API Well Number: 43013521050000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☑

APPLICATION FOR PERMIT TO DRILL

1. WELL NAME and NUMBER Aubrey 2-15-22-3-2WH	
2. TYPE OF WORK DRILL NEW WELL ◉ REENTER P&A WELL ○ DEEPEN WELL ○	**3. FIELD OR WILDCAT** NORTH MYTON BENCH
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO	**5. UNIT or COMMUNITIZATION AGREEMENT NAME**
6. NAME OF OPERATOR NEWFIELD PRODUCTION COMPANY	**7. OPERATOR PHONE** 435 646-4825
8. ADDRESS OF OPERATOR Rt 3 Box 3630 , Myton, UT, 84052	**9. OPERATOR E-MAIL** mcrozier@newfield.com
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) 14-20-H62-6269	**11. MINERAL OWNERSHIP** FEDERAL ○ INDIAN ◉ STATE ○ FEE ○
	12. SURFACE OWNERSHIP FEDERAL ○ INDIAN ○ STATE ○ FEE ◉
13. NAME OF SURFACE OWNER (if box 12 = 'fee') Dart Homestead Ranch, Inc.	**14. SURFACE OWNER PHONE (if box 12 = 'fee')** 435-722-7087
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee') Route 2, Box 2044, Roosevelt, UT 84066	**16. SURFACE OWNER E-MAIL (if box 12 = 'fee')**
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')	**18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS** YES ○ (Submit Commingling Application) NO ◉
	19. SLANT VERTICAL ○ DIRECTIONAL ○ HORIZONTAL ◉

20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	381 FSL 1838 FEL	SWSE	10	3.0 S	2.0 W	U
Top of Uppermost Producing Zone	330 FNL 1980 FEL	NWNE	15	3.0 S	2.0 W	U
At Total Depth	660 FSL 1980 FEL	SWSE	22	3.0 S	2.0 W	U

21. COUNTY DUCHESNE	**22. DISTANCE TO NEAREST LEASE LINE (Feet)** 381	**23. NUMBER OF ACRES IN DRILLING UNIT** 40
	25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 30	**26. PROPOSED DEPTH** MD: 18540 TVD: 8963
27. ELEVATION - GROUND LEVEL 5362	**28. BOND NUMBER** WYB000493	**29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE** 437478

Hole, Casing, and Cement Information

String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
COND	24	20	0 - 60	0.0	Unknown	0.0	Class G	57	1.17	15.8
SURF	17.5	13.375	0 - 1600	54.5	J-55 LT&C	8.4	Class G	229	3.33	11.0
							Class G	885	1.9	15.0
I1	12.25	9.625	0 - 8586	40.0	N-80 Buttress	11.0	Halliburton Premium , Type Unknown	1619	2.57	11.5
							50/50 Poz	908	1.34	14.0
PROD	8.75	5.5	0 - 18540	20.0	P-110 Other	14.5	50/50 Poz	1640	1.84	14.0
							50/50 Poz	165	1.84	17.3

ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	☑ COMPLETE DRILLING PLAN
☑ AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	☐ FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
☑ DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	☑ TOPOGRAPHICAL MAP

NAME Don Hamilton	**TITLE** Permitting Agent	**PHONE** 435 719-2018
SIGNATURE	**DATE** 03/20/2013	**EMAIL** starpoint@etv.net
API NUMBER ASSIGNED 43013521050000	**APPROVAL**	Permit Manager

RECEIVED: August 21, 2013

Newfield Production Company
Aubrey 2-15-22-3-2WH
Surface Hole Location: 381' FSL, 1838' FEL, Section 10, T3S, R2W
Bottom Hole Location: 660' FSL, 1980' FEL, Section 22, T3S, R2W
Duchesne County, UT

Drilling Program

1. Formation Tops

Uinta	surface
Green River	3,769'
Garden Gulch member	6,644'
Uteland Butte member	8,892'
Wasatch	9,023'
Lateral TD	8,963' TVD / 18,540' MD

2. Depth to Oil, Gas, Water, or Minerals

Base of moderately saline	1,418'		(water)
Green River	6,644'	- 9,023'	(oil)
Wasatch	8,963'	- 9,023'	(oil)

3. Pressure Control

Section	BOP Description
Surface	12-1/4" Diverter
Intermediate	The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc for a 5M system.
Prod/Prod Liner	The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 for equipment and testing requirements, procedures, etc for a 5M system. A 5M BOP system will consist of 2 ram preventers (double or two singles) and an annular preventer (see attached diagram). A choke manifold rated to at least 5,000 psi will be used

4. Casing

Description	Interval		Weight (ppf)	Grade	Coup	Pore Press @ Shoe	MW @ Shoe	Frac Grad @ Shoe	Safety Factors		
	Top	Bottom (TVD/MD)							Burst	Collapse	Tension
Conductor	0'	60'	--	--	Weld	--	--	--	--	--	--
20									--	--	--
Surface	0'	1,600'	54.5	J-55	STC	8.33	8.4	13	2,730	1,130	514,000
13 3/8									2.72	2.10	5.89
Intermediate	0'	8,475'	40	N-80	BTC	10.5	11	16	5,750	3,090	916,000
9 5/8		8,586'							1.08	1.27	2.70
Production	0'	8,963'	20	P-110	BTC	14	14.5	16	12,360	11,080	641,000
5 1/2		18,540'							2.20	1.89	1.73

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Assumptions:

Surface casing MASP = (frac gradient + 1.0 ppg) - (gas gradient)
Intermediate casing MASP = (reservoir pressure) - (gas gradient)
Production casing MASP = (reservoir pressure) - (gas gradient)
Intermediate collapse calculations assume 50% evacuated
Maximum intermediate csg collapse load assumes loss of mud to a fluid level of 4,238'
Intermediate csg run from surface to 8,475' and will not experience full evacuation
Production csg run from surface to TD will isolate intermediate csg from production loads
Production csg withstands burst and collapse loads for anticipated production conditions
Surface & production collapse calcs assume fully evacuated casing w/ a gas gradient
All tension calculations assume air weight of casing
Gas gradient = 0.1 psi/ft

All casing shall be new.
All casing strings shall have a minimum of 1 centralizer on each of the bottom 3 joints.

5. Cement

Job	Hole Size	Fill	Slurry Description	ft^3 / sacks	OH excess	Weight (ppg)	Yield (ft^3/sk)
Conductor	24	60'	Class G w/ 2% KCl + 0.25 lbs/sk Cello Flake	66 / 57	15%	15.8	1.17
Surface Lead	17 1/2	500'	Class G w/ 2% KCl + 0.25 lbs/sk Cello Flake	764 / 229	120%	11.0	3.33
Surface Tail	17 1/2	1,100'	Class G w/ 2% KCl + 0.25 lbs/sk Cello Flake	1681 / 885	120%	15.0	1.9
Intermediate Lead	12 1/4	6,644'	HLC Premium - 35% Poz/65% Glass G + 10% bentonite	4162 / 1619	100%	11.5	2.57
Intermediate Tail	12 1/4	1,942'	50/50 Poz/Class G + 1% bentonite	1217 / 908	100%	14.0	1.34
Production Lead	8 3/4	9,954'	ElastiSeal Foam from 17.3ppg - 14.0 ppg	3017 / 1640	20%	14.0	1.84
Production Tail	8 3/4	1,000'	ElastiSeal Unfoamed	303 / 165	20%	17.3	1.84

The surface casing will be cemented to surface. In the event that cement does not reach surface during the primary cement job, a remedial job will be performed.

Actual cement volumes for the intermediate casing string will be calculated from an open hole caliper log, plus 15% excess.

The 5.5" production string will be run from surface to TD and cemented to setback. The cement slurries will be adjusted for hole conditions and blend test results. The lateral will be cemented past the setback.

This well will not be perforated or produced outside the legal setbacks

6. Type and Characteristics of Proposed Circulating Medium

Interval	Description
Surface - 1,600'	An air and/or fresh water system will be utilized. If an air rig is used, the blooie line discharge may be less than 100' from the wellbore in order to minimize location size. The blooie line is not equipped with an automatic igniter. The air compressor may be located less than 100' from the well bore due to the low possibility of combustion with the air/dust mixture. Water will be on location to be used as kill fluid, if necessary.

RECEIVED: July 23, 2013

1,600' - 8,586' A water based mud: Hole stability may be improved with additions of KCl or a similar inhibitive substance. In order to control formation pressure the system will be weighted with additions of bentonite, and if conditions warrant, with barite.

Anticipated maximum mud weight is 11.0 ppg.

8,586' - TD One of two possible mud systems may be used depending on offset well performance on ongoing wells: A water based mud: Hole stability may be improved with additions of KCl or a similar inhibitive substance. In order to control formation pressure the system will be weighted with additions of bentonite, and if conditions warrant, with barite.

-or-

A diesel based OBM system: with an oil to water ratio between 70/30 and 80/20. Emulsifiers and wetting agents will be used to maintain adequate mud properties. A water phase salinity will be maintained in the range of 25% using CaCl (Calcium Chloride). All cuttings will be dried and centrifuged so that they can be easily transferred to a lined cuttings pit with little to no free fluid on them. The cuttings will be mixed with fly ash prior to transportation to a location on Newfield owned surface. Once on Newfield owned surface, the cuttings will be treated with the previously approved FIRMUS process and used as a construction material on future location and/or roads on Newfield owned surface. The cuttings may also be transported to a state approved disposal facility.

Anticipated maximum mud weight is 14.5 ppg.

7. Logging, Coring, and Testing

Logging: A dual induction, gamma ray, and caliper log will be run from KOP to the base of the surface casing. A compensated neutron/formation density log will be run from TD to the top of the Garden Gulch formation. A cement bond log will be run from KOP to the cement top behind the production casing and or intermediate casing.

Cores: As deemed necessary.

DST: There are no DST's planned for this well.

RECEIVED: July 23, 2013

8. Anticipated Abnormal Pressure or Temperature

Maximum anticipated bottomhole pressure will be approximately equal to total depth (feet) multiplied by a 0.73 psi/ft gradient.

8,963' x 0.73 psi/ft = 6525.1 psi

No abnormal temperature is expected. No H_2S is expected.

9. Other Aspects

The lateral of this well will target the Wasatch formation
After setting 9-5/8" casing, an 8-3/4" vertical hole will be drilled to a kick off point of 8,947'
Directional tools will then be used to build to 92.59 degrees inclination.
The lateral will be drilled to the bottomhole locationof 660' FSL of Section 22. A 5-1/2" longstring will be run from surface to TD and cemented in place. We will drill past the 660' setback just enough to bury our shoe track. We will not place our hydraulic toe sleeve South of the setback line to ensure that we are in compliance.

