIPELINE LLC(836023)	90.0	TARGA CRUDE MARKETING LLC(836021)	10.0																																				
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RRC USE ONLY: Reviewer's initials: <u>RRC Staff</u> Approval date: <u>12/18/2019</u>																																															
15. PREVIOUS OPERATOR CERTIFICATION FOR CHANGE OF OPERATOR P-4 FILING. Being the PREVIOUS OPERATOR, I certify that operating responsibility for the well(s) designated in this filing, located on the subject lease has been transferred in its entirety to the above named Current Operator. I understand, as Previous Operator, that designation of the above named operator as Current Operator is not effective until this certificate is approved by the Commission.																																															
Name of Previous Operator _____ Name (print) _____ Title _____		Signature <input type="checkbox"/> Authorized Employee of previous operator <input type="checkbox"/> Authorized agent of previous operator <i>(see instruction G)</i> _____ Date _____ Phone with area code _____																																													
16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.																																															
Name (print) <u>Regulatory Clerk</u> Title <u>sholguin@abraxaspetroleum.com</u> E-mail Address (optional)		Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator <i>(see instruction G)</i> <u>Scarlet Holguin</u> <u>09/18/2019</u> <u>(210) 757-9844</u> Date Phone with area code																																													

Form P-16

Page 1

Rev. 05/2019

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 I. OPERATOR INFORMATION			
Operator Name:	ABRAXAS PETROLEUM CORPORATION		Operator P-5 No.:
Operator Address:	18803 MEISNER DR. SAN ANTONIO, TEXAS 78258		

SECTION II. WELL INFORMATION			
District No.:	08	API No.:	475-37766
Well No.:	101H	Drilling Permit No.:	847614
Lease Name:	WOODBERRY 3	RRC ID or Lease No.:	
Total Lease Acres:	640.700	Field Name:	PHANTOM (WOLFCAMP)
Proration Acres:	80.00	Field No.:	71052900
Wellbore Profile	Horizontal Well	Is this a UFT field?	Yes
SL Record (Parent) Well Drilling Permit No.:		County:	Ward

Purpose of Filing:

☐ Drilling Permit Application (Form W-1)

☒ Completion Report (Form G-1/W-2)

[illegible]

SECTION IV. REMARKS - REQUIRED FOR PSA AND CO-DEVELOPMENT (refer to instructions)	

☐ Additional Pages: (No. of additional pages)

Signature _____

Email
(include email address *only* if you affirmatively consent to its public release)

Date: 09/19/19
mo. day yr.

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 08 November 2018**GAU Number:** 220504**Attention:** ABRAXAS PETROLEUM
18803 MEISNER DR
SAN ANTONIO, TX 78258**Operator No.:** 003125**API Number:**
County: WARD
Lease Name: WOODBERRY
Lease Number:
Well Number: 101H
Total Vertical Depth: 12000
Latitude: 31.559369
Longitude: -103.137970
Datum: NAD27**Purpose:** New Production Well**Location:** Survey-G&MMB&A; Abstract-52; Block-F; Section-98

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 Santa Rosa, which is estimated to occur at a depth of 1400 feet, must be protected.

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

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

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. Unless stated otherwise, this recommendation is for normal drilling, production, and plugging operations only.

This determination is based on information provided when the application was submitted on 11/06/2018. 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

Form GW-2 P.O. Box 12967 Austin, Texas 78771-2967 512-463-2741 Internet address: www.rrc.texas.gov
Rev. 02/2014

ABRAXAS PETROLEUM CORP.

LEASE NAME & WELL NO:
WOODBERRY 3 #101H "AS-DRILLED"

NEAREST TOWN IN COUNTY:
±1.85 MILES NORTHWEST OF PYOTE, TEXAS

DESCRIPTION:
SHL: SECTION 98, BLOCK F, G. & M.M.B. & A. SURVEY, A-52
PP/FTP/LTP/BHL: SECTION 3, BLOCK 17, UNIVERSITY LAND SURVEY,
WARD COUNTY, TEXAS

SPECIAL NOTES:

Original Document Size: 8.5"x14"
All Coordinates are in NAD 27 TX-C Zone unless otherwise noted.

CERTIFICATION:

This well location shown on this permit plat was surveyed under my direct supervision. All As-Drilled information provided by client. This plat is for Texas Railroad Commission permit purpose only and should not be considered a boundary survey.

