



ENDURING RESOURCES

332 CR 3100 Aztec NM 87410

Telephone: 505 636 9720 Facsimile: 505 334 1979

Monica Kuehling
NMOCD – District 3, Aztec
1000 Rio Brazos Rd.
Aztec, NM 87410

RE: Mosely 1-2 (30-045-33472) Plan of Action, RBDMS MPK1810957218

Ms. Kuehling,

This action plan is in response to the *2018 Bradenhead Test* letter received by Enduring Resources, LLC on June 14, 2018. Due to an initial bradenhead pressure of 51 psi, collected on March 13, 2018, a gas sample was collected from the tubing, casing and bradenhead of this well string on April 11, 2018. An outline of the results are represented in *Table I*.

Based on the results presented, Enduring Resources does not believe that the gas in the bradenhead definitively matches the gas in the casing and tubing for this well. The bradenhead gas analysis shows an extreme difference in the percentage of ethane in the bradenhead gas when compared to the casing and tubing gas. The bradenhead gas shows an ethane percentage of 2.816 percent, while the gas in the casing and tubing showed ethane percentages of 0.50115 and 0.05282 percent respectively. The gas in the bradenhead shows an ethane concentration nearly 6 times the concentration shown in the casing (0.50115 %). Also, the percentages of propane and n-butane are different enough in the bradenhead, when compared to the percentages in the casing and tubing, that it indicates the potential that the gas may not be from the same source. Additionally, the Mosely 1-2 wellsite is completed into the Fruitland Coal formation, which is not typically associated with heavier gases like ethane.

Additionally, the pressure difference between the casing and bradenhead is not indicative of a casing leak. The casing pressure at this was recorded at 7 PSI, while the bradenhead pressure was recorded at 51 PSI. The fact that the pressure is higher in the bradenhead than in the casing, and that the bradenhead pressure builds back up to pressures above the casing pressure after being relieved, indicates that the gas is not coming from the casing, as a more equalized pressure would be expected if the gas was leaking into the bradenhead from the casing.

Finally, Enduring preformed a re-completion at this location in in December of 2017. During the completion activity, a pressure test was conducted of the casing, which passed at 1000 PSIG for 30 minutes, solidifying the fact that there was not a leak in the casing. Please see attached *Form C-103*.

Due to Enduring's belief that the gas is not coming from the well casing, Enduring proposes to tie the bradenhead into the production line, alleviating pressure on the bradenehad. This will help prevent any potential effects on groundwater from the unknown gas by venting it out of the bradnehead. Additionally, Enduring proposes to perform bradenhead testing on the Mosely 1-2 on an annual basis in order to monitor the condition at this well site. Thank you for your time in regards to this matter.

James McDaniel
HSE Supervisor
Enduring Resources, LLC
San Juan Basin Operations

NMOCD

JUN 22 2018

DISTRICT III

Table I
Mosely 1-2 Gas Analysis Results

Description	Date	Nitrogen %	Methane %	CO2 %	Ethane %	H2S %	Propane %	i-butane %	n-butane %	i-Pentane %	n-Pentane %	Hexanes +
Casing	4/11/2018	1.9215	96.0079	0.91584	0.50115	0	0.35835	0.11283	0.02697	0.13778	0.01798	0
Tubing	4/11/2018	1.50276	96.91782	0.05282	0.05282	0	0.27051	0.14351	0	0.01558	0	0
BradenHead	4/11/2018	1.32668	94.74406	0	2.81636	0	0.78627	0.14916	0.12386	0.033	0.0655	0.00406

Diablo Analytical BTU Report

GPA 2145-03 Analysis

Sample Information

Sample Information	
Sample Name	Moseley 1-2 Tubing
Station Number	2300450197
Taken By	Alpine Analysis LLC
Operator	Travis Tapp
Method Name	StandardNatGas.met
Injection Date	2018-04-11 14:20:55
Report Date	2018-04-11 14:25:02
EZReporter Configuration File	default Standard Sample.cfgx
Source Data File	2018-04-11 14-20-43 (GMT -06-00)Moseley 1-2 Tubing
EZReporter Data File	Moseley 1-2 Tubing-20180411-142502.ezrx
Data Source	Agilent EZChrom Connector

