From:	Sarah Hudson
To:	Kourtney Romine
Cc:	James Thum; kristina.fugate@ag.idaho.gov; External - Joy M. Vega; sjb@msbtlaw.com; cdm@msbtlaw.com; james@idunionlaw.com; molly@idunionlaw.com; deastman@woodgrain.com; Michael Christian
Subject:	Witness and Exhibit Disclosure
Date:	Monday, August 10, 2020 08:58:41 AM
Attachments:	SROG Witness and Exhibit Disclosure.pdf EX. SR 11- Fallon 1-10 Flow test rpt 3815-35.xls

Attached please find the Witness and Exhibit Disclosure from Mike Christian. Also attached is EX. SR 11 which is an excel spreadsheet. If you have any questions, please feel free to contact us.

Thank you,
Sarah Hudson
Legal Assistant

101 S. Capitol Blvd., Suite 930
Boise, ID 83702 p. 208. 473.7009 | f. 208.473.7661 | e. sarah@smithmalek.com

BEFORE THE OIL AND GAS CONSERVATION COMMISSION
STATE OF IDAHO

In the Matter of Application of Snake River Oil and Gas, LLC, for an order establishing a spacing unit for Fallon #1-10 well consisting of the E ½ of the SE ¼ of Section 9, SW ¼ of Section 10, N ½ of the N ½ of the NW ¼ of Section 15, and the N ½ of the NE ¼ of the NE ¼ of Section 16, Township 8 North, Range 5 West, Boise Meridian, Payette County, Idaho	)	Docket No. CC-2020-OGR-01-001
SNAKE RIVER OIL AND GAS, LLC, Applicant.	)	

APPLICANT'S WITNESS AND EXHIBIT DISCLOSURE

Applicant Snake River Oil and Gas, LLC discloses the following witnesses and exhibits for the hearing of this matter on August 13, 2010:

1. Witnesses: James L. Allen

2. Exhibits: Attached are copies of the following exhibits:

   a. SR1-SR7: PowerPoint presentation

   b. SR8-SR10: Zedi gas analyses

   c. SR11: Flow test results spreadsheet

Dated this 10th day of August, 2020.

SMITH+MALEK PLLC

Michael Christian

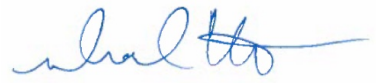
Attorney for Applicant

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 10th day of August, 2020, I caused to be served a true and correct copy of the foregoing by the method indicated below, and addressed as follows:

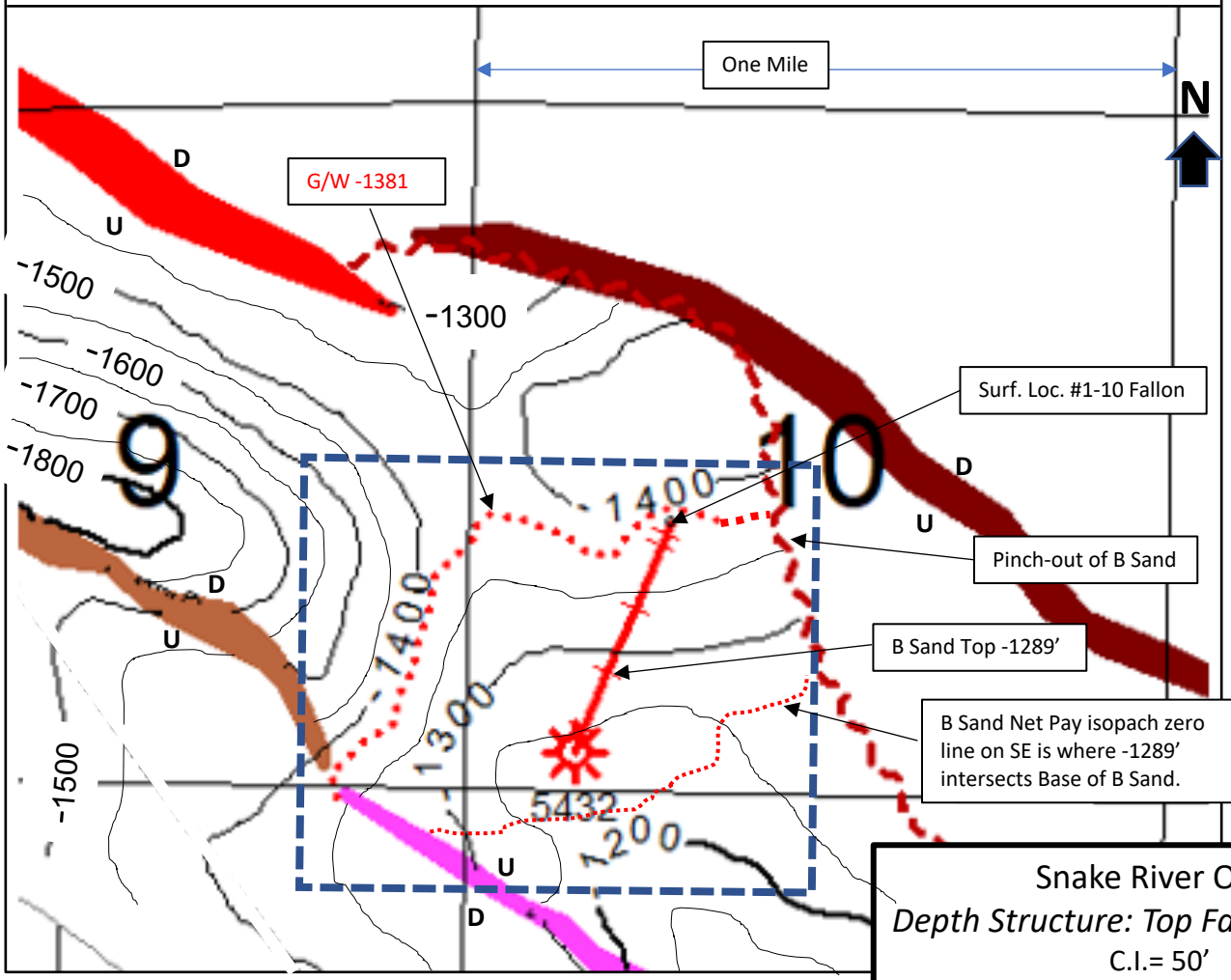
James Thum Idaho Department of Lands P.O. Box 83720 Boise, Idaho 83720-0050	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: jthum@idl.idaho.gov
Kristina Fugate Deputy Attorney General P.O. Box 83720 Boise, ID 83720	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: kristina.fugate@ag.idaho.gov
Joy Vega Deputy Attorney General P.O. Box 83720 Boise, ID 83720	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: joy.vega@ag.idaho.gov
Kourtney Romine Idaho Department of Lands P.O. Box 83720 Boise, Idaho 83720-0050	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: kromine@idl.idaho.gov

Stephanie Bonney Cherise McClain MSBT Law, Chtd. Attorneys for City of Fruitland 7699 W. Riverside Dr. Boise, ID 83714	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: sjb@msbtlaw.com, cdm@msbtlaw.com
James Piotrowski 1020 W. Main, Suite 400 P.O. Box 2864 Boise, ID 83702	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: james@idunionlaw.com, molly@idunionlaw.com
Woodgrain Millwork, Inc. Kelly Dame c/o David Eastman	[ ] U.S. Mail [ ] Certified Mail, return receipt requested [ ] Overnight Delivery [ ] Messenger Delivery [X] Email: deastman@woodgrain.com



Michael Christian

EX. SR1
Proposed 300-Acre Unit &
Depth Structure Map for Fallon B Sand



Legend

- 300-acre Unit
- Gas-Water Contact
- Sand Pinch-Out
- Intersection of Top Pay with Base B Sand