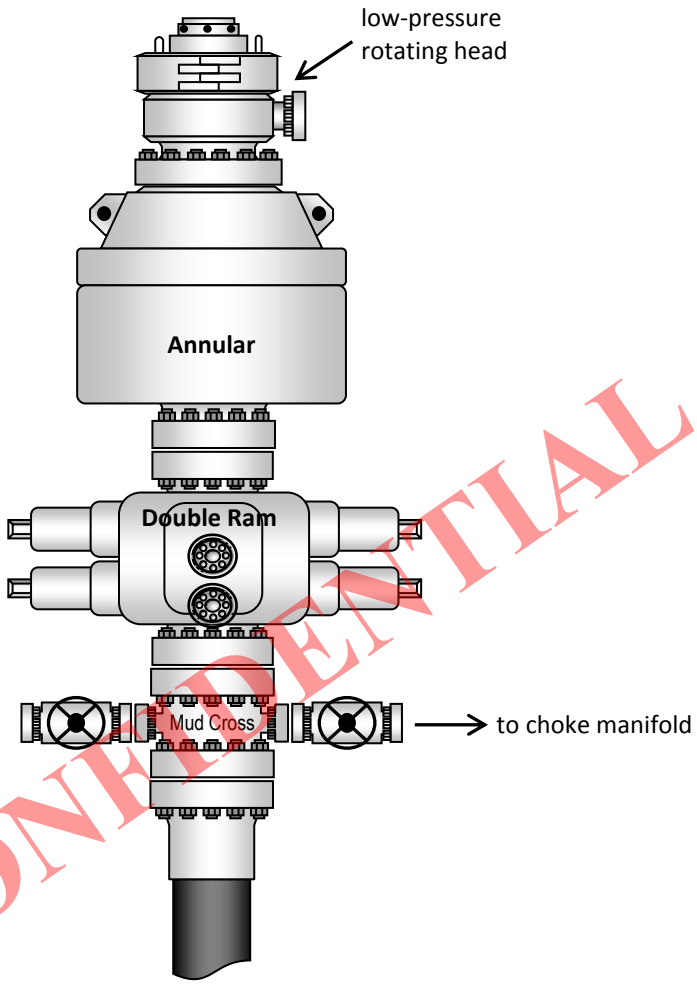
Newfield requests the following variances from Onshore Order #2:

- Variance from Onshoer Order #2, III.E.1
  Refer to Newfield Production Company Standard Operating Practices "Ute Tribal Green River Development Program" paragraph 9.0

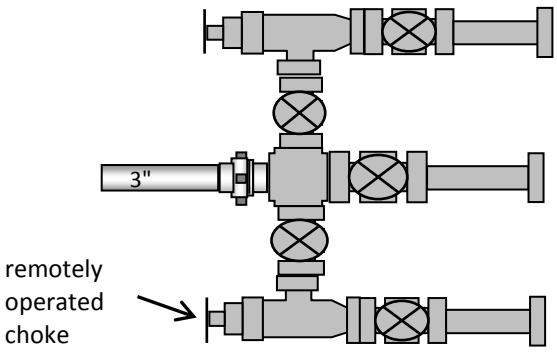
If oil based mud (OBM) is used and If Newfield owns the surface rights on the same drilling site at a location where construction is desired, the cuttings may be used for construction by a Firmus® process at that location. Otherwise, after the cuttings have been made safe for transport as described in paragraph 6, they will be transported to another location on which Newfield owns surface rights and there mixed, as part of a Firmus® process, with at least one additional chemical that will convert them to a temporarily uncured cementitious mixture that will be placed and shaped into a temporary desired final structure that will spontaneously harden within seven days after placement to form the desired structure. Samples of the temporary desired final structure may be taken for testing as described below (after the samples have hardened), or samples of the starting pretreated cuttings and mud will be taken during the construction and later mixed in a laboratory, molded, and cured to simulate the final structure as well as reasonably possible. Either these laboratory-made simulations of the final structure or samples of the temporary mixture itself after hardening, will be mechanically tested directly to determine their unconfined compressive strength and their hydraulic conductivity. Leachates of the mechanically tested structures themselves or of finer particles made by crushing and size-grading of the mechanically tested structures themselves to a specified particle size range will be analyzed, according to specified methods, for their contents of arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, zinc, benzene, total petroleum hydrocarbons (TPH), and chlorides, and the pH of these leachates will also be measured. The results of all these tests will be reported by Newfield to UDOGM at intervals as requested, along with the latitude and longitude (or other comparable location data) of the site of the useful constructions built.

RECEIVED: July 23, 2013

Typical 5M BOP stack configuration



Typical 5M choke manifold configuration



RECEIVED: July 23, 2013

API Well Number: 43013521050000

NEWFIELD EXPLORATION COMPANY

Well location, #2-15-22-3-2WH, located as shown in the SW 1/4 SE 1/4 of Section 10, T3S, R2W, U.S.B.&M., Duchesne County, Utah.

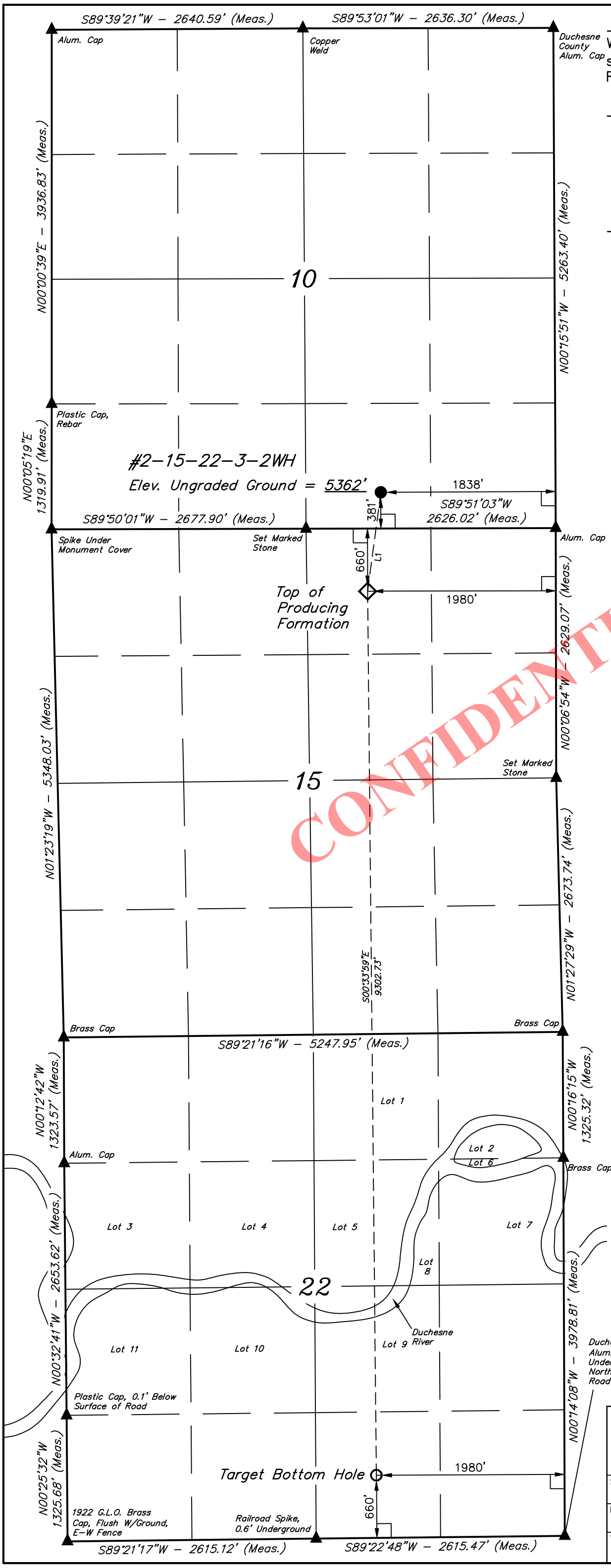
BASIS OF ELEVATION

SPOT ELEVATION LOCATED AT THE SOUTHEAST CORNER OF SECTION 20, T3S, R2W, U.S.B.&M. TAKEN FROM THE MYTON, QUADRANGLE, UTAH, DUCHESNE COUNTY, 7.5 MINUTE QUAD (TOPOGRAPHIC MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5148 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.

T3S, R2W, U.S.B.&M.



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S07°36'02"W	1050.14'

NAD 83 (SURFACE LOCATION)
LATITUDE = 40°13'50.13" (40.230592)
LONGITUDE = 110°05'34.24" (110.092844)
NAD 27 (SURFACE LOCATION)
LATITUDE = 40°13'50.28" (40.230633)
LONGITUDE = 110°05'31.70" (110.092139)
NAD 83 (TOP OF PRODUCING FORMATION)
LATITUDE = 40°13'39.85" (40.227736)
LONGITUDE = 110°05'36.03" (110.093342)
NAD 27 (TOP OF PRODUCING FORMATION)
LATITUDE = 40°13'39.99" (40.227775)
LONGITUDE = 110°05'33.49" (110.092636)
NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 40°12'07.94" (40.202206)
LONGITUDE = 110°05'34.89" (110.093025)
NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 40°12'08.09" (40.202247)
LONGITUDE = 110°05'32.35" (110.092319)

LEGEND:

- ∟ = 90° SYMBOL
- ● = PROPOSED WELL HEAD.
- ▲ = SECTION CORNERS LOCATED.
- △ = SECTION CORNERS RE-ESTABLISHED. (Not Set on Ground.)