Component Results

Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.321	1039265.0	1.50276	0.0	0.01453	0.166
Methane	0.325	46149435.0	96.91782	981.1	0.53683	16.460
Carbon Dioxide	0.377	750566.0	1.09700	0.0	0.01667	0.188
Ethane	0.431	38102.0	0.05282	0.9	0.00055	0.014
Hydrogen Sulfide	0.601	0.0	0.00000	0.0	0.00000	0.000
Propane	0.527	532497.0	0.27051	6.8	0.00412	0.075
i-Butane	0.567	328911.0	0.14351	4.7	0.00288	0.047
n-Butane	0.611	0.0	0.00000	0.0	0.00000	0.000
i-Pentane	0.709	40426.0	0.01558	0.6	0.00039	0.006
n-Pentane	0.759	0.0	0.00000	0.0	0.00000	0.000
Hexanes Plus	0.000	0.0	0.00000	0.0	0.00000	0.000
Water	0.000	0.0	0.00000	0.0	0.00000	0.000
Total:			100.00000	994.2	0.57597	16.954

Results Summary

Result	Dry	Sat. (Base)
Total Raw Mole% (Dry)	96.92800	
Pressure Base (psia)	14.730	
Temperature Base	60.0	
Water Mole%	-	1.74067
Gross Heating Value (BTU / Ideal cu.ft.)	994.2	976.9
Gross Heating Value (BTU / Real cu.ft.)	996.2	979.2
Relative Density (G), Real	0.5769	0.5779
Compressibility (Z) Factor	0.9980	0.9976
Total GPM	16.954	16.764

Diablo Analytical BTU Report

GPA 2145-03 Analysis

Sample Information

Sample Information	
Sample Name	Moseley 1-2 Casing
Station Number	2300450197
Taken By	Alpine Analysis LLC
Operator	Travis Tapp
Method Name	StandardNatGas.met
Injection Date	2018-04-11 13:55:48
Report Date	2018-04-11 13:59:40
EZReporter Configuration File	default Standard Sample.cfgx
Source Data File	2018-04-11 13:55:37 (GMT -06-00)Moseley 1-2 Casing
EZReporter Data File	Moseley 1-2 Casing-20180411-135940.ezrx
Data Source	Agilent EZChrom Connector

Component Results

Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.321	1311507.0	1.92159	0.0	0.01859	0.212
Methane	0.325	45118279.0	96.00796	971.9	0.53179	16.306
Carbon Dioxide	0.378	618379.0	0.91584	0.0	0.01392	0.157
Ethane	0.430	356865.0	0.50115	8.9	0.00520	0.134
Hydrogen Sulfide	0.601	0.0	0.00000	0.0	0.00000	0.000
Propane	0.530	696169.0	0.35835	9.0	0.00546	0.099
i-Butane	0.568	254278.0	0.11238	3.7	0.00226	0.037
n-Butane	0.612	62125.0	0.02697	0.9	0.00054	0.009
i-Pentane	0.709	353567.0	0.13778	5.5	0.00343	0.050
n-Pentane	0.774	48093.0	0.01798	0.7	0.00045	0.007
Hexanes Plus	0.000	0.0	0.00000	0.0	0.00000	0.000
Water	0.000	0.0	0.00000	0.0	0.00000	0.000
Total:			100.00000	1000.6	0.58163	17.009

Results Summary

Result	Dry	Sat. (Base)
Total Raw Mole% (Dry)	95.66030	
Pressure Base (psia)	14.730	
Temperature Base	60.0	
Water Mole%	-	1.74067
Gross Heating Value (BTU / Ideal cu.ft.)	1000.6	983.2
Gross Heating Value (BTU / Real cu.ft.)	1002.7	985.6
Relative Density (G), Real	0.5826	0.5835
Compressibility (Z) Factor	0.9980	0.9976
Total GPM	17.009	16.819