Snake River O&G

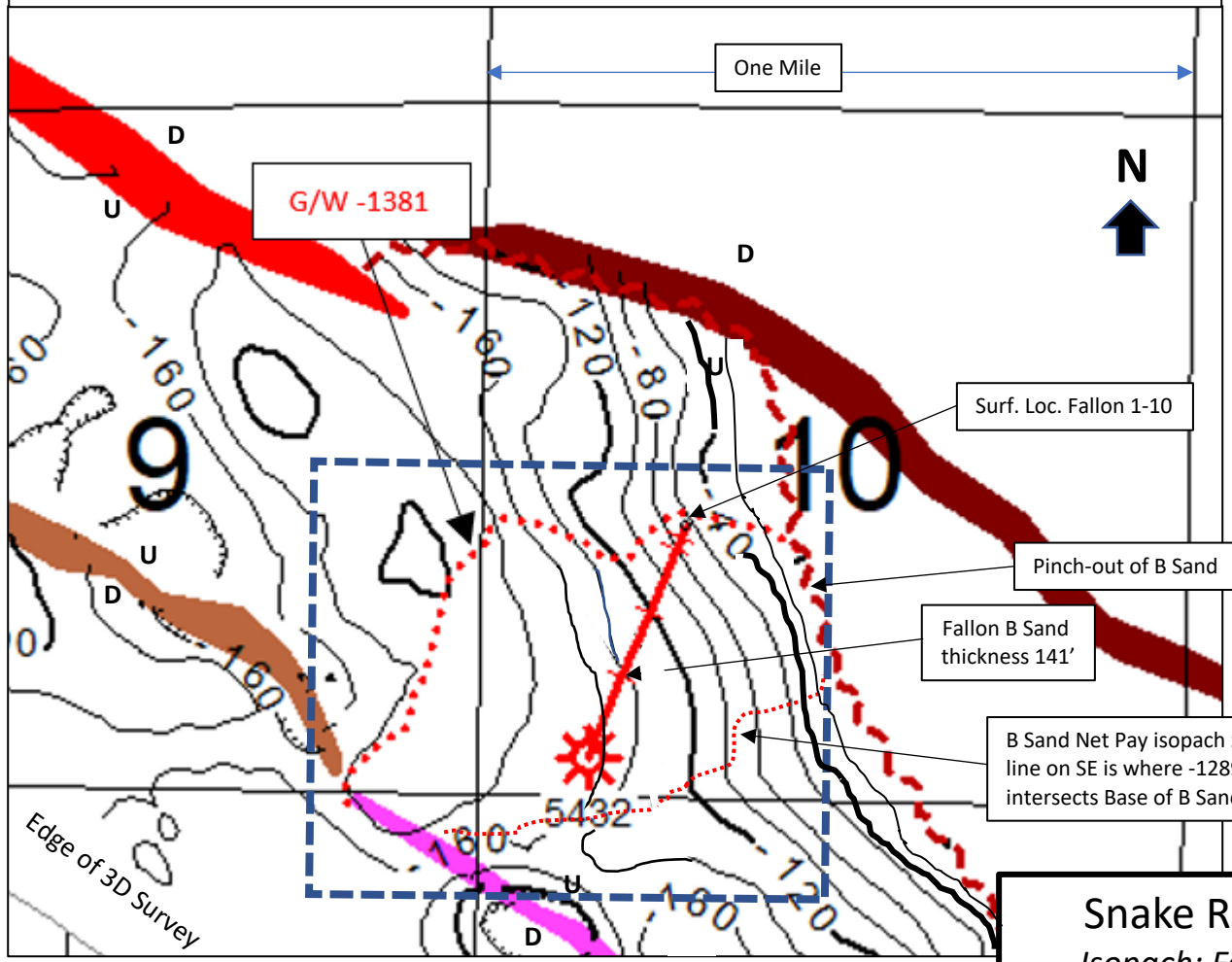
Depth Structure: Top Fallon B Sand

C.I.= 50'

T8N – R5W

March 2020

Ex. SR2
Proposed 300-Acre Unit & Gross Thickness Isopach Map for Fallon B Sand



Legend

- 300-acre Unit
- Gas-Water Contact
- Sand Pinch-Out
- Intersection of Top Pay with Base B Sand

Snake River O&G

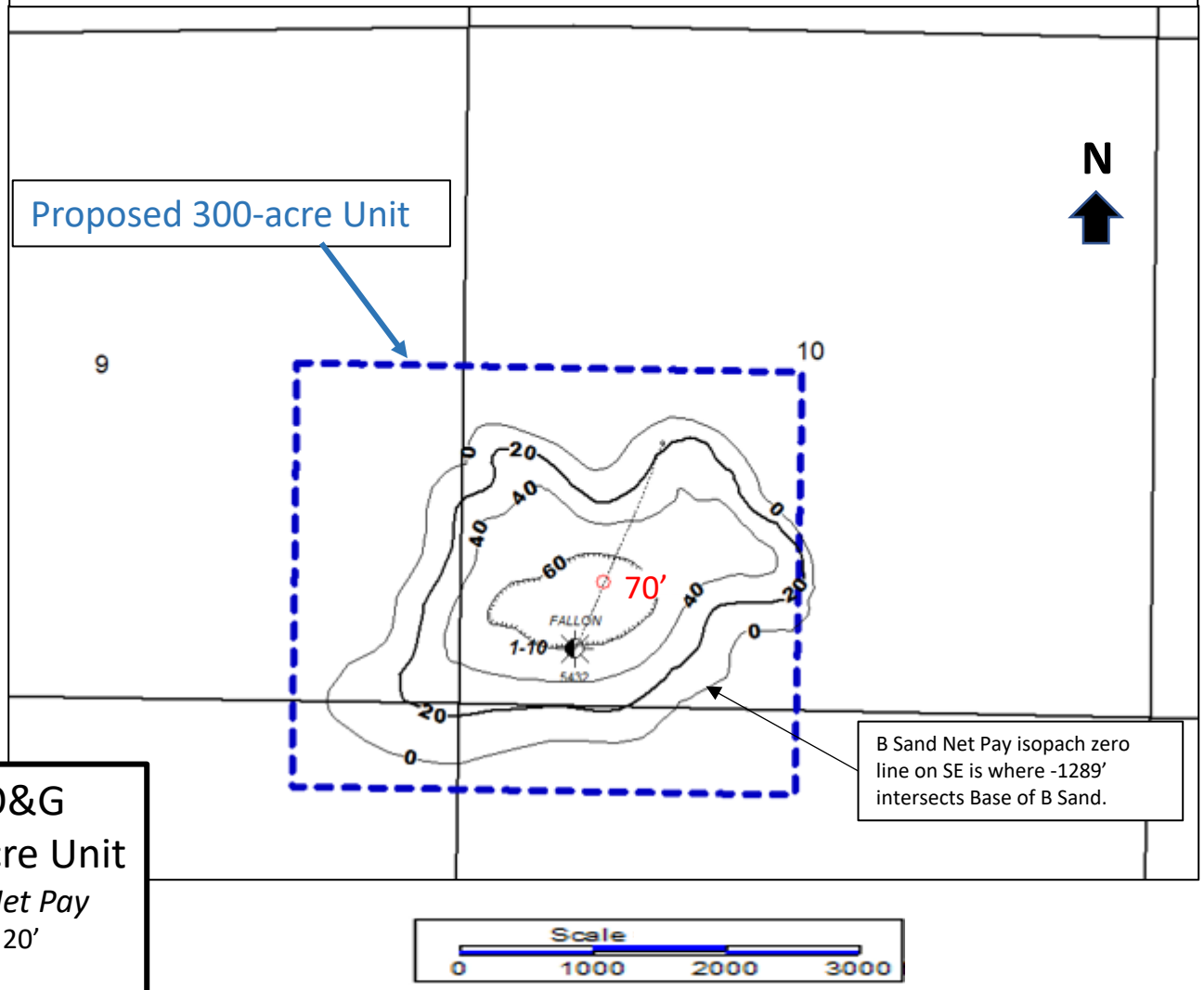
Isopach: Fallon B Sand

C.I.= 20'

T8N – R5W

March 2020

Ex. SR3
Proposed 300-Acre Unit &
Net Pay Isopach Map for Fallon B Sand



Snake River O&G
Proposed 300-acre Unit
Isopach: Fallon B Net Pay
Contour Interval= 20'
T8N – R5W
July 2020

Ex. SR4

Porosity and Permeability of Fallon B Sand

Sidewall Core Analysis

SROG ML Investments 2-10

Willow Field
Payette County, Idaho

Core Lab

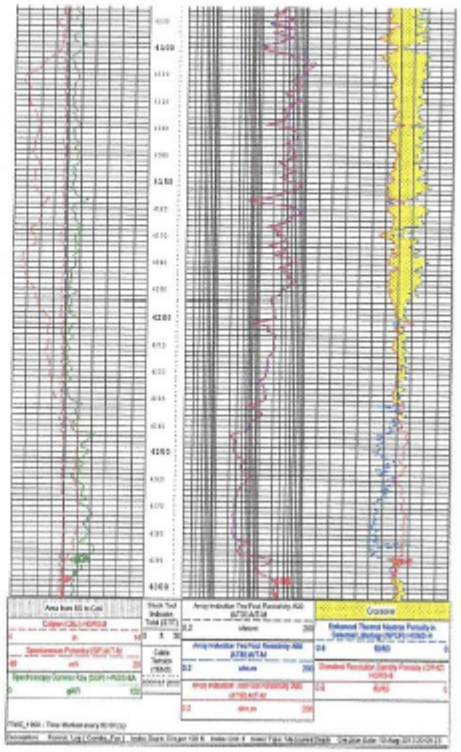
File No.: HOU-130982
Date: August 12, 2013
Drilling Fluid: Water Based Mud
Analyst(s): JDH/PH
Cores: Schlumberger