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

REGISTERED LAND SURVEYOR No. 161319 ROBERT L. KAY STATE OF UTAH 07-05-13

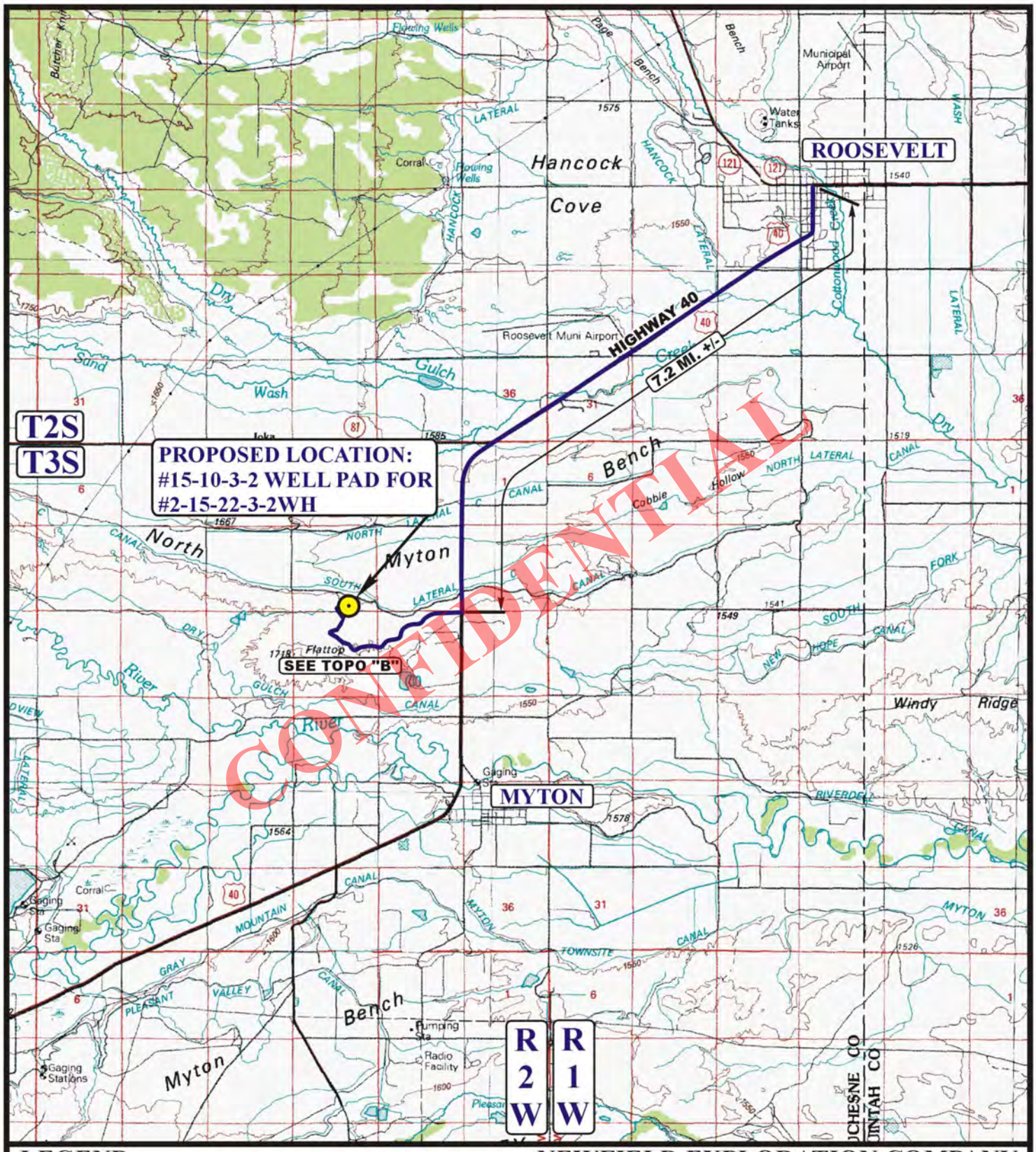
REV: 07-05-13

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST – VERNAL, UTAH 84078
(435) 789-1017

SCALE: 1" = 1000'	DATE SURVEYED: 04-22-13	DATE DRAWN: 05-02-13
PARTY: C.A. R.L.L. S.F.	REFERENCES: G.L.O. PLAT	
WEATHER: WARM	FILE: NEWFIELD EXPLORATION COMPANY	

RECEIVED: July 23, 2013

API Well Number: 43013521050000



LEGEND:

PROPOSED LOCATION

N

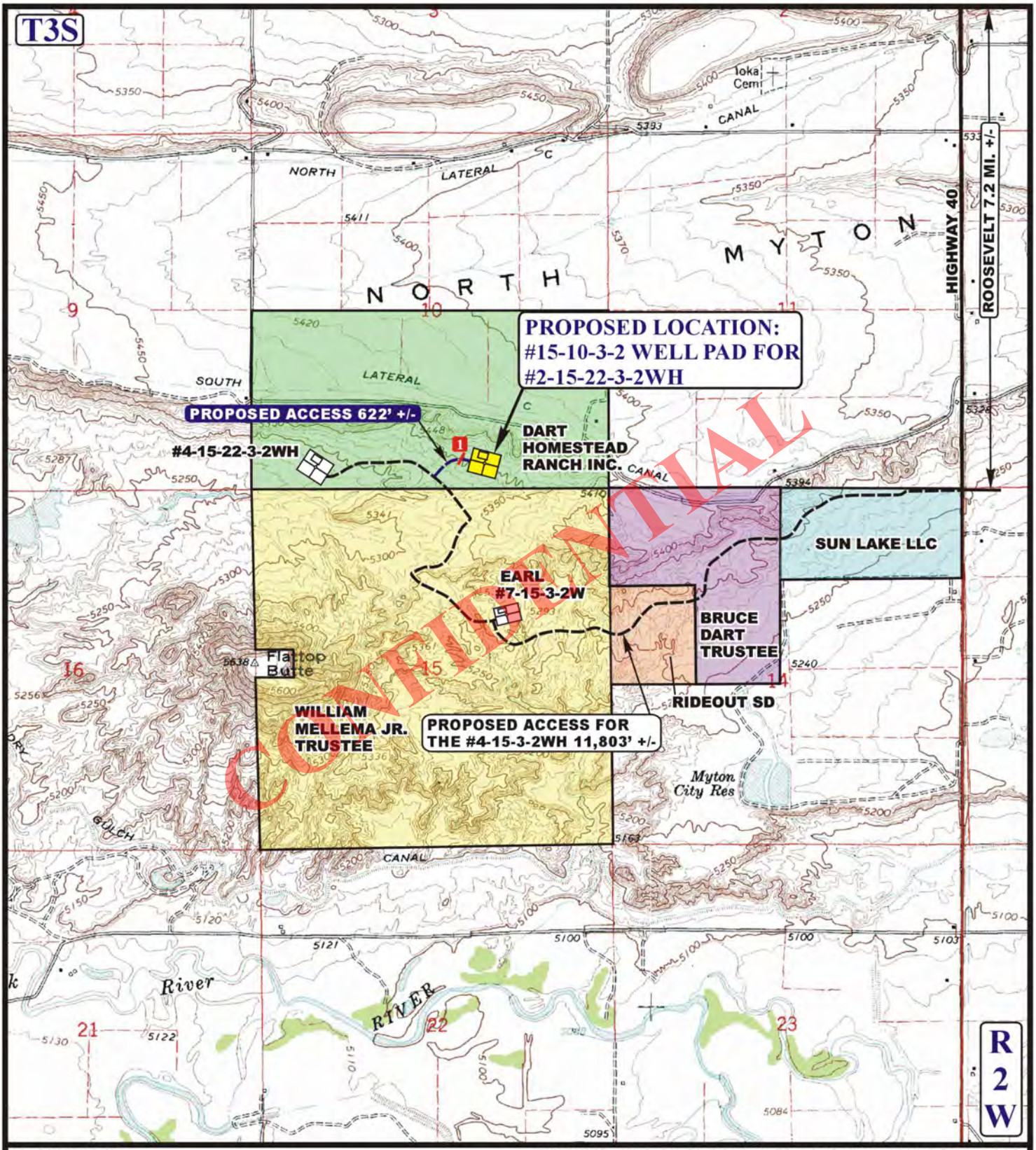
NEWFIELD EXPLORATION COMPANY

#15-10-3-2 WELL PAD FOR #2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

ACCESS ROAD MAP	11 MONTH	15 DAY	12 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.I.	REV: 07-05-13 S.O.		

API Well Number: 43013521050000



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

1 18" CMP REQUIRED

N

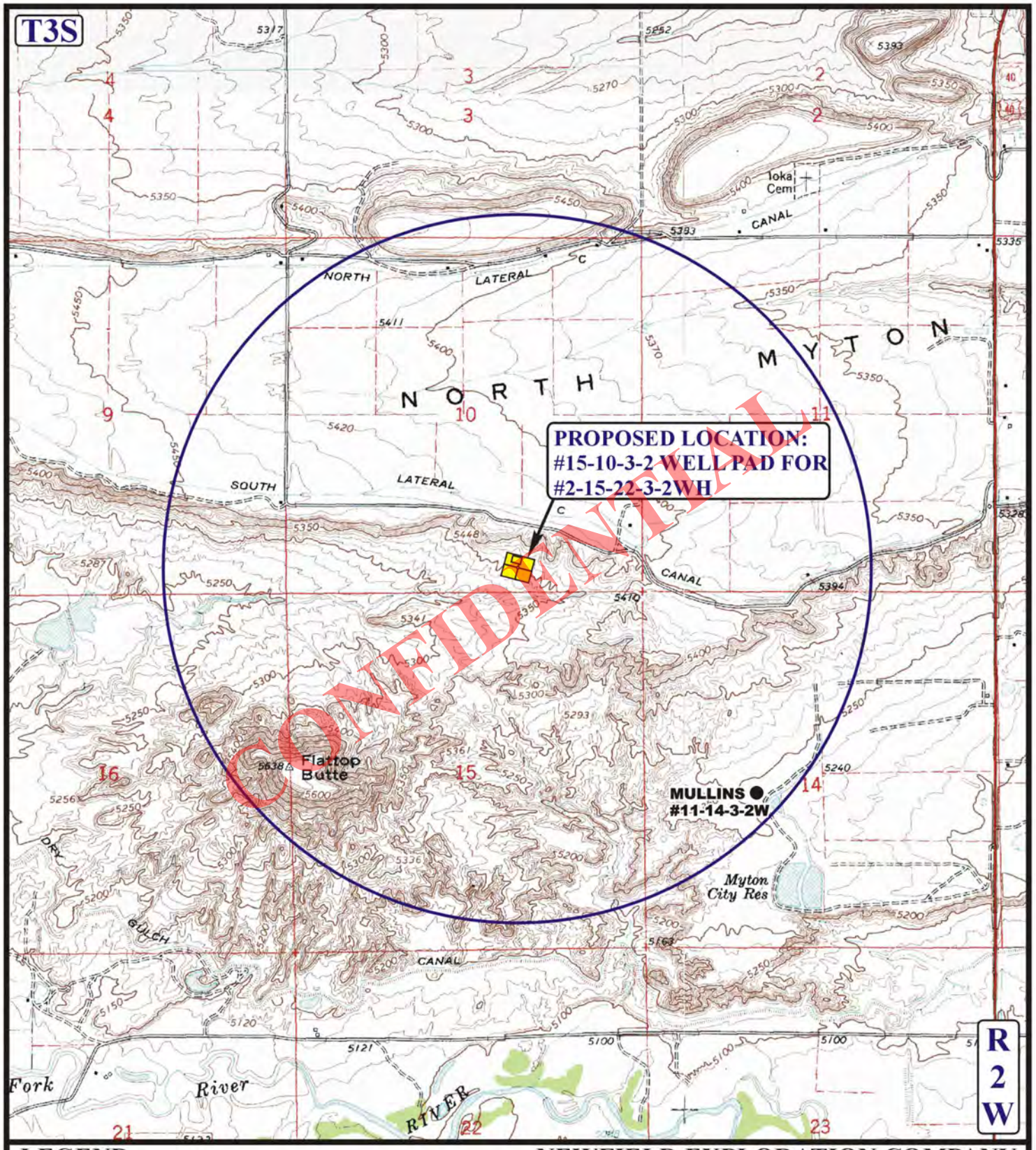
NEWFIELD EXPLORATION COMPANY

#15-10-3-2 WELL PAD FOR #2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

ACCESS ROAD MAP	11 MONTH	15 DAY	12 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: C.I.	REV: 07-05-13 S.O.		