Diablo Analytical BTU Report

GPA 2145-03 Analysis

Sample Information

Sample Information	
Sample Name	Moseley 1-2 Braden
Station Number	2300450197
Taken By	Alpine Analysis LLC
Operator	Travis Tapp
Method Name	StandardNatGas.met
Injection Date	2018-04-11 13:44:58
Report Date	2018-04-11 13:48:49
EZReporter Configuration File	default Standard Sample.cfgx
Source Data File	2018-04-11 13-44-47 (GMT -06-00)Moseley 1-2 Braden
EZReporter Data File	Moseley 1-2 Braden-20180411-134849.ezrx
Data Source	Agilent EZChrom Connector

Component Results

Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Nitrogen	0.320	909405.0	1.32668	0.0	0.01283	0.146
Methane	0.325	44717036.0	94.74406	959.1	0.52479	16.093
Carbon Dioxide	0.377	0.0	0.00000	0.0	0.00000	0.000
Ethane	0.426	2014018.0	2.81636	50.0	0.02924	0.755
Hydrogen Sulfide	0.601	0.0	0.00000	0.0	0.00000	0.000
Propane	0.530	1533957.0	0.78627	19.8	0.01197	0.217
i-Butane	0.577	338772.0	0.14916	4.9	0.00299	0.049
n-Butane	0.611	287041.0	0.12386	4.1	0.00249	0.039
i-Pentane	0.715	85014.0	0.03300	1.3	0.00082	0.012
n-Pentane	0.758	44443.0	0.01655	0.7	0.00041	0.006
Hexanes Plus	0.000	13376.0	0.00406	0.0	0.00000	0.000
Water	0.000	0.0	0.00000	0.0	0.00000	0.000
Total:			100.00000	1039.8	0.58554	17.317

Results Summary

Result	Dry	Sat. (Base)
Total Raw Mole% (Dry)	96.07440	
Pressure Base (psia)	14.730	
Temperature Base	60.0	
Water Mole%	-	1.74067
Gross Heating Value (BTU / Ideal cu.ft.)	1039.8	1021.7
Gross Heating Value (BTU / Real cu.ft.)	1042.1	1024.3
Relative Density (G), Real	0.5866	0.5874
Compressibility (Z) Factor	0.9978	0.9975
Total GPM	17.317	17.121

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
475 N. French Dr. Hobbs, NM 88240
District II - (505) 775-7235
801 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-045 33472

5. Indicate Type of Lease

STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Moseley 1

8. Well Number 2

9. OGRID Number 372286

10. Pool name or Wildcat
Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Enduring Resources

3. Address of Operator

332 Road 3100 Aztec NM 87410

4. Well Location

Unit Letter F : 1398 feet from the N line and 1464 feet from the W line

Section 1 Township 31N Range 13W NMPM County San Juan

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

5744' GL

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

DOWNHOLE COMMINGLE ☐

CLOSED-LOOP SYSTEM ☐

OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ P AND A ☐

CASING/CEMENT JOB ☐

OTHER: Frac job ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

12/16/2017 MIRU.

12/18/2017 ND WH, NU BOP, flowcross. PT BOP 250 psi (low) - 1500 psi (high) 5 min, tests good. MU 6-1/8in bit, & csg scraper on tbq. TIH to PBTD (no fill). TOH tbq, scraper, bit.

MIRU WL. Perf FRLDC: 1876 - 1880, 1855 - 1857, 1821 - 1823, 1816 - 1818, 1804 - 1807 (3 SPF, 120 deg phasing, 39 holes).

POOH w/guns. RDMO WL.

MU pkr, sleeve asmbly 2-7/8in N80 frac string. TIH pkr, sleeve assembly 3-1/2in P110 frac string. TIH to setting depth.

See attached for remainder of procedure. WBD attached.