SIDEWALL CORE ANALYSIS

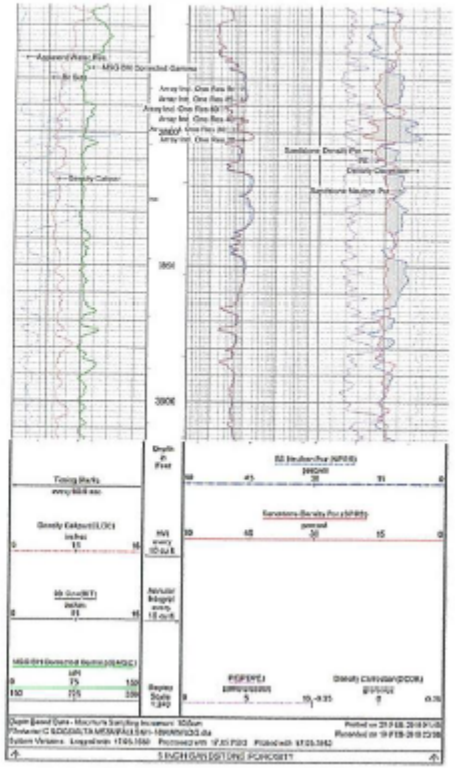
SHOT NO	REC (in)	Col	DEPTH (ft)	Kair (mD)*	POR (%)	Sco (%)	Stw (%)	PROD PROD	Ob (%)	Ob (%)	GAS DET	Stow (%)	°API	LITHOLOGY	FLU
52	1.1	A4	4133.0	1700.0	33.2	0.0	64.1	Gas	0.0	11.9	4	44		Sdf-cg vashy slty scalc	
51	1.0	A3	4145.0	2900.0	34.8	0.0	74.5	Gas	0.0	8.9	10	44		Sdf-mg vashy sslty	
50	1.1	A4	4157.0	2.7	15.1	0.0	78.9	(S)	0.0	3.5	18	84		Sdvfg vshy slty sw	
49	1.2	A4	4161.0	1750.0	33.2	0.4	76.3	Gas	0.1	7.8	3	44		Sdf-cg vashy slty	
48	1.1	A4	4171.0	3800.0	35.6	0.4	78.5	Gas	0.1	10.4	4	45		Sdm-vcg vashy vslty	
47	1.1	A4	4177.0	2500.0	34.0	0.0	85.3	Gas	0.0	11.8	1	44		Sdm-vcg vshy lam(2) slty	
46	1.0	A3	4183.0	3600.0	35.3	0.0	69.6	Gas	0.0	10.7	5	45		Sdm-vcg vashy slty	
45	1.0	A3	4189.0	3900.0	35.7	0.0	71.6	Gas	0.0	10.2	4	45		Sdm-vcg vashy salty	
44	1.0	A3	4195.0	1800.0	33.2	5.4	64.0	Oil	1.0	8.9	18	37	46	Sdm-vcg vashy slty scalc	
43	1.0	A3	4203.0	4000.0	35.6	5.0	59.7	Oil	1.0	12.7	10	38	48	Sdm-vcg vashy sslty scalc	
41	0.8	B3	4207.0	3400.0	35.4	5.1	59.8	Oil	1.0	12.1	7	38	46	Sdm-vcg sshy sslty scalc	
40	0.7	B3	4211.0	3900.0	35.7	0.0	77.0	Water	0.0	7.9	23	38		Sdm-vcg vashy sslty scalc	
38	1.1	A4	4217.0	1730.0	33.1	0.0	80.5	Water	0.0	6.5	0	37		Sdm-cg vashy slty	
37	1.3	A4	4221.0	3800.0	35.6	0.0	78.2	Water	0.0	7.6	0	38		Sdm-vcg vsshy sslty calc	
36	1.2	A4	4227.0	3700.0	35.5	0.0	80.6	Water	0.0	6.9	0	38		Sdm-cg vashy sslty	
35	1.3	A4	4231.0	1850.0	33.2	0.0	77.6	Water	0.0	7.4	0	37		Sdm-cg vashy slty	
34	1.1	A4	4235.0	3500.0	35.4	0.0	77.6	Water	0.0	7.9	0	38		Sdm-cg vashy sslty	

Density porosity of the B Sand measured 24%-30%. Cores were not taken so we have no direct measurement of permeability. We can estimate permeability using the ML Investment 2-10 from Willow Field. Cores in the 2-10 from 4133' to 4235' indicated porosity of 33%-35% and permeability in the 1700 – 4000 md. range with most varying from 3500 – 3900 md. Density logs showed porosity about 23%-24%, implying the cores significantly overestimated porosity. Assuming permeability was overestimated in the same proportion, the actual permeability was 2500 – 2900 md. Using that analysis, the B Sand in Fallon 1-10 has around 2900 – 3300 md.

SROG
ML Invest. 2-10
T8N-R4W

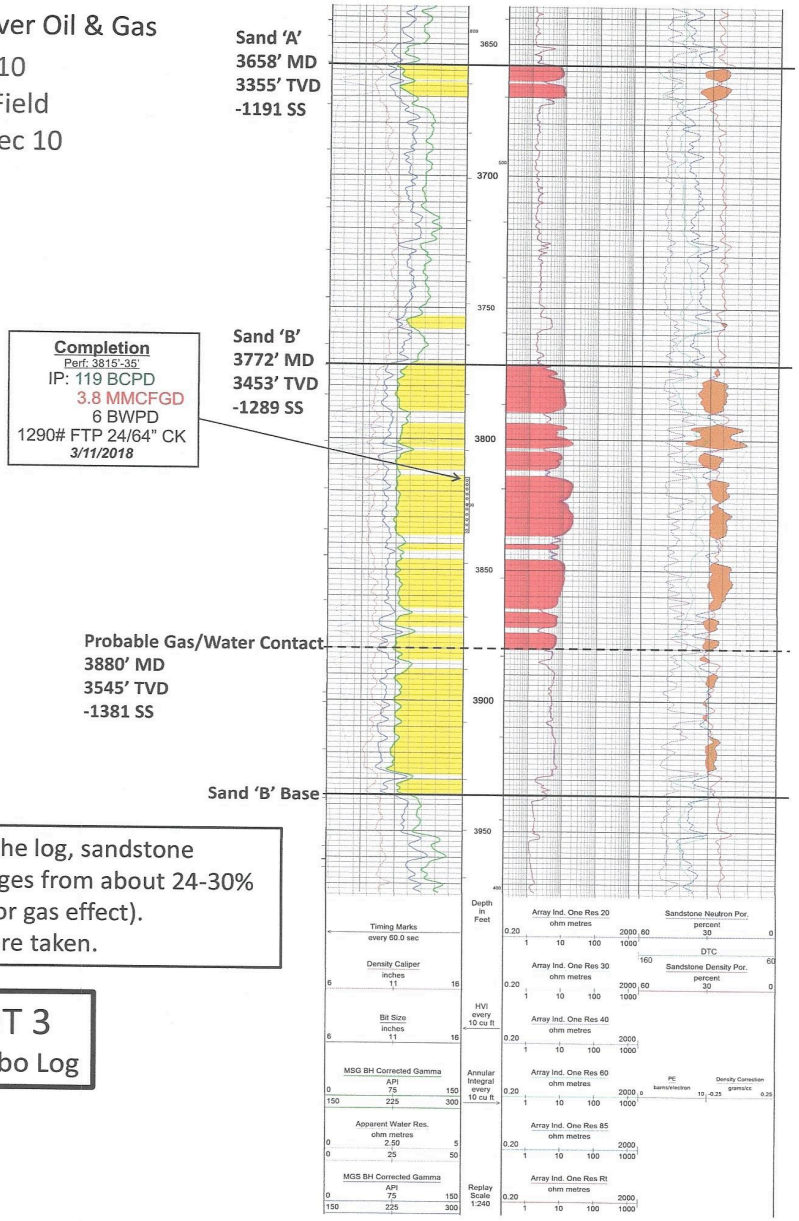


SROG
Fallon 1-10
T8N-R5W



Ex. SR5

Snake River Oil & Gas
Fallon 1-10
Wildcat Field
8N-5W Sec 10
KB 2167'



As seen on the log, sandstone porosity ranges from about 24-30% (corrected for gas effect).
No cores were taken.

EXHIBIT 3
Quad Combo Log

Ex. SR6

Items 2.e. – 2.i in letter from James Thum March 2, 2020

e. Water Saturation of net pay in Fallon B Sand is 40.69%.
It was calculated by Robert McGowen, P.E., of independent engineering firm of Coutret & Assoc. of Shreveport, LA., by applying Archie's equation to the well log information.

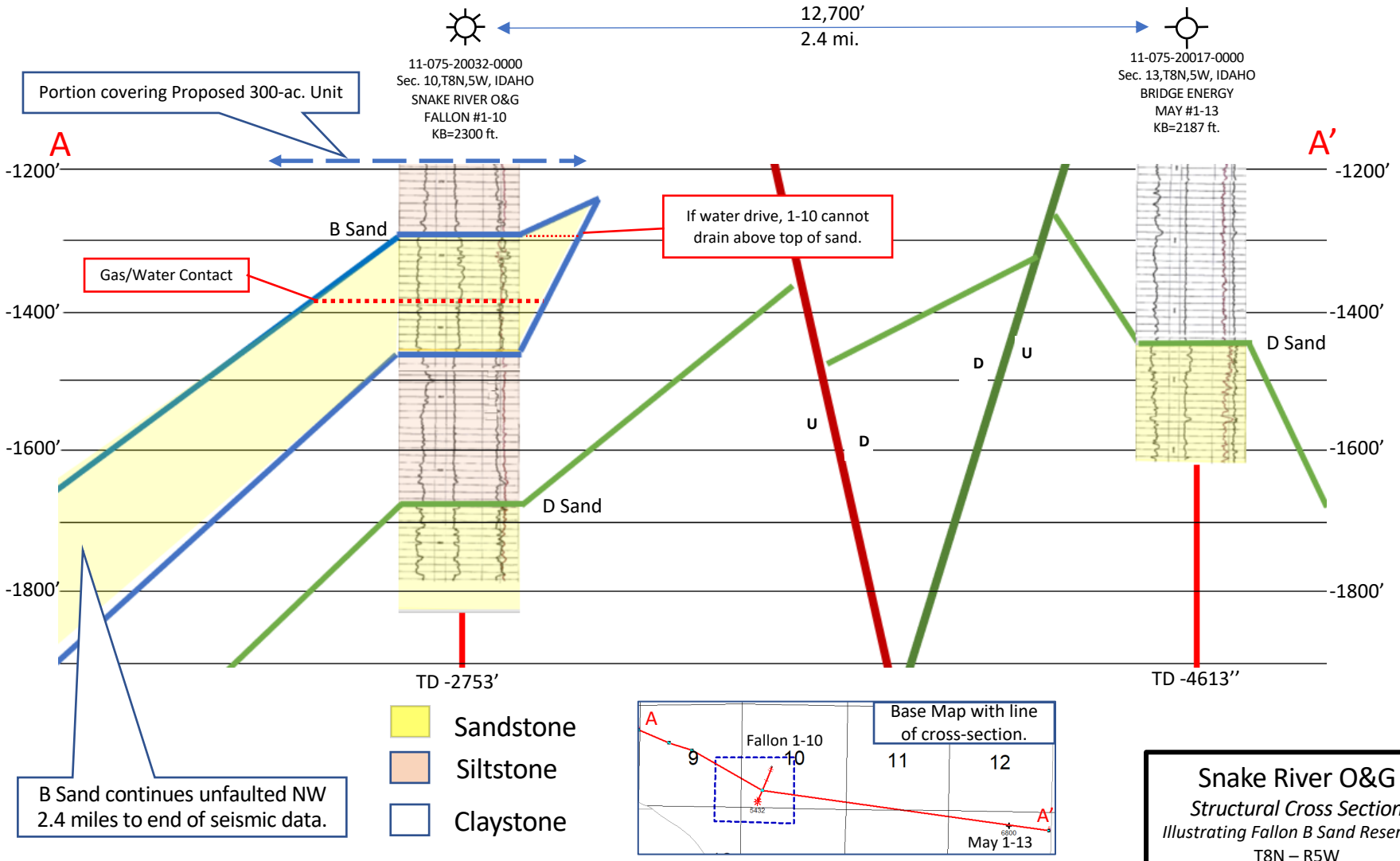
f. Reservoir temperature of the Fallon B Sand is 140 degrees.