API Well Number: 43013521050000



LEGEND:

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

N

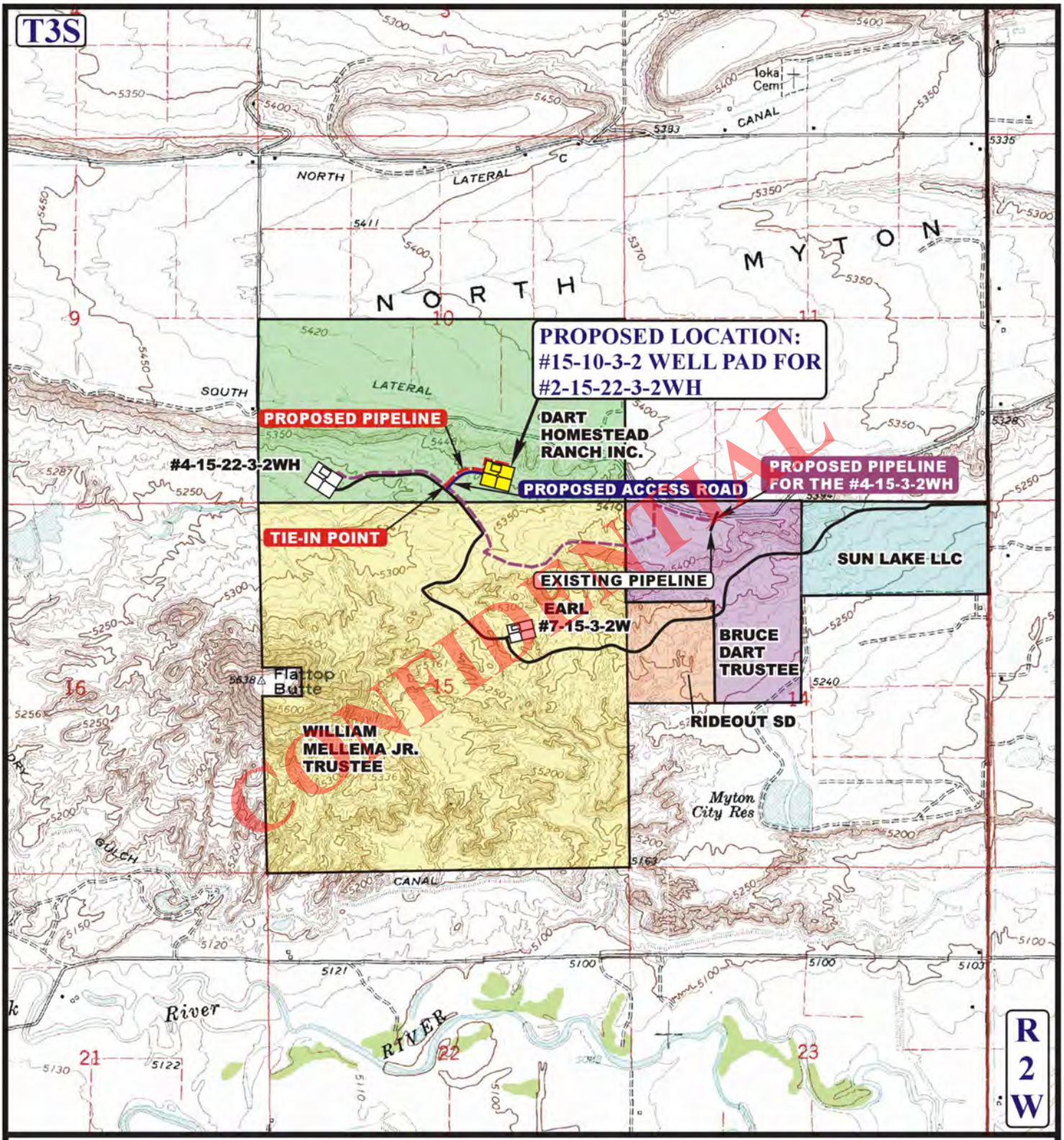
NEWFIELD EXPLORATION COMPANY

#15-10-3-2 WELL PAD FOR #2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	11 MONTH	15 DAY	12 YEAR	C TOPO
SCALE: 1" = 2000'	DRAWN BY: C.I.	REV: 07-05-13 S.O.		

API Well Number: 43013521050000



APPROXIMATE TOTAL PIPELINE DISTANCE = 1,176' +/-

LEGEND:

- PROPOSED ACCESS ROAD
- EXISTING PIPELINE
- PROPOSED PIPELINE
- PROPOSED PIPELINE (SERVICING OTHER WELLS)

N

NEWFIELD EXPLORATION COMPANY

#15-10-3-2 WELL PAD FOR #2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	11 MONTH	15 DAY	12 YEAR	D TOPO
SCALE: 1" = 2000'	DRAWN BY: C.I.	REV: 07-05-13 S.O.		

LEAM Drilling Systems LLC

LEAM Drilling Systems, Inc.
FOR
NEWFIELD EXPLORATION ROCKY MOUNTAINS
WELL: 2-15-22-3-2WH "AUBREY" (PLAN: Rev01)
SEC. 10, T3S-R2W, DUCHESNE COUNTY, UTAH
RIG NAME: PIONEER 78 (KB= 25')
JULY 05, 2013 -- WELL PLAN PLOT

NEWFIELD ROCKY MOUNTAINS

WELL DETAILS: 2-15-22-3-2WH
Ground Level: 5352.00

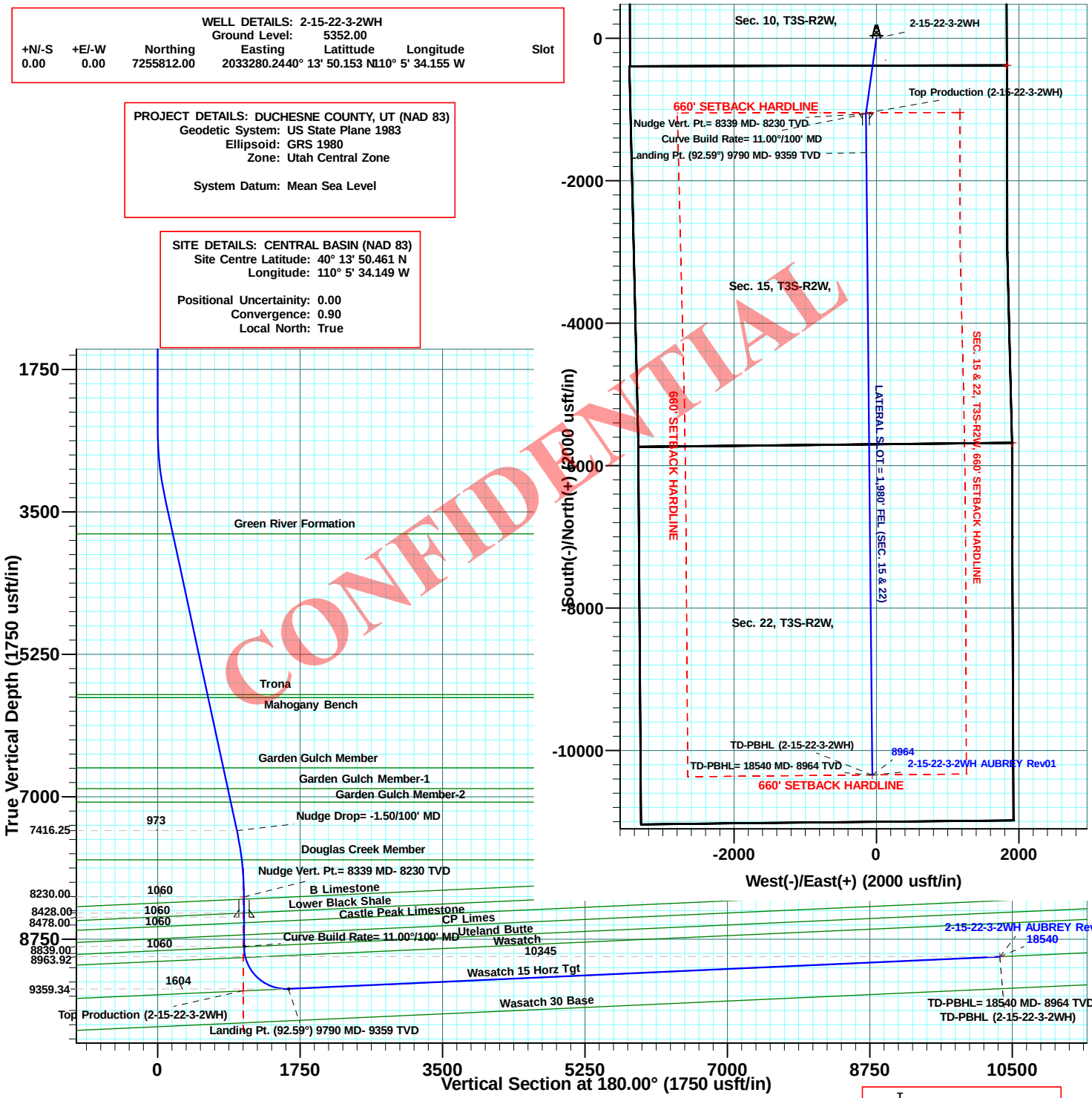
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	7255812.00	2033280.24	40° 13' 50.153 N	110° 5' 34.155 W	

PROJECT DETAILS: DUCHESNE COUNTY, UT (NAD 83)
Geodetic System: US State Plane 1983
Ellipsoid: GRS 1980
Zone: Utah Central Zone

System Datum: Mean Sea Level

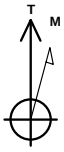
SITE DETAILS: CENTRAL BASIN (NAD 83)
Site Centre Latitude: 40° 13' 50.461 N
Longitude: 110° 5' 34.149 W

Positional Uncertainity: 0.00
Convergence: 0.90
Local North: True



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	
3320.04	12.30	187.87	3313.75	-86.86	-12.01	1.50	187.87	86.86	
7518.92	12.30	187.87	7416.25	-972.97	-134.49	0.00	0.00	972.97	
8338.96	0.00	0.00	8230.00	-1059.83	-146.50	1.50	180.00	1059.83	
8536.96	0.00	0.00	8428.00	-1059.83	-146.50	0.00	0.00	1059.83	
8586.96	0.00	0.00	8478.00	-1059.83	-146.50	0.00	0.00	1059.83	
8947.96	0.00	0.00	8839.00	-1059.83	-146.50	0.00	0.00	1059.83	
9789.69	92.59	179.45	9359.34	-1604.21	-141.27	11.00	179.45	1604.21	
18540.19	92.59	179.45	8963.92	-10345.37	-57.36	0.00	0.00	10345.37	TD-PBHL (2-15-22-3-2WH)