Spud Date:

01/23/2008

Rig Release Date:

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

SIGNATURE

April E. Pohl

TITLE Regulatory Specialist

DATE 1/22/2018

Type or print name

April E Pohl

E-mail address: apohl@enduringresources.com

PHONE: 505-636-9722

For State Use Only

APPROVED BY:

Bob Roll

Deputy Oil & Gas Inspector,
District #3

DATE 2/6/18

Conditions of Approval (if any):

Moseley 1-2 frac 2018

12/19/2017 Load frac string 2% KCL water, PT frac string 5K psig 30 min. Test good. Set mech (top) pkr. Load TCA 2% KCl water. PT TCA to 1K psig 30 min. Test good. RIH, retrieve plug from profile in mech pkr.
Pressure frac string set hyd pkrs. Pkrs set @ 1850 psig
EOT @ 1897ft
PKR 1 @ 1885ft (elements) PKR 2 @ 1827ft (elements) PKR 3 @ 1747ft (elements)
Hold 1,850 psig on frac string 10 min.
ND BOP, flowcross. NU 5K frac stack. PT 5K psig 30 min. good. PT secondary seals 5K psig. good. RIH SL. Knock out burst disc in btm pkr.
RDMO. Final report for frac prep. Reports resume with frac ops.

12/31/2017 Frac lower FC perfs 2010 - 2042 down 3-1/2in frac string. Load, break 1970 gal water. Pump 500 gal 15% HCl. Pump 28603 gal Water-Frac G 20lb linear gel & 65709 gal Delta 140 20lb XL gel carrying 147500 lbs 20/40 Brady sand. 3, 4, 5 ppg stages coated w/SandWedge NT. Max rate 30 BPM, max STP 3225 psig, avg rate 30 BPM, avg STP 2,848 psig, max sand conc 5 ppg.
Flushed 1397 gal Water Frac G (10 bbls past btm perf, clear frac string to ensure good ball drop, sleeve shift). ISIP 1536 psig (FG = 1.20 psi/ft).
Drop 1.900in frac ball. Displace ball to sleeve w/water @ 5 BPM. Sleeve shifted. Max pressure 3078 psig. Frac middle FC perfs 1854 - 1881 down 3-1/2in frac string. Load, break 1064 gal water. Pump 500 gal 15% HCl. Pump 14467 gal Water-Frac G 20lb linear gel, 37482 gal Delta 140 20lb XL gel carrying 80200 lbs 20/40 Brady sand. 3, 4, 5 ppg stages coated w/SandWedge NT. Max rate 30 BPM, max STP 3078 psig, avg rate 30 BPM, avg STP 2633 psig, max sand conc 5 ppg. Flushed 1136 gal Water Frac G (10 bbls past sleeve, clear frac string to ensure good ball drop, sleeve shift). ISIP 1,463 psig (FG = 1.22 psi/ft).
Drop 2.048in frac ball. Displace ball to sleeve water @ 5 BPM. Sleeve shifted. Max pressure 3087 psig. Frac upper FC perfs 1802 - 1823 down 3-1/2in frac string. Load, break 1298 gal water. Pump 500 gal 15% HCl. Pump 11074 gal Water-Frac G 20lb linear gel, 19601 gal Delta 140 20lb XL gel carrying 23980 lbs 20/40 Brady sand. 3 ppg stage coated SandWedge NT.
Max rate 31 BPM, max STP 3087 psig, avg rate 25 BPM, avg STP 2533 psig, max sand conc 5 ppg. Flushed 1165 gal Water Frac G (10 bbls past sleeve). SD after flushing frac string after 0.25 ppg sand stage. TCA pressure climbing steadily. Max pressure 25 psig. Bleed off pressure, monitor. Stayed at 0. Resume job. SD during 2.5 ppg sand stage.
Resume job at 20 BPM. Ramp to 3 ppg sand stage. TCA pressure steadily climb to 175 psig. Cut sand, flush, SD. Possible packer failure.
Pumped 40% of design sand weight on final stage. RDMO.

1/5/2018 MIRU. ND frac stack, NU BOP, RU floor, RU pipe handling equip. SDFWE.