g. Gas analysis was done on two samples taken during well flow testing on 3/14/18. Both showed the gas to be comprised of over 76% methane (liq. vol.), nearly 97% hydrocarbons. BTU was 1206-1212. An analysis of condensate showed over 5% each of propane, butane, hexanes, heptanes, and octanes, plus lesser percentages of others. Gas-oil ratio is 81,220.

h. Gas Formation Volume Factor is 0.0017552 rcf/scf. That was calculated by McGowen using reservoir pressure of 1448 psi and reservoir temperature of 140 deg.

i. Estimated original gas in place is 7.083 BCFG with 3.407 BCFG recoverable from this well. The recover factor of 48.1% was calculated by McGowen using water drive with an abandonment pressure of 1000 psia. The actual recovery may be higher if there is a partial pressure-depletion drive mechanism along with a water-drive mechanism.

Ex. SR 7
Cross-section relating proposed 330-acre unit to sand control and wells.



Snake River O&G

Structural Cross Section

Illustrating Fallon B Sand Reservoir

T8N – R5W

August 2020

EX. SR 8

Zedi US Inc
29 Country Acres Road
Riverton, WY 82501
307-856-0866

Realize Production Potential

Client:	Alta Mesa	**Analysis Date:**	3/25/2018
Sample ID:	Harmon 3PH Separator	**Date Sampled:**	03/14/2018
Unique #:	NI	**Purpose:**	NI
Sample Temperature:	68 DEG F	**Sample Pressure:**	620 PSI
Sampled By:	Austin Taylor	**Type Sample:**	Spot
County:	Payette		

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide.....	0.1231	0.271	0.112
Nitrogen.....	0.3592	0.503	0.211
Methane.....	84.2062	67.513	76.270
Ethane.....	8.3595	12.562	11.944
Propane.....	3.8342	8.450	5.644
iso-Butane.....	0.6932	2.014	1.212
n-Butane.....	1.1192	3.251	1.885
iso-Pentane.....	0.3011	1.086	0.588
n-Pentane.....	0.2813	1.014	0.545
Cyclopentane.....	0.0390	0.137	0.062
n-Hexane.....	0.1228	0.529	0.270
Cyclohexane.....	0.0496	0.209	0.090
Other Hexanes	0.1755	0.756	0.386
Heptanes.....	0.0890	0.446	0.219
Methylcyclohexane.....	0.0417	0.205	0.090
2,2,4-Trimethylpentane...	0.0000	0.000	0.000
Benzene.....	0.0417	0.163	0.062
Toluene.....	0.0346	0.159	0.062
Ethylbenzene.....	0.0016	0.008	0.003
Xylenes.....	0.0057	0.030	0.012
C8+ Heavies.....	0.1219	0.696	0.334
Totals	100.000	100.000	100.000

ADDITIONAL BETX DATA

Components	Mole %	Weight %	Liq. Vol. %
Cyclopentane	0.0390	0.137	0.062
Cyclohexane	0.0496	0.209	0.090
2-Methylpentane	0.1104	0.476	0.243
3-Methylpentane	0.0650	0.280	0.143
n-Hexane	0.1228	0.529	0.270
Methylcyclohexane	0.0417	0.205	0.090
2,2,4-Trimethylpentane	0.0000	0.000	0.000
Benzene	0.0417	0.163	0.062
Toluene	0.0346	0.159	0.062
Ethylbenzene	0.0016	0.008	0.003
m-Xylene	0.0009	0.005	0.002
p-Xylene	0.0039	0.021	0.008
o-Xylene	0.0009	0.005	0.002

SPECIFIC GRAVITY @ 60/60 F, calculated……	0.6909
TOTAL GPM (Ethane Inclusive)……..	4.369
CALCULATED BTU / REAL CF @ 14.73 PSIA, dry basis……	1210.927
CALCULATED BTU / REAL CF @ 14.73 PSIA, wet basis……	1190.616
AVERAGE MOLECULAR WEIGHT……	20.009
MOLAR MASS RATIO……	0.6909
RELATIVE DENSITY (G x Z (Air) / Z), calculated……	0.6931
IDEAL GROSS HEATING VALUE, BTU / IDEAL CF @ 14.696 PSIA……	1212.145
COMPRESSIBILITY FACTOR (Z)……..	0.99670

PROPANE GPM ……	1.0536
BUTANE GPM ……	0.5782
GASOLINE GPM (PENTANE AND HEAVIER) ……	0.5076
TOTAL ACID GAS MOLE %……..……	0.1231
VOC WEIGHT FRACTION ……..…..……..……	0.192

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-09, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.

EX. SR 9

Zedi US Inc
29 Country Acres Road
Riverton, WY 82501
307-856-0866

Realize Production Potential

Client:	Alta Mesa	**Analysis Date:**	03/25/2018
Sample ID:	Harmon HP Gas From Well	**Date Sampled:**	03/14/2018
Unique #:	NI	**Purpose:**	NI
Sample Temperature:	58 DEG F	**Sample Pressure:**	1350 PSI
Sampled By:	Austin Taylor	**Type Sample:**	Spot
County:	Payette		

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide.....	0.1229	0.272	0.112
Nitrogen.....	0.3565	0.502	0.210
Methane.....	84.4483	68.093	76.654
Ethane.....	8.2598	12.483	11.827
Propane.....	3.7751	8.367	5.569
iso-Butane.....	0.6895	2.014	1.208
n-Butane.....	1.1268	3.292	1.902
iso-Pentane.....	0.3166	1.148	0.620
n-Pentane.....	0.2993	1.085	0.581
Cyclopentane.....	0.0401	0.141	0.064
n-Hexane.....	0.1190	0.515	0.262
Cyclohexane.....	0.0394	0.166	0.072
Other Hexanes	0.1797	0.778	0.396
Heptanes.....	0.0985	0.496	0.243
Methylcyclohexane.....	0.0268	0.132	0.058
2,2,4-Trimethylpentane...	0.0000	0.000	0.000
Benzene.....	0.0260	0.102	0.039
Toluene.....	0.0173	0.080	0.031
Ethylbenzene.....	0.0011	0.006	0.002
Xylenes.....	0.0090	0.048	0.019
C8+ Heavies.....	0.0481	0.276	0.132
Totals	100.000	100.000	100.000

ADDITIONAL BETX DATA

Components	Mole %	Weight %	Liq. Vol. %
Cyclopentane	0.0401	0.141	0.064
Cyclohexane	0.0394	0.166	0.072
2-Methylpentane	0.1131	0.490	0.249
3-Methylpentane	0.0666	0.289	0.147
n-Hexane	0.1190	0.515	0.262
Methylcyclohexane	0.0268	0.132	0.058
2,2,4-Trimethylpentane	0.0000	0.000	0.000
Benzene	0.0260	0.102	0.039
Toluene	0.0173	0.080	0.031
Ethylbenzene	0.0011	0.006	0.002
m-Xylene	0.0014	0.008	0.003
p-Xylene	0.0061	0.032	0.013
o-Xylene	0.0015	0.008	0.003

SPECIFIC GRAVITY @ 60/60 F, calculated.....	0.6869
TOTAL GPM (Ethane Inclusive).....	4.289
CALCULATED BTU / REAL CF @ 14.73 PSIA, dry basis.....	1205.309
CALCULATED BTU / REAL CF @ 14.73 PSIA, wet basis.....	1185.096
AVERAGE MOLECULAR WEIGHT.....	19.896
MOLAR MASS RATIO.....	0.6869
RELATIVE DENSITY (G x Z (Air) / Z), calculated.....	0.6892
IDEAL GROSS HEATING VALUE, BTU / IDEAL CF @ 14.696 PSIA.....	1206.456
COMPRESSIBILITY FACTOR (Z).....	0.99676

PROPANE GPM	1.0374
BUTANE GPM	0.5794
GASOLINE GPM (PENTANE AND HEAVIER)	0.4684

TOTAL ACID GAS MOLE %.....	0.1229

VOC WEIGHT FRACTION	0.186

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-09, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.