Signature Date:
08/16/2019



William J. Keating
Texas Reg. No. 5041



2803 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 882-1883 OR (800) 787-1883 • FAX (432) 882-1743
WWW.TOPOGRAPHIC.COM

Texas Firm Registration NO. 10042500
AD_WOODBERRY_3_#101H

Surface Hole Location

330' FSL & 200' FWL (SEC.98)
SHL Ground Elevation: 2653'
X = 1126385 Y = 699424
LAT.: N 31.5595027 LONG.: W 103.1384100
NAD 83 TX-C ZONE
X = 1422851 Y = 10541999
LAT.: N 31.5596354 LONG.: W 103.1388498

Penetration Point:

331' FSL & 38' FEL (SEC.3)
X = 1126156 Y = 699358
LAT.: N 31.5593058 LONG.: W 103.1391387

First Take Point:

335' FSL & 113' FEL (SEC.3)
X = 1126083 Y = 699341
LAT.: N 31.5592531 LONG.: W 103.1393730

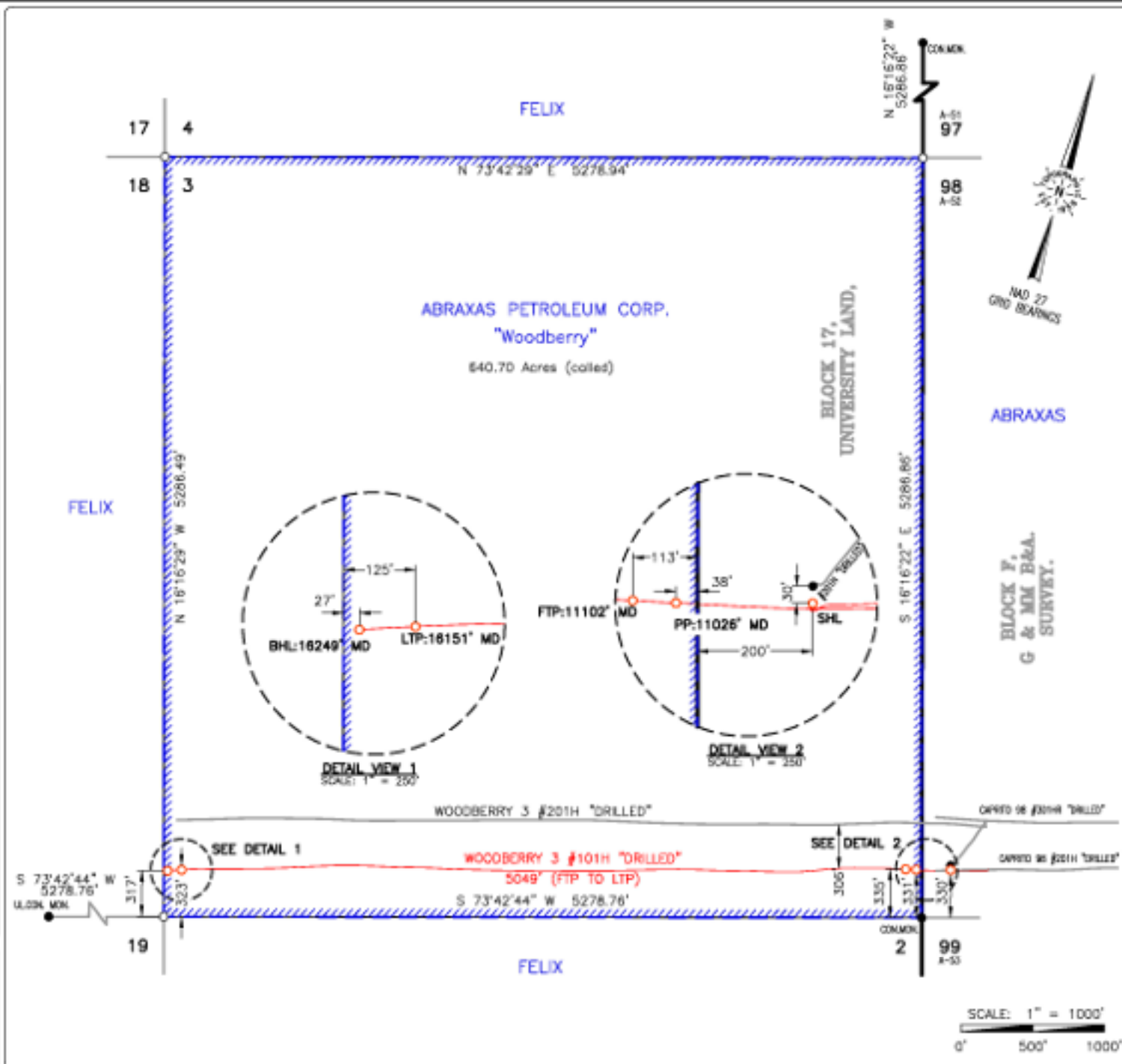
Last Take Point:

323' FSL & 125' FWL (SEC.3)
X = 1121248 Y = 697915
LAT.: N 31.5549994 LONG.: W 103.1547740

Bottom Hole Location:

317' FSL & 27' FWL (SEC.3)
X = 1121156 Y = 697883
LAT.: N 31.5549037 LONG.: W 103.1550670

- LEGEND**
- Section Line
 - Block Line
 - Abstract Line
 - Tract Line
 - Lease Road
 - County Road
 - Unit/Lease Boundary
 - Found Monument
 - Set 1/2" Rebar w/cap
 - Calculated Corner



Surveyed: 10/09/2018

Scale: 1"=1000'

COGO: 575-120469

Drawn By: YB; 08/14/2019

Revision: () Date Revised: / /