1/8/2018 MU 3-1/2in pup jt on swivel, screw in hanger, PU hanger, release pk by pulling 43K, came free. TOH 3-1/2in frac string, MU 3-1/2in elevators, BOP csg rams use 2-3/8in.
MU 6-1/8in bit, bit sub w float, 2-3/8in tbg. TIH 2-3/8in tbg, bit. Tag fill @ 2011ft (31ft perfs covered, 202ft fill total).
TOOH 4 stands of 2-3/8in tbg above the top perfs, SDFN

1/9/2018 TIH to 2011ft bit, bit sub, tbg to c/ot WB.
Start AFU pumping 10 BPH, 1 gal foam/hr, 1 gal inhibitor/hr, pumping at 300 psi, returns 10 BPH. C/O to 2213ft PBTD. Maintain pump rate, returns thru day for 8.5 hours. WB clean, TOH 8 stds tbg above top perfs.

1/10/2018 TIH check fill, tag @ 2210ft (3ft fill) Land 2 365". 4.5lb, J-55 tbg @ 2107ft. SN @ 2069ft.
BHA consists of:
BP 8ft x 2.625in pup joint 24ft tubing screen 4ft x 2.365in pup jt SN
65 jts 2.365in, 14.5lb, J-55 tbg to surf
RU swab lubricator, make 4 runs, water level approx 1800ft 1st run. ND BOP, NU WH, TIH pump and rods.
Load hole fluid, test tbg 500 psi, test good. Long stroke pump 520 psi, test good. Clamp off polish rod @ 6in abv tag. Rod string consists of:
2in x 1.5in x 12ft RWAC pump w/2ft PA 60-ring plngr, sand check
4ft guided rod 8 - 1.25in sinker bars 73 - .75in plain rods 2 - 6ft x .75in pony rods 16ft x 1.25in polish rod
RDMO

Well Name: **Moseley 1-2**

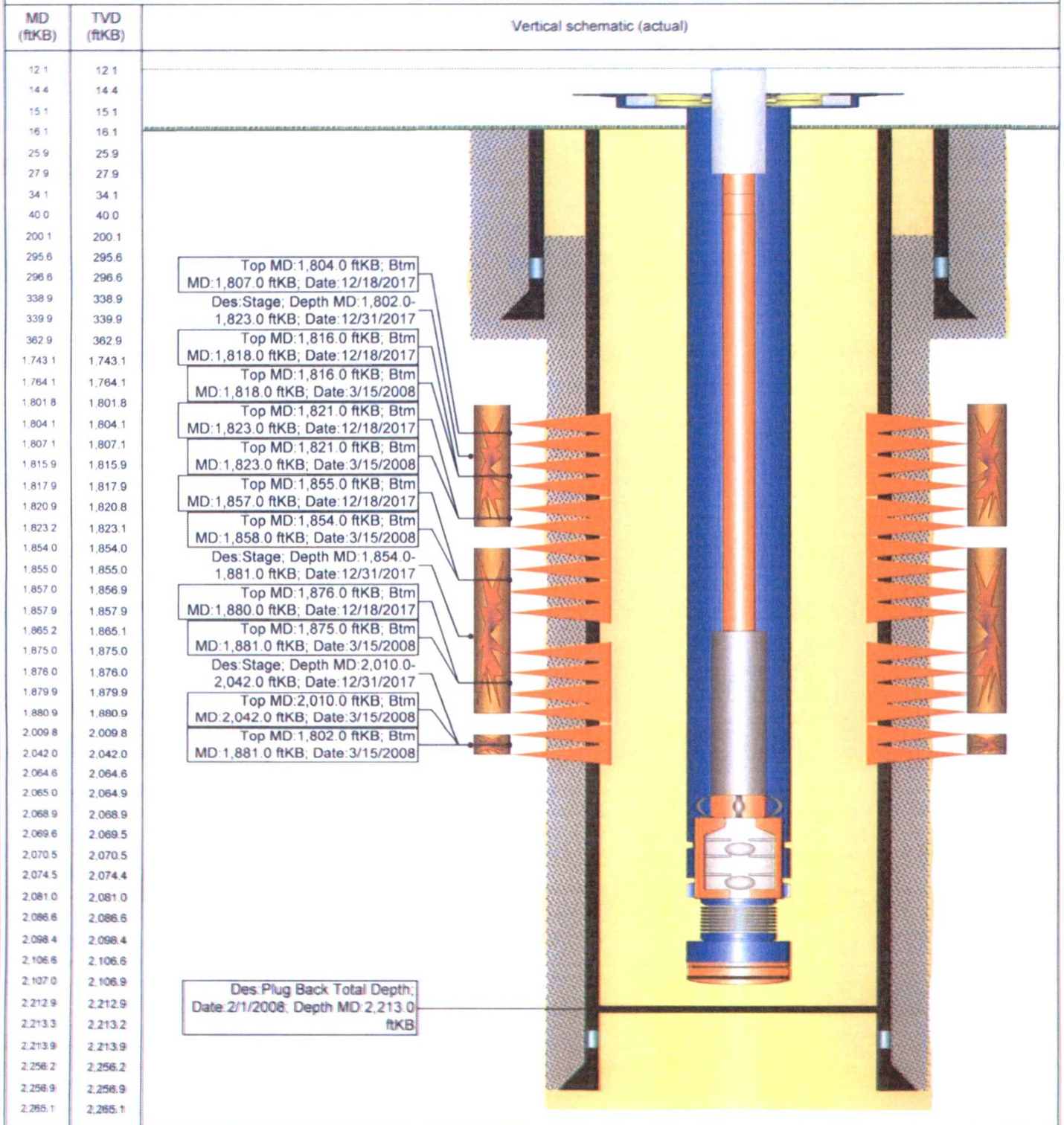
API/UWI 3004533472	Surface Legal Location	Field Name Basin (New Mexico)	License # 000000	State/Province New Mexico	Well Configuration Type Land
Original KB Elevation (ft) 5,760.00	KB-Tubing Head Distance (ft)	Spud Date 1/23/2008 00:00	Rig Release Date	PSTD (All) (ftKB) Original Hole - 2,213.0	Total Depth All (TVD) (ftKB)