EX. SR 10

zedi
Realize Production Potential

Zedi US Inc
29 Country Acres Rd.
Riverton, WY 82501
307-856-0866

EXTENDED HYDROCARBON LIQUID STUDY
CERTIFICATE OF ANALYSIS

Company:	**Alta Mesa**	Sample Name:	**Harmon-Fallon 1-10**
Date Sampled:	03/14/2018	Sample Number:	18032020-01
Sample Location:	Idaho	Date Tested:	03/23/2018
Sample Pressure:	600 PSI	Test Method:	GPA 2186M
Sample Temperature:	56 °F		
County:	Payette	Date Reported:	03/27/2018
Sample Source:	Treater	Note: Due to the nature of H2S, the values of	
Sampling Method:	GPA-2174	H2S reported may be lower than actual.	
Type Sample:	SPOT		

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide	0.1096	0.075	0.056
Nitrogen	0.0307	0.013	0.010
Methane	19.0692	4.762	9.619
Ethane	8.1924	3.835	6.519
Propane	11.1782	7.674	9.163
iso-Butane	4.3678	3.952	4.253
n-Butane	9.3016	8.416	8.725
iso-Pentane	5.1148	5.745	5.566
n-Pentane	5.9544	6.688	6.422
Hexanes	4.9569	6.650	6.065
Heptanes	9.8043	15.294	13.458
Octanes	5.3071	9.438	8.089
Nonanes	2.4875	4.967	4.165
Decanes+	1.5203	3.866	3.155
Benzene	0.5002	0.608	0.416
Toluene	1.3738	1.971	1.368
Ethylbenzene	0.4341	0.718	0.498
Xylenes	4.2457	7.017	4.907
n-Hexane	5.6094	7.525	6.863
2,2,4-Trimethylpentane	0.4419	0.786	0.683
Totals	100.000	100.000	100.000

EXTENDED ANALYSIS DATA

Components	Mole %	Weight %	Liq. Vol. %
Carbon Dioxide	0.1096	0.075	0.056
Nitrogen	0.0307	0.013	0.010
Methane	19.0692	4.763	9.621
Ethane	8.1924	3.835	6.521
Propane	11.1782	7.674	9.165
iso-Butane	4.3678	3.952	4.254
n-Butane	9.3016	8.417	8.727
iso-Pentane	5.1148	5.745	5.567
n-Pentane	5.9544	6.688	6.424
Hexanes	4.9569	6.650	6.067
Heptanes	9.8043	15.294	13.462
Octanes	5.3071	9.438	8.092
Nonanes	2.4875	4.967	4.166
Decanes	0.6486	1.437	1.185
Benzene	0.5002	0.608	0.416
Toluene	1.3738	1.971	1.368
Ethylbenzene	0.4341	0.718	0.498
Xylenes	4.2457	7.017	4.908
n-Hexane	5.6094	7.526	6.865
2,2,4-Trimethylpentane	0.4419	0.786	0.683
Undecanes(C11)	0.4096	0.997	0.811
Dodecanes(C12)	0.2335	0.619	0.498
Tridecanes(C13)	0.1228	0.352	0.281
Tetradecanes(C14)	0.0455	0.141	0.111
Pentadecanes(C15)	0.0154	0.051	0.040
Hexadecanes(C16)	0.0037	0.013	0.010
Heptadecanes(C17)	0.0016	0.006	0.005
Octadecanes(C18)	0.0004	0.002	0.001
Nonadecanes(C19)	0.0003	0.001	0.001
Eicosanes (C20)	0.0002	0.001	0.001
Heneicosanes (C21)	0.0003	0.001	0.001
Docosanes (C22)	0.0005	0.003	0.002
Tricosanes (C23)	0.0007	0.003	0.003
Tetracosanes (C24)	0.0012	0.006	0.005
Pentacosanes (C25)	0.0016	0.009	0.007
Hexacosanes (C26)	0.0020	0.012	0.009
Heptacosanes (C27)	0.0032	0.019	0.015
Octacosanes (C28)	0.0049	0.030	0.022
Nonacosanes (C29)	0.0041	0.026	0.020
Triacosanes (C30)	0.0069	0.045	0.034
Hentriacontane Plus (C31+)	0.0133	0.090	0.070
Totals	100.000	100.000	100.000

ADDITIONAL BTEX DATA

Components	Mole %	Weight %	Liq. Vol. %
2-Methylpentane	3.544	4.755	4.336
3-Methylpentane	1.413	1.895	1.728
n-Hexane	5.609	7.525	6.863
2,2,4-Trimethylpentane	0.442	0.786	0.683
Benzene	0.500	0.608	0.416
Toluene	1.374	1.971	1.368
Ethylbenzene	0.434	0.718	0.498
m-Xylene	0.488	0.807	0.564
p-Xylene	3.036	5.017	3.509
o-Xylene	0.722	1.193	0.834

API GRAVITY AT 60/60 F, calculated	**102.1**
SPECIFIC GRAVITY AT 60/60 F, calculated	**0.60563**
RELATIVE SPECIFIC GRAVITY OF DECANES+ (C10+) FRACTION, calculated	**0.74198**
AVERAGE MOLECULAR WEIGHT	**64.234**
AVERAGE MOLECULAR WEIGHT OF DECANES+ (C10+) FRACTION, calculated	**163.329**
TRUE VAPOR PRESSURE AT 100 F, PSIA, calculated	**1050.796**
AVERAGE BOILING POINT, F, calculated	**31.178**
CUBIC FEET OF GAS / GALLON OF LIQUID, as Ideal Gas, calculated	**29.892**
BTU / GALLON OF LIQUID AT 14.73 PSIA, calculated	**100,041.63**
LBS / GALLON OF LIQUID, calculated	**5.049**

NOTATION: ALL CALCULATIONS PERFORMED USING PHYSICAL CONSTANTS FROM GPA 2145-09, THE TABLES OF PHYSICAL CONSTANTS FOR HYDROCARBONS AND OTHER COMPOUNDS OF INTEREST TO THE NATURAL GAS INDUSTRY.

FLASHED CRUDE OIL LIQUID STUDIES
CERTIFICATE OF ANALYSIS

Sample Name: **Harmon-Fallon 1-10**
Sample Number: 18032020-01

TEST PERFORMED	RESULTS	DATE TESTED
CLOUD POINT (ASTM D-97), deg F, measured	-49.0	03/26/2018
POUR POINT (ASTM D-97), deg F, measured	<-67	03/26/2018

PROS Incorporated

PROS CONTACT: Dan Kurtz Cell (661) 201-2122 Fax (661) 589-5228

OPERATIONS LOG

COMPANY : **Alta Mesa Holdings LP**
CO. MAN : **Austin Taylor**
LOCATION : **Fallon**
WELL NO. : **1-10**
PERFS : **Tight Hole 2nd Zone**
DATE : **3/ 11/ 18 thru 3/**

DATE & TIME	SEQUENCE OF EVENTS
3/ 11/ 2018	
07:00	PROS Dan Kurtz on location , Walk location, fill out JSA
07:10	Fire Line Heater
07:15	Reconfigure Flow Line from Tubing, Flowing from Casing
10:00	Safety Meeting all Hands
10:40	Wire RIH with Guns
11:20	Fire Guns, Shut in to Rig Down Wire Line
11:25	Casing Pressure = 530 psi
12:11	Open Casing, flowing directly into Tank
12:30	Switch Flow into Separator
12:35	Flowing to Separator, 10/64" Adjustable Choke
12:45	Continue to flare Gas, Continue to unload water, open Choke to 13/64"
13:00	Pulled Drager Tube for H2S = 0 ppm, CO2 = 0 %Pbv pulled from Gas out Primary Separator
13:30	Rocked Choke - Walked Lines
16:00	Started 4 Point Test- Adjustable Choke Set to 8/64"
17:05	Pulled Drager Tube for H2S = 0 ppm, CO2 = 1000 %Pbv pulled from Gas out Primary Separator
18:00	PROS Shift Change Nate Lawrence for Dan Kurtz
18:30	Rocked Choke - Walked Lines
20:02	Step 2 on 4 Point Test- Adjustable Choke Set to 10/64"
20:15	Pulled Drager Tube for H2S = 0 ppm, CO2 = 1200 ppm pulled from Gas out Primary Separator
23:45	Pulled Drager Tube for H2S = 0 ppm, CO2 = 1200 ppm pulled from Gas out Primary Separator
3/ 12/ 2018	
00:05	Step 3 on 4 Point Test- Adjustable Choke Set to 12/64"
03:50	Pulled Drager Tube for H2S = 0 ppm, CO2 = 1200 ppm pulled from Gas out Primary Separator
04:05	Step 4 on 4 Point Test- Adjustable Choke Set to 14/64"
06:00	PROS Shift Change Dan Kurtz for Nate Lawrence
06:10	Walked location checked Lines and Tanks
07:45	Pulled Drager Tube for H2S = 0 ppm, CO2 = 600 ppm pulled from Gas out Primary Separator
08:00	End 4 Point test, continue flowing on 14/64"
11:00	Shut in Well, End Testing - Continue after Well Work to Run Tubing and Packer
3/ 13/ 2018	
07:00	PROS Dan Kurtz on location , Walk location, fill out JSA
07:30	Light Line Heater to pre Heat
07:45	Rerun Flow Line to tie onto Well Head Tubing
09:05	Rig Crew Pump Out Tubing Plug
09:20	Open Well - Flowing into Tank no Choke
09:25	Switch Flow into Separator, start on 8/64" Choke
09:35	Open Choke to 14/64"
10:40	Shut in Well to RDMO Rig
11:15	Open Well - Flowing into Separator return to 14/64" Choke
11:45	Pulled Drager Tube for H2S = 0 ppm, CO2 = 1600 ppm pulled from Gas out Primary Separator
12:30	Continue Flowing Well into Separator - No Fluid
15:30	Checked lines, levels on Separator and Scrubber, all Correct
17:00	Opened Choke to 18/64" adjustable Choke
17:05	Making adjustments to on Level Controllers on Primary Separator
18:00	PROS Shift change Nathan Lawrence for Dan Kurtz
18:10	Walk Location Check all lines
18:45	Ran chlorides and Ph and Resistive
20:00	Opened Choke to 18/64" adjustable Choke
22:05	CSG was at 400Psi Bleed off to 100Psi
22:15	Opened Choke to 20/64" adjustable Choke
3/ 14/ 2018	
00:25	Walk Location Check all lines
02:30	Walk Location Check all lines
04:15	CSG was at 350Psi Bleed off to 100Psi
06:00	Increased Choke from 20/64" to 24/64"
06:00	PROS Shift Change Dan Kurtz for Nate Lawrence
06:45	Pulled Drager Tube for H2S = 1 ppm, CO2 = 1200 ppm pulled from Gas out Primary Separator
08:05	CSG was at 450Psi Bleed off to 50Psi
08:45	Ran Gravity on Condensate, Corrected = 65.6
10:15	Pulling Pressure oil Samples
10:30	Pulling Pressure Gas Samples
11:05	JT (Alta Mesa) Pulled Chlorides = 60201 and Resistivity = 0.155 @ 54°
11:53	Opened Choke from 24/64" to 28/64" Adjustable
12:30	Walk Location Check all lines
14:50	Pulled Drager Tube for H2S = 2 ppm, CO2 = 1200 ppm pulled from Gas out Primary Separator
16:45	Pulled Water and Oil Gravity
17:15	Ran Chlorides = 47366 and Resistivity = 0.161 @ 68°
17:45	Shut in Well at Choke and Well Head
17:46	Take Final Readings, Secure location
18:30	Left Location