Azimuths to True North
Magnetic North: 11.09°

Magnetic Field
Strength: 52164.9snT
Dip Angle: 65.89°
Date: 7/5/2013
Model: IGRF2010

Plan: 2-15-22-3-2WH AUBREY Rev01 (2-15-22-3-2WH/2-15-22-3-2WH AUBREY)
Created By: Lynn Hulin Date: 19:30, July 05 2013

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

RECEIVED: July 23, 2013

LEAM Drilling Systems LLC

Planning Report

LEAM Drilling Systems LLC

Database:	EDM 5000.1 Lynn Db	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**TVD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Project:	DUCHESNE COUNTY, UT (NAD 83)	**MD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Site:	CENTRAL BASIN (NAD 83)	**North Reference:**	True
Well:	2-15-22-3-2WH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Project DUCHESNE COUNTY, UT (NAD 83),

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Utah Central Zone		

Site CENTRAL BASIN (NAD 83)

Site Position:		**Northing:**	7,255,843.21 usft	**Latitude:**	40° 13' 50.461 N
From:	Map	**Easting:**	2,033,280.24 usft	**Longitude:**	110° 5' 34.149 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.90 °

Well 2-15-22-3-2WH

Well Position	**+N/-S**	-31.21 usft	**Northing:**	7,255,812.00 usft	**Latitude:**	40° 13' 50.153 N
	+E/-W	-0.49 usft	**Easting:**	2,033,280.24 usft	**Longitude:**	110° 5' 34.155 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	5,380.00 usft	**Ground Level:**	5,352.00 usft

Wellbore 2-15-22-3-2WH AUBREY

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/5/2013	11.09	65.89	52,165

Design 2-15-22-3-2WH AUBREY Rev01

Audit Notes:

Version:	Rev01	**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.00

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,320.04	12.30	187.87	3,313.75	-86.86	-12.01	1.50	1.50	0.00	187.87	
7,518.92	12.30	187.87	7,416.25	-972.97	-134.49	0.00	0.00	0.00	0.00	
8,338.96	0.00	0.00	8,230.00	-1,059.83	-146.50	1.50	-1.50	0.00	180.00	
8,536.96	0.00	0.00	8,428.00	-1,059.83	-146.50	0.00	0.00	0.00	0.00	
8,586.96	0.00	0.00	8,478.00	-1,059.83	-146.50	0.00	0.00	0.00	0.00	
8,947.96	0.00	0.00	8,839.00	-1,059.83	-146.50	0.00	0.00	0.00	0.00	
9,789.69	92.59	179.45	9,359.34	-1,604.21	-141.27	11.00	11.00	0.00	179.45	
18,540.19	92.59	179.45	8,963.92	-10,345.37	-57.36	0.00	0.00	0.00	0.00	TD-PBHL (2-15-22-

LEAM Drilling Systems LLC

Planning Report

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Site:	CENTRAL BASIN (NAD 83)	**North Reference:**	True
Well:	2-15-22-3-2WH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	1.50	187.87	2,599.99	-1.30	-0.18	1.30	1.50	1.50	0.00
2,700.00	3.00	187.87	2,699.91	-5.19	-0.72	5.19	1.50	1.50	0.00
2,800.00	4.50	187.87	2,799.69	-11.66	-1.61	11.66	1.50	1.50	0.00
2,900.00	6.00	187.87	2,899.27	-20.73	-2.87	20.73	1.50	1.50	0.00
3,000.00	7.50	187.87	2,998.57	-32.37	-4.47	32.37	1.50	1.50	0.00
3,100.00	9.00	187.87	3,097.54	-46.58	-6.44	46.58	1.50	1.50	0.00
3,200.00	10.50	187.87	3,196.09	-63.36	-8.76	63.36	1.50	1.50	0.00
3,300.00	12.00	187.87	3,294.16	-82.68	-11.43	82.68	1.50	1.50	0.00
3,320.04	12.30	187.87	3,313.75	-86.86	-12.01	86.86	1.50	1.50	0.00
EOB-Tangent= 4199 ft. at 3320 MD									
3,400.00	12.30	187.87	3,391.88	-103.74	-14.34	103.74	0.00	0.00	0.00
3,500.00	12.30	187.87	3,489.58	-124.84	-17.26	124.84	0.00	0.00	0.00
3,600.00	12.30	187.87	3,587.29	-145.94	-20.17	145.94	0.00	0.00	0.00
3,700.00	12.30	187.87	3,684.99	-167.05	-23.09	167.05	0.00	0.00	0.00
3,785.98	12.30	187.87	3,769.00	-185.19	-25.60	185.19	0.00	0.00	0.00
Green River Formation									
3,800.00	12.30	187.87	3,782.70	-188.15	-26.01	188.15	0.00	0.00	0.00
3,900.00	12.30	187.87	3,880.40	-209.25	-28.93	209.25	0.00	0.00	0.00
4,000.00	12.30	187.87	3,978.11	-230.36	-31.84	230.36	0.00	0.00	0.00
4,100.00	12.30	187.87	4,075.81	-251.46	-34.76	251.46	0.00	0.00	0.00
4,200.00	12.30	187.87	4,173.51	-272.56	-37.68	272.56	0.00	0.00	0.00
4,300.00	12.30	187.87	4,271.22	-293.67	-40.59	293.67	0.00	0.00	0.00
4,400.00	12.30	187.87	4,368.92	-314.77	-43.51	314.77	0.00	0.00	0.00
4,500.00	12.30	187.87	4,466.63	-335.87	-46.43	335.87	0.00	0.00	0.00
4,600.00	12.30	187.87	4,564.33	-356.98	-49.34	356.98	0.00	0.00	0.00
4,700.00	12.30	187.87	4,662.04	-378.08	-52.26	378.08	0.00	0.00	0.00

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Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	12.30	187.87	4,759.74	-399.18	-55.18	399.18	0.00	0.00	0.00
4,900.00	12.30	187.87	4,857.44	-420.29	-58.10	420.29	0.00	0.00	0.00
5,000.00	12.30	187.87	4,955.15	-441.39	-61.01	441.39	0.00	0.00	0.00
5,100.00	12.30	187.87	5,052.85	-462.49	-63.93	462.49	0.00	0.00	0.00
5,200.00	12.30	187.87	5,150.56	-483.60	-66.85	483.60	0.00	0.00	0.00
5,300.00	12.30	187.87	5,248.26	-504.70	-69.76	504.70	0.00	0.00	0.00
5,400.00	12.30	187.87	5,345.97	-525.80	-72.68	525.80	0.00	0.00	0.00
5,500.00	12.30	187.87	5,443.67	-546.91	-75.60	546.91	0.00	0.00	0.00
5,600.00	12.30	187.87	5,541.38	-568.01	-78.52	568.01	0.00	0.00	0.00
5,700.00	12.30	187.87	5,639.08	-589.11	-81.43	589.11	0.00	0.00	0.00
5,800.00	12.30	187.87	5,736.78	-610.22	-84.35	610.22	0.00	0.00	0.00
5,807.39	12.30	187.87	5,744.00	-611.78	-84.57	611.78	0.00	0.00	0.00
Trona									
5,845.26	12.30	187.87	5,781.00	-619.77	-85.67	619.77	0.00	0.00	0.00
Mahogany Bench									
5,900.00	12.30	187.87	5,834.49	-631.32	-87.27	631.32	0.00	0.00	0.00
6,000.00	12.30	187.87	5,932.19	-652.42	-90.18	652.42	0.00	0.00	0.00
6,100.00	12.30	187.87	6,029.90	-673.53	-93.10	673.53	0.00	0.00	0.00
6,200.00	12.30	187.87	6,127.60	-694.63	-96.02	694.63	0.00	0.00	0.00
6,300.00	12.30	187.87	6,225.31	-715.73	-98.94	715.73	0.00	0.00	0.00
6,400.00	12.30	187.87	6,323.01	-736.84	-101.85	736.84	0.00	0.00	0.00
6,500.00	12.30	187.87	6,420.71	-757.94	-104.77	757.94	0.00	0.00	0.00
6,600.00	12.30	187.87	6,518.42	-779.04	-107.69	779.04	0.00	0.00	0.00
6,700.00	12.30	187.87	6,616.12	-800.15	-110.60	800.15	0.00	0.00	0.00
6,728.53	12.30	187.87	6,644.00	-806.17	-111.44	806.17	0.00	0.00	0.00
Garden Gulch Member									
6,800.00	12.30	187.87	6,713.83	-821.25	-113.52	821.25	0.00	0.00	0.00
6,900.00	12.30	187.87	6,811.53	-842.35	-116.44	842.35	0.00	0.00	0.00
6,990.55	12.30	187.87	6,900.00	-861.46	-119.08	861.46	0.00	0.00	0.00
Garden Gulch Member-1									
7,000.00	12.30	187.87	6,909.24	-863.46	-119.36	863.46	0.00	0.00	0.00
7,100.00	12.30	187.87	7,006.94	-884.56	-122.27	884.56	0.00	0.00	0.00
7,159.42	12.30	187.87	7,065.00	-897.10	-124.01	897.10	0.00	0.00	0.00
Garden Gulch Member-2									
7,200.00	12.30	187.87	7,104.64	-905.66	-125.19	905.66	0.00	0.00	0.00
7,300.00	12.30	187.87	7,202.35	-926.77	-128.11	926.77	0.00	0.00	0.00
7,400.00	12.30	187.87	7,300.05	-947.87	-131.02	947.87	0.00	0.00	0.00
7,500.00	12.30	187.87	7,397.76	-968.97	-133.94	968.97	0.00	0.00	0.00
7,518.92	12.30	187.87	7,416.25	-972.97	-134.49	972.97	0.00	0.00	0.00
Nudge Drop= -1.50/100' MD									
7,600.00	11.08	187.87	7,495.64	-989.24	-136.74	989.24	1.50	-1.50	0.00
7,700.00	9.58	187.87	7,594.01	-1,007.01	-139.20	1,007.01	1.50	-1.50	0.00
7,800.00	8.08	187.87	7,692.83	-1,022.23	-141.30	1,022.23	1.50	-1.50	0.00
7,882.88	6.84	187.87	7,775.00	-1,032.89	-142.78	1,032.89	1.50	-1.50	0.00
Douglas Creek Member									
7,900.00	6.58	187.87	7,792.00	-1,034.87	-143.05	1,034.87	1.50	-1.50	0.00
8,000.00	5.08	187.87	7,891.48	-1,044.94	-144.44	1,044.94	1.50	-1.50	0.00
8,100.00	3.58	187.87	7,991.19	-1,052.43	-145.48	1,052.43	1.50	-1.50	0.00
8,200.00	2.08	187.87	8,091.07	-1,057.33	-146.15	1,057.33	1.50	-1.50	0.00
8,300.00	0.58	187.87	8,191.04	-1,059.63	-146.47	1,059.63	1.50	-1.50	0.00
8,338.96	0.00	0.00	8,230.00	-1,059.83	-146.50	1,059.83	1.50	-1.50	0.00