Most Recent Job

Job Category Completion/Workover	Primary Job Type Recompletion	Secondary Job Type Refrac	Start Date 12/16/2017	End Date 1/10/2018
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TD: 2,265.0

Land, Original Hole, 1/22/2018 6:59:51 AM



WellView

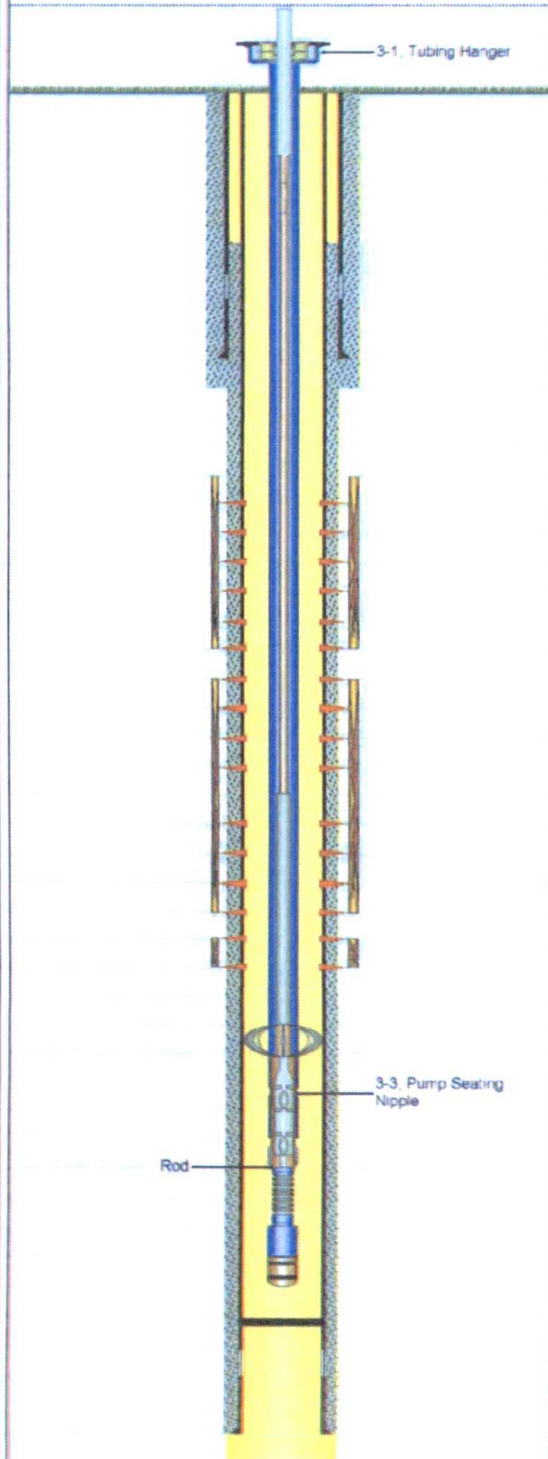
ERC - Current WBD

Well Name: Moseley 1-2

API/UVI 3004533472	Surface Legal Location	Field Name Basin(New Mexico)	License # 000000	State/Province New Mexico	Well Configuration Type Land
Original KB Elevation (ft) 5,760.00	KB-Tubing Head Distance (ft)	Spud Date 1/23/2008 00:00	Rig Release Date	PEFD (All) (ftKB) Original Hole - 2,213.0	Total Depth All (ftKB) (ftKB)

Land, Original Hole, 1/12/2018 7:51:51 AM

Vertical schematic (actual)



Casing Strings

Csg Des	OD (in)	Wt/Len (lb/ft)	Grade	Top Thread	Top (ftKB)	Set Depth (ftKB)
Surface	9 5/8	35.00	J-55	LTC	16.0	340.0
Production	7	23.00	N80	LTC	16.0	2,257.0

Cement

Description Production Casing Cement	Comment 375 sx 50:50 G:POZ, 13.1 ppg, 1.41 cuft/sx, circ 1 bbl cmt to surface, TOC @ 200' (CBL)
Description Surface Casing Cement	Comment 200 sx Cl G, 15.6 ppg, 1.2 cuft/sx, circ 43 sx to surf

Perforations

Date	Top (ftKB)	Btm (ftKB)