PROS Incorporated

PROS CONTACT: Dan Kurtz Cell (661) 201-2122 Fax (661) 589-5228

WELL TEST DATA RECORD

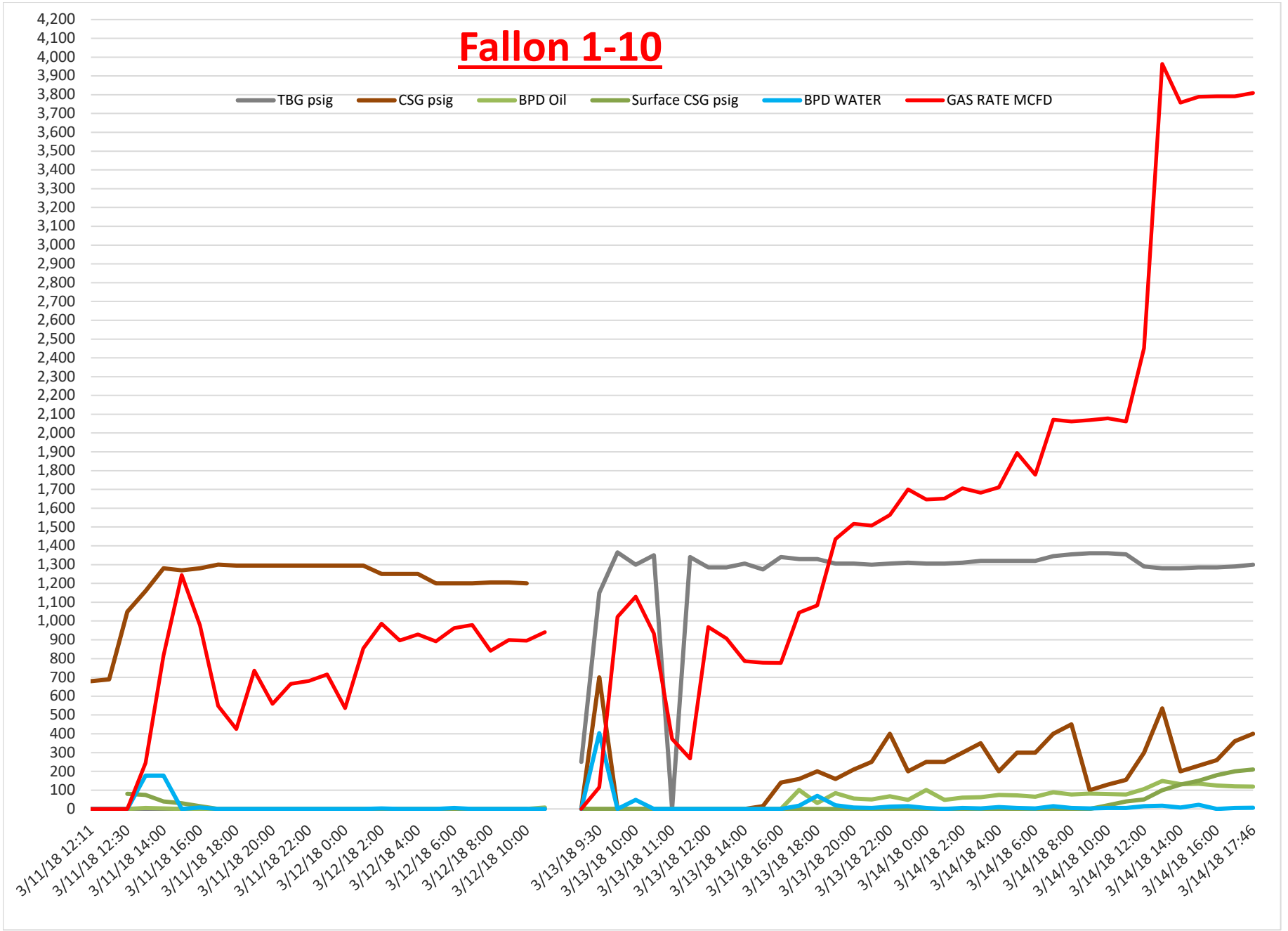
COMPANY : **Alta Mesa Holdings LP**
CO. MAN : **Austin Taylor**
LOCATION : **Fallon**
WELL NO. : **x**
PERFS : **Tight Hole 2nd Zone**
DATE : **3/ 11/ 18 thru 3/ 14/**

METER RUN = **3.068** Inches
STATIC RANGE = **500** PSIA
DIFFERENTIAL = **100** Inches of Water Column
PRESSURE BASE= **14.73** PSIA
TEMPERATURE BASE= **60** Degrees F
SEPARATOR =