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Nudge Vert. Pt.= 8339 MD- 8230 TVD									
8,367.02	0.00	0.00	8,258.06	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
B Limestone									
8,400.00	0.00	0.00	8,291.04	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
8,500.00	0.00	0.00	8,391.04	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
8,536.02	0.00	0.00	8,427.06	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
Lower Black Shale									
8,536.96	0.00	0.00	8,428.00	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
Top Lw. Blk. Shale-Tangent= 50 ft.at 8537 MD									
8,586.96	0.00	0.00	8,478.00	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
Tangent= 361 ft. at 8587 MD - 9-5/8" Csg (8,478' TVD)									
8,600.00	0.00	0.00	8,491.04	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
8,656.02	0.00	0.00	8,547.06	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
Castle Peak Limestone									
8,700.00	0.00	0.00	8,591.04	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
8,800.00	0.00	0.00	8,691.04	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
8,805.02	0.00	0.00	8,696.06	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
CP Limes									
8,900.00	0.00	0.00	8,791.04	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
8,947.96	0.00	0.00	8,839.00	-1,059.83	-146.50	1,059.83	0.00	0.00	0.00
Curve Build Rate= 11.00°/100' MD									
8,950.00	0.22	179.45	8,841.04	-1,059.83	-146.50	1,059.83	11.00	11.00	0.00
8,953.02	0.56	179.45	8,844.06	-1,059.85	-146.50	1,059.85	11.00	11.00	0.00
Uteland Butte									
9,000.00	5.72	179.45	8,890.95	-1,062.43	-146.48	1,062.43	11.00	11.00	0.00
9,050.00	11.22	179.45	8,940.39	-1,069.79	-146.40	1,069.79	11.00	11.00	0.00
9,084.78	15.05	179.45	8,974.25	-1,077.70	-146.33	1,077.70	11.00	11.00	0.00
Wasatch									
9,100.00	16.72	179.45	8,988.89	-1,081.86	-146.29	1,081.86	11.00	11.00	0.00
9,150.00	22.22	179.45	9,036.01	-1,098.52	-146.13	1,098.52	11.00	11.00	0.00
9,200.00	27.72	179.45	9,081.32	-1,119.62	-145.93	1,119.62	11.00	11.00	0.00
9,250.00	33.22	179.45	9,124.39	-1,144.97	-145.68	1,144.97	11.00	11.00	0.00
9,300.00	38.72	179.45	9,164.84	-1,174.33	-145.40	1,174.33	11.00	11.00	0.00
9,350.00	44.22	179.45	9,202.29	-1,207.43	-145.08	1,207.43	11.00	11.00	0.00
9,400.00	49.72	179.45	9,236.39	-1,243.97	-144.73	1,243.97	11.00	11.00	0.00
9,450.00	55.22	179.45	9,266.84	-1,283.60	-144.35	1,283.60	11.00	11.00	0.00
9,500.00	60.72	179.45	9,293.34	-1,325.98	-143.95	1,325.98	11.00	11.00	0.00
9,550.00	66.22	179.45	9,315.66	-1,370.69	-143.52	1,370.69	11.00	11.00	0.00
9,600.00	71.72	179.45	9,333.60	-1,417.34	-143.07	1,417.34	11.00	11.00	0.00
9,650.00	77.22	179.45	9,346.98	-1,465.50	-142.61	1,465.50	11.00	11.00	0.00
9,700.00	82.72	179.45	9,355.68	-1,514.71	-142.13	1,514.71	11.00	11.00	0.00
9,750.00	88.22	179.45	9,359.62	-1,564.54	-141.66	1,564.54	11.00	11.00	0.00
9,789.69	92.59	179.45	9,359.34	-1,604.21	-141.27	1,604.21	11.00	11.00	0.00
Landing Pt. (92.59°) 9790 MD- 9359 TVD									
9,800.00	92.59	179.45	9,358.87	-1,614.51	-141.18	1,614.51	0.00	0.00	0.00
9,900.00	92.59	179.45	9,354.35	-1,714.41	-140.22	1,714.41	0.00	0.00	0.00
10,000.00	92.59	179.45	9,349.84	-1,814.30	-139.26	1,814.30	0.00	0.00	0.00
10,100.00	92.59	179.45	9,345.32	-1,914.19	-138.30	1,914.19	0.00	0.00	0.00
10,200.00	92.59	179.45	9,340.80	-2,014.09	-137.34	2,014.09	0.00	0.00	0.00
10,300.00	92.59	179.45	9,336.28	-2,113.98	-136.38	2,113.98	0.00	0.00	0.00
10,400.00	92.59	179.45	9,331.76	-2,213.87	-135.42	2,213.87	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

LEAM Drilling Systems LLC

Database:	EDM 5000.1 Lynn Db	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**TVD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Project:	DUCHESNE COUNTY, UT (NAD 83)	**MD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Site:	CENTRAL BASIN (NAD 83)	**North Reference:**	True
Well:	2-15-22-3-2WH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.00	92.59	179.45	9,327.24	-2,313.77	-134.46	2,313.77	0.00	0.00	0.00
10,600.00	92.59	179.45	9,322.72	-2,413.66	-133.50	2,413.66	0.00	0.00	0.00
10,700.00	92.59	179.45	9,318.20	-2,513.55	-132.54	2,513.55	0.00	0.00	0.00
10,800.00	92.59	179.45	9,313.68	-2,613.45	-131.59	2,613.45	0.00	0.00	0.00
10,900.00	92.59	179.45	9,309.17	-2,713.34	-130.63	2,713.34	0.00	0.00	0.00
11,000.00	92.59	179.45	9,304.65	-2,813.23	-129.67	2,813.23	0.00	0.00	0.00
11,100.00	92.59	179.45	9,300.13	-2,913.13	-128.71	2,913.13	0.00	0.00	0.00
11,200.00	92.59	179.45	9,295.61	-3,013.02	-127.75	3,013.02	0.00	0.00	0.00
11,300.00	92.59	179.45	9,291.09	-3,112.91	-126.79	3,112.91	0.00	0.00	0.00
11,400.00	92.59	179.45	9,286.57	-3,212.81	-125.83	3,212.81	0.00	0.00	0.00
11,500.00	92.59	179.45	9,282.05	-3,312.70	-124.87	3,312.70	0.00	0.00	0.00
11,600.00	92.59	179.45	9,277.53	-3,412.59	-123.91	3,412.59	0.00	0.00	0.00
11,700.00	92.59	179.45	9,273.01	-3,512.48	-122.96	3,512.48	0.00	0.00	0.00
11,800.00	92.59	179.45	9,268.50	-3,612.38	-122.00	3,612.38	0.00	0.00	0.00
11,900.00	92.59	179.45	9,263.98	-3,712.27	-121.04	3,712.27	0.00	0.00	0.00
12,000.00	92.59	179.45	9,259.46	-3,812.16	-120.08	3,812.16	0.00	0.00	0.00
12,100.00	92.59	179.45	9,254.94	-3,912.06	-119.12	3,912.06	0.00	0.00	0.00
12,200.00	92.59	179.45	9,250.42	-4,011.95	-118.16	4,011.95	0.00	0.00	0.00
12,300.00	92.59	179.45	9,245.90	-4,111.84	-117.20	4,111.84	0.00	0.00	0.00
12,400.00	92.59	179.45	9,241.38	-4,211.74	-116.24	4,211.74	0.00	0.00	0.00
12,500.00	92.59	179.45	9,236.86	-4,311.63	-115.28	4,311.63	0.00	0.00	0.00
12,600.00	92.59	179.45	9,232.34	-4,411.52	-114.33	4,411.52	0.00	0.00	0.00
12,700.00	92.59	179.45	9,227.83	-4,511.42	-113.37	4,511.42	0.00	0.00	0.00
12,800.00	92.59	179.45	9,223.31	-4,611.31	-112.41	4,611.31	0.00	0.00	0.00
12,900.00	92.59	179.45	9,218.79	-4,711.20	-111.45	4,711.20	0.00	0.00	0.00
13,000.00	92.59	179.45	9,214.27	-4,811.10	-110.49	4,811.10	0.00	0.00	0.00
13,100.00	92.59	179.45	9,209.75	-4,910.99	-109.53	4,910.99	0.00	0.00	0.00
13,200.00	92.59	179.45	9,205.23	-5,010.88	-108.57	5,010.88	0.00	0.00	0.00
13,300.00	92.59	179.45	9,200.71	-5,110.78	-107.61	5,110.78	0.00	0.00	0.00
13,400.00	92.59	179.45	9,196.19	-5,210.67	-106.65	5,210.67	0.00	0.00	0.00
13,500.00	92.59	179.45	9,191.67	-5,310.56	-105.69	5,310.56	0.00	0.00	0.00
13,600.00	92.59	179.45	9,187.16	-5,410.46	-104.74	5,410.46	0.00	0.00	0.00
13,700.00	92.59	179.45	9,182.64	-5,510.35	-103.78	5,510.35	0.00	0.00	0.00
13,800.00	92.59	179.45	9,178.12	-5,610.24	-102.82	5,610.24	0.00	0.00	0.00
13,900.00	92.59	179.45	9,173.60	-5,710.14	-101.86	5,710.14	0.00	0.00	0.00
14,000.00	92.59	179.45	9,169.08	-5,810.03	-100.90	5,810.03	0.00	0.00	0.00
14,100.00	92.59	179.45	9,164.56	-5,909.92	-99.94	5,909.92	0.00	0.00	0.00
14,200.00	92.59	179.45	9,160.04	-6,009.82	-98.98	6,009.82	0.00	0.00	0.00
14,300.00	92.59	179.45	9,155.52	-6,109.71	-98.02	6,109.71	0.00	0.00	0.00
14,400.00	92.59	179.45	9,151.01	-6,209.60	-97.06	6,209.60	0.00	0.00	0.00
14,500.00	92.59	179.45	9,146.49	-6,309.50	-96.11	6,309.50	0.00	0.00	0.00
14,600.00	92.59	179.45	9,141.97	-6,409.39	-95.15	6,409.39	0.00	0.00	0.00
14,700.00	92.59	179.45	9,137.45	-6,509.28	-94.19	6,509.28	0.00	0.00	0.00
14,800.00	92.59	179.45	9,132.93	-6,609.18	-93.23	6,609.18	0.00	0.00	0.00
14,900.00	92.59	179.45	9,128.41	-6,709.07	-92.27	6,709.07	0.00	0.00	0.00
15,000.00	92.59	179.45	9,123.89	-6,808.96	-91.31	6,808.96	0.00	0.00	0.00
15,100.00	92.59	179.45	9,119.37	-6,908.86	-90.35	6,908.86	0.00	0.00	0.00
15,200.00	92.59	179.45	9,114.85	-7,008.75	-89.39	7,008.75	0.00	0.00	0.00
15,300.00	92.59	179.45	9,110.34	-7,108.64	-88.43	7,108.64	0.00	0.00	0.00
15,400.00	92.59	179.45	9,105.82	-7,208.53	-87.47	7,208.53	0.00	0.00	0.00
15,500.00	92.59	179.45	9,101.30	-7,308.43	-86.52	7,308.43	0.00	0.00	0.00
15,600.00	92.59	179.45	9,096.78	-7,408.32	-85.56	7,408.32	0.00	0.00	0.00