3/15/2008	1,802.0	1,881.0
12/18/2017	1,804.0	1,807.0
12/18/2017	1,816.0	1,818.0
3/15/2008	1,816.0	1,818.0
12/18/2017	1,821.0	1,823.0
3/15/2008	1,821.0	1,823.0
3/15/2008	1,854.0	1,858.0
12/18/2017	1,855.0	1,857.0
3/15/2008	1,875.0	1,881.0
12/18/2017	1,876.0	1,880.0
3/15/2008	2,010.0	2,042.0

Tubing Strings

Tubing Description		Run Date	String Length (ft)		Set Depth (ftKB)	
Tubing - Production		1/10/2018	2,092.50		2,107.0	
Jts	Item Des	OD (in)	Len (ft)	Top (ftKB)	Btm (ftKB)	
1	Tubing Hanger	6.338	0.50	14.5	15.0	
65	Tubing	2 3/8	2,054.50	15.0	2,069.5	
1	Pump Seating Nipple	2 3/8	1.00	2,069.5	2,070.5	
1	Tubing	2 3/8	4.00	2,070.5	2,074.5	
1	Wirewrap Screen	2 3/8	24.00	2,074.5	2,098.5	
1	Tubing	2 3/8	8.00	2,098.5	2,106.5	
1	Bull Plug	2 3/8	0.50	2,106.5	2,107.0	

Rod Strings

Rod Description		Run Date		String Length (ft)		Set Depth (ftKB)	
Rod		1/10/2018		2,069.00		2,081.0	
Jts	Item Des			OD (in)	Len (ft)	Top (ftKB)	Btm (ftKB)
1	Polished Rod			1 1/4	16.00	12.0	28.0
1	Sucker Rod			3/4	6.00	28.0	34.0
1	Sucker Rod			3/4	6.00	34.0	40.0
73	Sucker Rod			3/4	1,825.00	40.0	1,865.0
8	Sinker Bar			1 1/4	200.00	1,865.0	2,065.0
1	Rod Centralizer			1 1/4	4.00	2,065.0	2,069.0
1	Rod Pump			2	12.00	2,069.0	2,081.0