Calculation Based off of Meters

DATE TIME	FLOW DURATION (HRS.)	CHOKE SIZE 64ths	TBG psig	TBG temp	CSG psig	Surfac CSG psig	LAB RESULTS CORR. GRAV.	H2O API Grav	CHLORIDES PPM	pH	RESISTIVITY Rw	WATER TANK Tank Gauge	TOTAL BBLS	INCR BBLS	OIL TANK Tank Gauge	TOTAL BBLS	INCR BBLS	OIL METER METER BBLS	INCR BBLS	CUT % BS&W	WATER METER METER BBLS	INCR BBLS	SEP. TEMP °F	BPD GROSS	BPD Oil	BPD WATER	OVERALL WELL CUT % BS&W	CUMM TOTAL (BBLS)	CUMM WTR (BBLS)	CUMM OIL (BBLS)	Scrubber PRESS psig	1440 PRESS psig	GAS TEMP °F	ORIFICE SIZE	GAS METER TOTAL	GAS RATE MCFD	CUMM GAS MSCF	GLR	GOR	COMMENTS
3/11/18 12:11	0.00	S/I	N/A	N/A	680							0' 2.0"	9.0	0.0	0' 0.0"	0.0		0.0	0.00		0.0	0.00	95	0.00	0.00	0.00		0.00	0.00	0.00	0	0	78	1.500	0.000	0.000	0.000	0.000	0.000	Unloading Fluid into Tank - tank had 9 Bbls
3/11/18 12:15	0.07	10	N/A	N/A	690							0' 6.0"	27.0	18.0	0' 0.0"	0.0	0.0	0.0	0.0		0.0	0.00	95	0.00	0.00	0.00	100.0%	18.00	18.00	0.00	100			1.500	0.000	0.000	0.000			
3/11/18 12:30	0.32	10	N/A	N/A	1,050	80						0' 7.5"	33.7	6.7	0' 0.0"	0.0	0.0	0.0	0.0		0.0	0.00	95	0.00	0.00	0.00	100.0%	24.70	24.70	0.00	100			1.500	0.000	0.000	0.000			Switch Flow into Separator - 10/64" Choke
3/11/18 13:00	0.82	13	N/A	N/A	1,160	75						0' 10.0"	45.0	11.3	0' 0.0"	0.0	0.0	0.1	0.1	0.0%	3.7	3.70	95	182.40	4.80	177.60	97.4%	36.00	35.90	0.10	100	520	58	1.500	5.080	243.840	5.080	1336.84	50800.00	12:45 open to 13/64" Choke H2s =0 ppm CO2 = 0 ppm
3/11/18 14:00	1.82	16	N/A	N/A	1,280	40						0' 11.75"	52.9	7.9	0' 0.0"	0.0	0.0	0.2	0.1	0.0%	11.1	7.40	88	180.00	2.40	177.60	98.7%	43.50	43.30	0.20	100	550	58	1.500	39.100	816.480	39.100	4536.00		12:45 open to 16/64" Choke H2s =0 ppm CO2 = 0 ppm
3/11/18 15:00	2.82	16	N/A	N/A	1,270	30						0' 11.75"	52.9	0.0	0' 0.0"	0.0	0.0	0.2	0.0		11.1	0.00	86	0.00	0.00	0.00	100.0%	43.50	43.30	0.20	100	600	56	1.500	90.950	1244.398	90.950			
3/11/18 16:00	3.82	14	N/A	N/A	1280	15						0' 11.75"	52.9	0.0	0' 0.0"	0.0	0.0	0.2	0.0		11.4	0.30	86	7.20	0.00	7.20	100.0%	43.80	43.60	0.20	100	600	59	1.500	131.700	977.999	131.700			Start 4 Point Test -- 8/64" Choke
3/11/18 17:00	4.82	8	N/A	N/A	1300	0						0' 11.75"	52.9	0.0	0' 0.0"	0.0	0.0	0.2	0.0		11.4	0.00	86	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	60	1.500	154.530	547.919	154.530			H2s =0 ppm CO2 = 1000 ppm
3/11/18 18:00	5.82	8	N/A	N/A	1295	0						0' 11.75"	52.9	0.0	0' 0.0"	0.0	0.0	0.2	0.0		11.4	0.00	90	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	61	1.500	172.240	425.039	172.240			
3/11/18 19:00	6.82	8	N/A	N/A	1295	0						0' 11.75"	52.9	0.0	0' 0.0"	0.0	0.0	0.2	0.0		11.4	0.00	90	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	59	1.500	202.930	736.559	202.930			
3/11/18 20:00	7.82	8	N/A	N/A	1295	0						0' 11.75"	52.9	0.0	0' 0.0"	0.0	0.0	0.2	0.0		11.4	0.00	68	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	55	1.500	226.240	559.439	226.240			Step 2 of 4 Point Test -- 10/64" Choke
3/11/18 21:00	8.82	10	N/A	N/A	1295	0						0' 11.75"	52.9	2.1	0'0.0"	0.0	0.0	0.2	0.0		11.4	0.00	67	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	53	1.500	253.970	665.519	253.970			H2S=0 ppm CO2= 1200 ppm
3/11/18 22:00	9.82	10	N/A	N/A	1295	0						0' 11.75"	52.9	2.1	0'0.0"	0.0	0.0	0.2	0.0		11.4	0.00	67	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	51	1.500	282.360	681.359	282.360			
3/11/18 23:00	10.82	10	N/A	N/A	1295	0						0' 11.75"	52.9	2.1	0'0.0"	0.0	0.0	0.2	0.0		11.4	0.00	68	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	51	1.500	312.200	716.159	312.200			
3/12/18 0:00	11.82	10	N/A	N/A	1295	0						0' 11.75"	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.4	0.00	67	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	50	1.500	334.530	535.919	334.530			Step 3 of 4 Point Test -- 12/64" Choke
3/12/18 1:00	12.82	12	N/A	N/A	1295	0						0' 11.75"	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.4	0.00	88	0.00	0.00	0.00	100.0%	43.80	43.60	0.20	100	600	50	1.500	370.130	854.400	370.130			H2S=0 ppm CO2= 1200 ppm
3/12/18 2:00	13.82	12	N/A	N/A	1250	0						0' 11.75"	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.5	0.10	88	2.40	0.00	2.40	100.0%	43.90	43.70	0.20	100	600	50	1.500	411.220	986.159	411.220			
3/12/18 3:00	14.82	12	N/A	N/A	1250	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.5	0.00	88	0.00	0.00	0.00	100.0%	43.90	43.70	0.20	100	600	51	1.500	448.564	896.255	448.564			
3/12/18 4:00	15.82	12	N/A	N/A	1250	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.5	0.00	88	0.00	0.00	0.00	100.0%	43.90	43.70	0.20	100	600	50	1.500	487.248	928.415	487.248			Step 4 of 4 Point Test -- 14/64" Choke
3/12/18 5:00	16.82	14	N/A	N/A	1200	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.5	0.00	81	0.00	0.00	0.00	100.0%	43.90	43.70	0.20	100	600	51	1.500	524.400	891.647	524.400			H2S=0 ppm CO2= 1200 ppm
3/12/18 6:00	17.82	14	N/A	N/A	1200	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.7	0.20	81	4.80	0.00	4.80	100.0%	44.10	43.90	0.20	100	600	52	1.500	564.480	961.919	564.480			
3/12/18 7:00	18.82	14	N/A	N/A	1200	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.7	0.00	82	0.00	0.00	0.00	100.0%	44.10	43.90	0.20	100	600	50	1.500	605.250	978.479	605.250			
3/12/18 8:00	19.82	14	N/A	N/A	1205	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.7	0.00	81	0.00	0.00	0.00	100.0%	44.10	43.90	0.20	100	600	50	1.500	640.290	840.959	640.290			H2S=0 ppm CO2= 600 ppm
3/12/18 9:00	20.82	14	N/A	N/A	1205	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.7	0.00	79	0.00	0.00	0.00	100.0%	44.10	43.90	0.20	100	550	52	1.500	677.720	898.319	677.720			
3/12/18 10:00	21.82	14	N/A	N/A	1200	0						0'11.75	52.9	0.0	0'0.0"	0.0	0.0	0.2	0.0		11.7	0.00	78	0.00	0.00	0.00	100.0%	44.10	43.90	0.20	100	550	56	1.500	715.018	895.151	715.018			Shut in Well at 10:00 - Turn Over to Rig Crew
3/12/18 11:00	22.82		N/A	N/A								1' 0.0	54.0	1.1	0.0	0.0	0.0	0.5	0.3		11.7	0.00	78	7.20	7.20	0.00	0.0%	44.40	43.90	0.50	100	550	56	1.500	754.200	940.367	754.200			Blow Down Well to pump Kill Fluid
	Ran Tubing and Packer -- Restart Testing																																							
3/13/18 9:20	22.82	S/I	250		0	0						1' 0.0"	54.0	0.0	0.0	0.0	0.0	0.5	0.0		11.7	0.00		0.00	0.00	0.00		44.40	43.90	0.50	0	0	45	1.500	754.200	0.000	754.200			Open Tubing - Flowing to Tank - No Choke
3/13/18 9:30	22.99	8	1,150		700	0						1' 4.5"	74.3	20.3	0.0	0.0	0.0	0.5	0.0		14.5	2.80	60	403.20	0.00	403.20	100.0%	64.65	64.15	0.50	0	400	45	1.500	755.000	115.200	755.000	285.71		09:25 Switch Flow into Separator
3/13/18 9:45	23.24	14	1,365		0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		14.5	0.00	82	0.00	0.00	0.00		64.65	64.15	0.50	100	600	46	1.500	765.650	1022.400	765.650			
3/13/18 10:00	23.49	14	1,300	68	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.50	80	48.00	0.00	48.00	100.0%	65.15	64.65	0.50	100	600	47	1.500	777.420	1129.920	777.420	23540.00		
3/13/18 10:30	23.99	14	1,350	68	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	80	0.00	0.00	0.00		65.15	64.65	0.50	100	600	49	1.500	796.860	933.120	796.860			
3/13/18 11:00	24.49	S/I	N/A	66	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	78	0.00	0.00	0.00		65.15	64.65	0.50	100	600	49	1.500	804.620	372.479	804.620			10:40 Shut in Well -
3/13/18 11:30	24.99	14	1,340	65	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	70	0.00	0.00	0.00		65.15	64.65	0.50	100	600	51	1.500	810.220	268.799	810.220			
3/13/18 12:00	25.49	14	1,285	66	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	72	0.00	0.00	0.00		65.15	64.65	0.50	100	600	52	1.500	830.390	968.157	830.390			
3/13/18 13:00	26.49	14	1,285	72	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	76	0.00	0.00	0.00		65.15	64.65	0.50	100	600	55	1.500	868.200	907.444	868.200			
3/13/18 14:00	27.49	14	1,305	74	0	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	78	0.00	0.00	0.00		65.15	64.65	0.50	100	600	53	1.500	900.940	785.765	900.940			
3/13/18 15:00	28.49	14	1,275	77	15	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	79	0.00	0.00	0.00		65.15	64.65	0.50	100	600	48	1.500	933.360	778.084	933.360			
3/13/18 16:00	29.49	14	1,340	78	140	0						1' 4.5"	74.3	0.0	0.0	0.0	0.0	0.5	0.0		15.0	0.00	78	0.00	0.00	0.00	100.0%	65.15	64.65	0.50	100	600	45	1.500	965.700	776.164	965.700			
3/13/18 17:00	30.49	18	1,330	79	160	0						1' 4.5"	74.3	0.0	0' 1.0"	4.5	4.5	4.7	4.2	0.0%	15.7	0.70	77	117.60	100.80	16.80	14.3%	70.05	65.35	4.70	100	600	52	1.500	1009.250	1045.206	1009.250	8887.76	10369.05	
3/13/18 18:00	31.49	18	1,330	81	200	0						1' 5.0"	76.5	2.3	0' 1.5"	6.7	2.2	6.0	1.3	0.0%	18.6	2.90	77	100.80	31.20	69.60	69.0%	74.25	68.25	6.00	100	600	49	1.500	1054.390	1083.363	1054.390	10747.62	34723.08	
3/13/18 19:00	32.49	18	1,305	81	160	0						1' 5.0"	76.5	0.0	0'2.0	9.0	2.3	9.5	3.5	0.0%	19.4	0.80	77	103.20	84.00	19.20	18.6%	78.55	69.05	9.50	100	600	44	1.500	1114.240	1436.406	1114.240	13918.60		
3/13/18 20:00	33.49	18	1,305	80	210	0						1' 6.0"	80.0	3.5	0'2.5"	11.0	2.0	11.8	2.3	0.0%	19.7	0.30	78	62.40	55.20	7.20	11.5%	81.15	69.35	11.80	100	600	41	1.500	1177.450	1517.046	1177.450	24311.54	27482.61	
3/13/18 21:00	34.49	18	1,300	80	250	0			42,000	7.0	.09 @ 65	1' 6.0"	80.0	0.0	0'2.5"	11.0	0.0	13.9	2.1	0.0%	19.9	0.20	78	55.20	50.40	4.80	8.7%	83.45	69.55	13.90	100	600	40	1.500	1240.290	1508.166	1240.290	27321.74	29923.81	
3/13/18 22:00	35.49	18	1,305	81	400	0						1' 6.0"	81.0	1.0	0' 3.0"	13.5	2.5	16.7	2.8	0.0%	20.4	0.50	78	79.20	67.20	12.00	15.2%	86.75	70.05	16.70	100	600	40	1.500	1305.470	1564.327	1305.470	19751.52	23278.57	
3/13/18 23:00	36.49	20	1,310	82	200	0						1'6.0"	81.0	0.0	0'3.0"	13.5	0.0	18.7	2.0	0.0%	21.0	0.60	76	62.40	48.00	14.40	23.1%	89.35	70.65	18.70	100	600	41	1.500	1376.300	1699.927	1376.300	27242.31	35415.00	At 22:15 Set Choke to a 20/64 - CSG was at 400Psi bleed off to a 100Psi At 22:05