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LEAM Drilling Systems LLC

Planning Report

LEAM Drilling Systems LLC

Database:	EDM 5000.1 Lynn Db	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**TVD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Project:	DUCHESNE COUNTY, UT (NAD 83)	**MD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Site:	CENTRAL BASIN (NAD 83)	**North Reference:**	True
Well:	2-15-22-3-2WH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,700.00	92.59	179.45	9,092.26	-7,508.21	-84.60	7,508.21	0.00	0.00	0.00
15,800.00	92.59	179.45	9,087.74	-7,608.11	-83.64	7,608.11	0.00	0.00	0.00
15,900.00	92.59	179.45	9,083.22	-7,708.00	-82.68	7,708.00	0.00	0.00	0.00
16,000.00	92.59	179.45	9,078.70	-7,807.89	-81.72	7,807.89	0.00	0.00	0.00
16,100.00	92.59	179.45	9,074.18	-7,907.79	-80.76	7,907.79	0.00	0.00	0.00
16,200.00	92.59	179.45	9,069.67	-8,007.68	-79.80	8,007.68	0.00	0.00	0.00
16,300.00	92.59	179.45	9,065.15	-8,107.57	-78.84	8,107.57	0.00	0.00	0.00
16,400.00	92.59	179.45	9,060.63	-8,207.47	-77.89	8,207.47	0.00	0.00	0.00
16,500.00	92.59	179.45	9,056.11	-8,307.36	-76.93	8,307.36	0.00	0.00	0.00
16,600.00	92.59	179.45	9,051.59	-8,407.25	-75.97	8,407.25	0.00	0.00	0.00
16,700.00	92.59	179.45	9,047.07	-8,507.15	-75.01	8,507.15	0.00	0.00	0.00
16,800.00	92.59	179.45	9,042.55	-8,607.04	-74.05	8,607.04	0.00	0.00	0.00
16,900.00	92.59	179.45	9,038.03	-8,706.93	-73.09	8,706.93	0.00	0.00	0.00
17,000.00	92.59	179.45	9,033.51	-8,806.83	-72.13	8,806.83	0.00	0.00	0.00
17,100.00	92.59	179.45	9,029.00	-8,906.72	-71.17	8,906.72	0.00	0.00	0.00
17,200.00	92.59	179.45	9,024.48	-9,006.61	-70.21	9,006.61	0.00	0.00	0.00
17,300.00	92.59	179.45	9,019.96	-9,106.51	-69.26	9,106.51	0.00	0.00	0.00
17,400.00	92.59	179.45	9,015.44	-9,206.40	-68.30	9,206.40	0.00	0.00	0.00
17,500.00	92.59	179.45	9,010.92	-9,306.29	-67.34	9,306.29	0.00	0.00	0.00
17,600.00	92.59	179.45	9,006.40	-9,406.19	-66.38	9,406.19	0.00	0.00	0.00
17,700.00	92.59	179.45	9,001.88	-9,506.08	-65.42	9,506.08	0.00	0.00	0.00
17,800.00	92.59	179.45	8,997.36	-9,605.97	-64.46	9,605.97	0.00	0.00	0.00
17,900.00	92.59	179.45	8,992.84	-9,705.87	-63.50	9,705.87	0.00	0.00	0.00
18,000.00	92.59	179.45	8,988.33	-9,805.76	-62.54	9,805.76	0.00	0.00	0.00
18,100.00	92.59	179.45	8,983.81	-9,905.65	-61.58	9,905.65	0.00	0.00	0.00
18,200.00	92.59	179.45	8,979.29	-10,005.55	-60.62	10,005.55	0.00	0.00	0.00
18,300.00	92.59	179.45	8,974.77	-10,105.44	-59.67	10,105.44	0.00	0.00	0.00
18,400.00	92.59	179.45	8,970.25	-10,205.33	-58.71	10,205.33	0.00	0.00	0.00
18,500.00	92.59	179.45	8,965.73	-10,305.23	-57.75	10,305.23	0.00	0.00	0.00
18,540.19	92.59	179.45	8,963.92	-10,345.37	-57.36	10,345.37	0.00	0.00	0.00
TD-PBHL= 18540 MD- 8964 TVD									

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LEAM Drilling Systems LLC

Planning Report

LEAM Drilling Systems LLC

Database:	EDM 5000.1 Lynn Db	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**TVD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Project:	DUCHESNE COUNTY, UT (NAD 83)	**MD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Site:	CENTRAL BASIN (NAD 83)	**North Reference:**	True
Well:	2-15-22-3-2WH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Sec. 10, T3S-R2W,	0.00	0.00	0.00	4,883.06	1,810.17	7,260,722.93	2,035,013.37	40° 14' 38.410 N	110° 5' 10.810 W
- plan misses target center by 5207.78usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			0.00	0.00	0.00	7,260,722.93	2,035,013.37		
Point 2			0.00	-2,629.85	13.59	7,258,093.62	2,035,068.33		
Point 3			0.00	-5,261.72	22.54	7,255,462.22	2,035,118.68		
Point 4			0.00	-5,268.07	-2,602.72	7,255,414.57	2,032,493.84		
Point 5			0.00	-5,275.30	-5,269.67	7,255,365.38	2,029,827.34		
Point 6			0.00	-19.50	-5,275.01	7,260,620.45	2,029,739.31		
Point 7			0.00	-4.32	-2,635.57	7,260,677.15	2,032,378.19		
Point 8			0.00	0.00	0.00	7,260,722.93	2,035,013.37		
SEC. 15 & 22, T3S-R2	0.00	0.00	16.00	-1,040.47	1,173.86	7,254,790.13	2,034,470.32	40° 13' 39.870 N	110° 5' 19.020 W
- plan misses target center by 1568.60usft at 16.00usft MD (16.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			16.00	0.00	0.00	7,254,790.13	2,034,470.32		
Point 2			16.00	-1,974.16	4.00	7,252,816.28	2,034,505.37		
Point 3			16.00	-3,985.74	53.78	7,250,805.73	2,034,586.79		
Point 4			16.00	-5,305.21	73.27	7,249,486.73	2,034,627.04		
Point 5			16.00	-5,965.95	76.42	7,248,826.12	2,034,640.58		
Point 6			16.00	-9,287.89	89.07	7,245,504.79	2,034,705.49		
Point 7			16.00	-9,320.28	-3,175.78	7,245,421.04	2,031,441.55		
Point 8			16.00	-9,328.33	-3,822.09	7,245,402.83	2,030,795.45		
Point 9			16.00	-5,348.68	-3,851.22	7,249,381.53	2,030,703.72		
Point 10			16.00	-4,029.21	-3,871.27	7,250,700.52	2,030,662.91		
Point 11			16.00	-9.06	-3,967.86	7,254,718.65	2,030,503.09		
Point 12			16.00	-4.10	-1,965.32	7,254,755.11	2,032,505.30		
Point 13			16.00	0.00	0.00	7,254,790.13	2,034,470.32		
Sec. 15, T3S-R2W,	0.00	0.00	-64.00	-378.66	1,832.27	7,255,462.21	2,035,118.24	40° 13' 46.410 N	110° 5' 10.530 W
- plan misses target center by 1872.08usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-64.00	0.00	0.00	7,255,462.21	2,035,118.24		
Point 2			-64.00	-2,627.83	5.84	7,252,834.80	2,035,165.42		
Point 3			-64.00	-5,300.15	72.21	7,250,163.85	2,035,273.82		
Point 4			-64.00	-5,358.12	-5,174.01	7,250,023.36	2,030,029.16		
Point 5			-64.00	-13.43	-5,301.72	7,255,365.38	2,029,817.38		
Point 6			-64.00	-6.35	-2,625.26	7,255,414.56	2,032,493.40		
Point 7			-64.00	0.00	0.00	7,255,462.21	2,035,118.24		
Sec. 22, T3S-R2W,	0.00	0.00	-64.00	-5,678.82	1,904.03	7,250,163.84	2,035,273.37	40° 12' 54.030 N	110° 5' 9.610 W
- plan misses target center by 5989.86usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-64.00	0.00	0.00	7,250,163.84	2,035,273.37		
Point 2			-64.00	-1,324.52	5.43	7,248,839.57	2,035,299.63		
Point 3			-64.00	-5,302.15	20.15	7,244,862.67	2,035,376.93		
Point 4			-64.00	-5,341.28	-3,898.87	7,244,761.89	2,031,459.01		
Point 5			-64.00	-5,358.25	-5,208.57	7,244,724.31	2,030,149.74		
Point 6			-64.00	-57.10	-5,246.23	7,250,024.22	2,030,028.68		
Point 7			-64.00	0.00	0.00	7,250,163.84	2,035,273.37		
Nudge Pt. (2-15-22-3-	0.00	0.00	8,230.00	-1,059.83	-146.50	7,254,750.00	2,033,150.43	40° 13' 39.679 N	110° 5' 36.044 W
- plan hits target center									
- Point									
TD-PBHL (2-15-22-3-2	0.00	0.00	8,964.00	-10,345.37	-57.69	7,245,467.00	2,033,385.31	40° 12' 7.912 N	110° 5' 34.899 W
- plan misses target center by 0.34usft at 18540.18usft MD (8963.92 TVD, -10345.37 N, -57.36 E)									
- Point									

LEAM Drilling Systems LLC

Planning Report

LEAM Drilling Systems LLC

Database:	EDM 5000.1 Lynn Db	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**TVD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Project:	DUCHESNE COUNTY, UT (NAD 83)	**MD Reference:**	WELL(5352'+28'= 5380' MSL) @ 5380.00usft (Pioneer 78 (KB= 28'))
Site:	CENTRAL BASIN (NAD 83)	**North Reference:**	True
Well:	2-15-22-3-2WH	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	2-15-22-3-2WH AUBREY		
Design:	2-15-22-3-2WH AUBREY Rev01		

Top Production (2-15-	0.00	180.00	9,383.00	-1,049.83	-146.45	7,254,760.00	2,033,150.32	40° 13' 39.778 N	110° 5' 36.043 W

- plan misses target center by 239.32usft at 9358.09usft MD (9208.04 TVD, -1213.11 N, -145.03 E)
- Rectangle (sides W0.00 H0.00 D2,000.00)