3/14/18 0:00	37.49	20	1,305	82	250	0						1'6.0"	81.0	0.0	0'3.0"	13.5	0.0	22.9	4.2	0.0%	21.2	0.20	77	105.60	100.80	4.80	4.5%	93.75	70.85	22.90	100	600	39	1.500	1444.900	1646.407	1444.900	15590.91	16333.33	
3/14/18 1:00	38.49	20	1,305	82	250	0						1'6.3"	82.0	1.0	0'3.5"	14.0	0.5	24.9	2.0	0.0%	21.2	0.00	77	48.00	48.00	0.00	0.0%	95.75	70.85	24.90	100	600	39	1.500	1513.720	1651.687	1513.720	34410.00	34410.00	
3/14/18 2:00	39.49	20	1,310	84	300	0						1'6.3"	82.0	0.0	0'3.5"	14.0	0.0	27.4	2.5	0.0%	21.4	0.20	78	64.80	60.00	4.80	7.4%	98.45	71.05	27.40	100	600	38	1.500	1584.800	1705.927	1584.800	26325.93	28432.00	
3/14/18 3:00	40.49	20	1,320	83	350	0						1'6.3"	82.0	0.0	0'3.5"	14.0	0.0	30.0	2.6	0.0%	21.5	0.10	78	64.80	62.40	2.40	3.7%	101.15	71.15	30.00	100	600	40	1.500	1654.900	1682.407	1654.900	25962.96	26961.54	
3/14/18 4:00	41.49	20	1,320	83	200	0						1'6.5"	85.0	3.0	0'4.0."	18.0	4.0	33.1	3.1	0.0%	21.9	0.40	79	84.00	74.40	9.60	11.4%	104.65	71.55	33.10	100	600	38	1.500	1726.200	1711.207	1726.200	20371.43	23000.00	CSG was at 350 bleed off to 150 at 04:15
3/14/18 5:00	42.49	20	1,320	87	300	0						1'6.5"	85.0	0.0	0'4.0"	18.0	0.0	36.1	3.0	0.0%	22.1	0.20	80	76.80	72.00	4.80	6.3%	107.85	71.75	36.10	100	600	38	1.500	1805.120	1894.088	1805.120	24662.50	26306.67	
3/14/18 6:00	43.49	20	1,320	89	300	0						1' 6.5	85.0	0.0	0' 6"	27.0	9.0	38.8	2.7	0.0%	22.2	0.10	80	67.20	64.80	2.40	3.6%	110.65	71.85	38.80	100	600	38	1.500	1879.220	1778.407	1879.220	26464.29	27444.44	Increased choke to 24/64"
3/14/18 7:00	44.49	24	1,345	89	400	0						1' 6.5	85.0	0.0	0' 7.0"	31.5	4.5	42.5	3.7	0.0%	22.8	0.60	77	103.20	88.80	14.40	14.0%	114.95	72.45	42.50	100	620	39	1.500	1965.530	2071.449	1965.530	20072.09	23327.03	
3/14/18 8:00	45.49	24	1,355	89	450	0						1' 6.5	85.0	0.0	0' 0.9"	40.5	9.0	45.7	3.2	0.0%	23.0	0.20	77	81.60	76.80	4.80	5.9%	118.35	72.65	45.70	100	620	39	1.500	2051.430	2061.609	2051.430	25264.71	26843.75	CSG was at 450 bleed off to 50 at 04:15
3/14/18 9:00	46.49	24	1,360	100	100	0	65.6					1' 6.5	85.0	0.0	0' 0.9"	40.5	0.0	49.1	3.4	0.0%	23.1	0.10	76	84.00	81.60	2.40	2.9%	121.85	72.75	49.10	100	620	38	1.500	2137.620	2068.569	2137.620	24625.71	25350.00	
3/14/18 10:00	47.49	24	1,360	98	130	20						1' 6.5	85.0	0.0	0' 0.9"	40.5	0.0	52.4	3.3	0.0%	23.3	0.20	75	84.00	79.20	4.80	5.7%	125.35	72.95	52.40	100	620	38	1.500	2224.220	2078.409	2224.220	24742.86	26242.42	Pulling Pressure Samples Gas, Water, Oil
3/14/18 11:00	48.49	24	1,355	99	155	40			60,201	7.0	0.155 @ 54°	1' 6.5	85.0	0.0	0' 0.9"	40.5	0.0	55.6	3.2	0.0%	23.5	0.20	75	81.60	76.80	4.80	5.9%	128.75	73.15	55.60	100	620	39	1.500	2310.100	2061.129	2310.100	25258.82	26837.50	JT (Alta Mesa) Pulled Chlorides and Resistivity
3/14/18 12:00	49.49	24	1,290	105	300	50						1' 6.5	85.0	0.0	0' 0.9"	40.5	0.0	60.0	4.4	0.0%	24.1	0.60	80	120.00	105.60	14.40	12.0%	133.75	73.75	60.00	145	650	43	1.500	2412.240	2451.370	2412.240	20428.00	23213.64	11:53 Opened Choke from 24/64" to 28/64"
3/14/18 13:00	50.49	28	1,280	112	535	100						1' 6.75"	85.0	0.0	0' 0.9"	40.5	0.0	66.2	6.2	0.0%	24.8	0.70	80	165.60	148.80	16.80	10.1%	140.65	74.45	66.20	145	670	48	1.500	2577.410	3964.097	2577.410	23937.68	26640.32	
3/14/18 14:00	51.49	28	1,280	114	200	130						1' 6.75"	85.0	0.0	0' 0.9"	40.5	0.0	71.7	5.5	0.0%	25.1	0.30	85	139.20	132.00	7.20	5.2%	146.45	74.75	71.70	145	670	52	1.500	2734.000	3758.176	2734.000	26998.28	28470.91	
3/14/18 15:00	52.49	28	1,285	112	230	150						1' 7.0"	85.5	0.5	0' 0.9"	40.5	0.0	77.3	5.6	0.0%	26.0	0.90	88	156.00	134.40	21.60	13.8%	152.95	75.65	77.30	145	670	54	1.500	2891.900	3789.611	2891.900	24292.31	28196.43	H2S = 2 ppm CO2 = 1200 ppm
3/14/18 16:00	53.49	28	1,285	116	260	180						1' 7.0"	85.5	0.0	0' 0.9"	40.5	0.0	82.5	5.2	0.0%	26.0	0.00	90	124.80	124.80	0.00	0.0%	158.15	75.65	82.50	145	670	56	1.500	3049.880	3791.531	3049.880	30380.77	30380.77	
3/14/18 17:00	54.49	28	1,290	116	360	200	68.7	5.7	47,366	7.0	0.161 @ 68°	1' 7.0"	85.5	0.0	0' 0.9"	40.5	0.0	87.5	5.0	0.0%	26.2	0.20	90	124.80	120.00	4.80	3.8%	163.35	75.85	87.50	145	670	58	1.500	3207.880	3792.011	3207.880	30384.62	31600.00	
3/14/18 17:46	55.25	28	1,300	116	400	210						1' 7.0"	85.5	0.0	0' 0.9"	40.5	0.0	91.3	3.8	0.0%	26.4	0.20	90	125.20	118.94	6.26	5.0%	167.35	76.05	91.30	145	670	57	1.500	3329.580	3809.153	3329.580	30425.00	32026.32	
	End Test																																							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CSG psig
BPD Oil
Surface CSG psig
BPD WATER
GAS RATE MCFD
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