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,785.98	3,769.00	Green River Formation		0.00	180.00
5,807.39	5,744.00	Trona		0.00	180.00
5,845.26	5,781.00	Mahogany Bench		0.00	180.00
6,728.53	6,644.00	Garden Gulch Member		0.00	180.00
6,990.55	6,900.00	Garden Gulch Member-1		0.00	180.00
7,159.42	7,065.00	Garden Gulch Member-2		0.00	180.00
7,882.88	7,775.00	Douglas Creek Member		0.00	180.00
8,367.02	8,258.06	B Limestone		-2.59	180.00
8,536.02	8,427.06	Lower Black Shale		-2.59	180.00
8,656.02	8,547.06	Castle Peak Limestone		-2.59	180.00
8,805.02	8,696.06	CP Limes		-2.59	180.00
8,953.02	8,844.06	Uteland Butte		-2.59	180.00
9,084.78	8,974.25	Wasatch		-2.59	180.00

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,500.00	2,500.00	0.00	0.00	
3,320.04	3,313.75	-86.86	-12.01	EOB-Tangent= 4199 ft. at 3320 MD
7,518.92	7,416.25	-972.97	-134.49	Nudge Drop= -1.50/100' MD
8,338.96	8,230.00	-1,059.83	-146.50	Nudge Vert. Pt.= 8339 MD- 8230 TVD
8,536.96	8,428.00	-1,059.83	-146.50	Top Lw. Blk. Shale-Tangent= 50 ft.at 8537 MD
8,586.96	8,478.00	-1,059.83	-146.50	Tangent= 361 ft. at 8587 MD
8,947.96	8,839.00	-1,059.83	-146.50	Curve Build Rate= 11.00°/100' MD
9,789.69	9,359.34	-1,604.21	-141.27	Landing Pt. (92.59°) 9790 MD- 9359 TVD
18,540.19	8,963.92	-10,345.37	-57.36	TD-PBHL= 18540 MD- 8964 TVD

AFFIDAVIT OF EASEMENT AND RIGHT-OF-WAY

Peter Burns personally appeared before me, being duly sworn, deposes and with respect to State of Utah R649-3-34.7 says:

1. My name is Peter Burns. I am a Landman for Newfield Production Company, whose address is 1001 17th Street, Suite 2000, Denver, CO 80202 ("Newfield").

2. Newfield is the Operator of the proposed Aubrey 2-15-22-3-2WH well with a surface location to be positioned in the SWSE of Section 10, Township 3 South, Range 2 West, Duchesne County, Utah (the "Drillsite Location"). The surface owner of a portion of the access road and pipeline route is William Mellema, Jr. - Trustee, whose address is P.O. Box 1198, Parker, CO 80134-1198 ("Surface Owner").

3. Newfield and the Surface Owner have agreed upon an Easement and Right-of-Way dated September 20, 2012 covering the N/2 and SE/4SW/4 of Section 15, Township 3 South, Range 2 West, Duchesne County, Utah.

FURTHER AFFIANT SAYETH NOT.

Peter Burns

ACKNOWLEDGEMENT

STATE OF COLORADO §
§
COUNTY OF DENVER §

Before me, a Notary Public, in and for the State, on this 19th day of February, 2012, personally appeared Peter Burns, to me known to be the identical person who executed the foregoing instrument, and acknowledged to me that he executed the same as his own free and voluntary act and deed for the uses and purposes therein set forth.

NOTARY PUBLIC

My Commission Expires:

ALAN D. WILD NOTARY PUBLIC STATE OF COLORADO MY COMMISSION EXPIRES 2/17/2015

AFFIDAVIT OF EASEMENT AND RIGHT-OF-WAY

Peter Burns personally appeared before me, being duly sworn, deposes and with respect to State of Utah R649-3-34.7 says:

1. My name is Peter Burns. I am a Landman for Newfield Production Company, whose address is 1001 17th Street, Suite 2000, Denver, CO 80202 ("Newfield").

2. Newfield is the Operator of the proposed Aubrey 2-15-22-3-2WH well with a surface location to be positioned in the SWSE of Section 10, Township 3 South, Range 2 West, Duchesne County, Utah (the "Drillsite Location"). The surface owner of a portion of the access road route is Mack Rideout, Personal Representative of the Estate of Sherman D. Rideout, whose address is 3634 Capstone Ave., Salt Lake City, UT 84121 ("Surface Owner").

3. Newfield and the Surface Owner have agreed upon an Easement and Right-of-Way dated December 10, 2012 covering the SWNW of Section 14, Township 3 South, Range 2 West, Duchesne County, Utah.

FURTHER AFFIANT SAYETH NOT.

Peter Burns

ACKNOWLEDGEMENT

STATE OF COLORADO §
§
COUNTY OF DENVER §

Before me, a Notary Public, in and for the State, on this 19th day of February, 2012, personally appeared Peter Burns, to me known to be the identical person who executed the foregoing instrument, and acknowledged to me that he executed the same as his own free and voluntary act and deed for the uses and purposes therein set forth.

NOTARY PUBLIC

My Commission Expires:

ALAN D. WILD NOTARY PUBLIC STATE OF COLORADO MY COMMISSION EXPIRES 2/17/2015

AFFIDAVIT OF EASEMENT, RIGHT-OF-WAY AND SURFACE USE AGREEMENT

Peter Burns personally appeared before me, being duly sworn, deposes and with respect to State of Utah R649-3-34.7 says:

1. My name is Peter Burns. I am a Landman for Newfield Production Company, whose address is 1001 17th Street, Suite 2000, Denver, CO 80202 ("Newfield").

2. Newfield is the Operator of the proposed Aubrey 2-15-22-3-2WH well with a surface location to be positioned in the SWSE of Section 10, Township 3 South, Range 2 West (the "Drillsite Location"), with a well bore point of entry in the NWNE of Section 15, Township 3 South, Range 2 West and a bottom hole location to be positioned in the SWSE of Section 22, Township 3 South, Range 2 West, Duchesne County, Utah. The surface owner of the Drillsite Location is Dart Homestead Ranch, Inc. whose address is Route 2, Box 2044, Roosevelt, UT 84066 ("Surface Owner").

3. Newfield and the Surface Owner have agreed upon an Easement, Right-of-Way and Surface Use Agreement dated February 16, 2013 covering the Drillsite Location, access to the Drillsite Location and a portion of the pipeline route.

FURTHER AFFIANT SAYETH NOT.

Peter Burns

ACKNOWLEDGEMENT

STATE OF COLORADO §
§
COUNTY OF DENVER §

Before me, a Notary Public, in and for the State, on this 19th day of February, 2013, personally appeared Peter Burns, to me known to be the identical person who executed the foregoing instrument, and acknowledged to me that he executed the same as his own free and voluntary act and deed for the uses and purposes therein set forth.

NOTARY PUBLIC

My Commission Expires:

ALAN D. WILD NOTARY PUBLIC STATE OF COLORADO MY COMMISSION EXPIRES 2/17/2015

API Well Number: 43013521050000

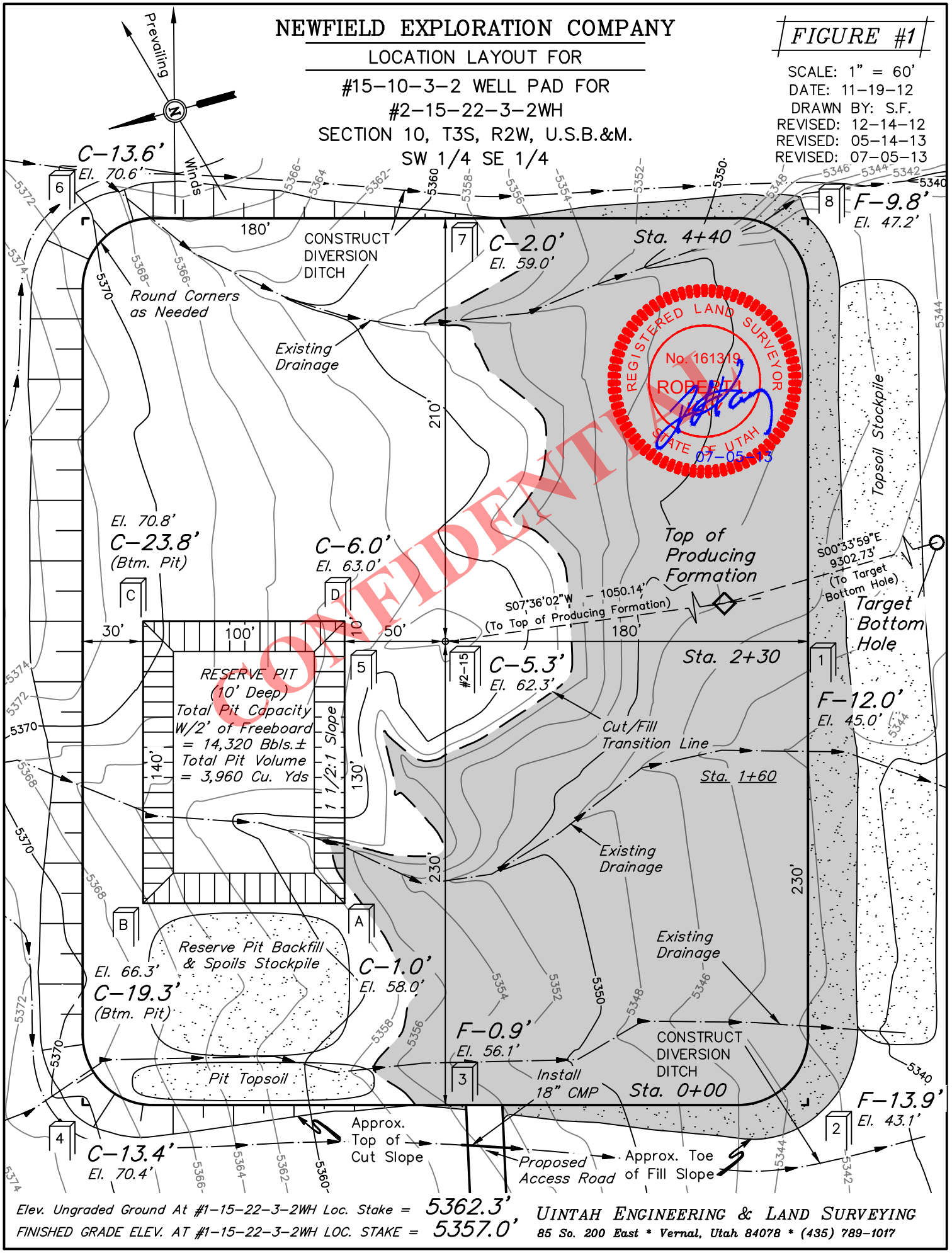
NEWFIELD EXPLORATION COMPANY

LOCATION LAYOUT FOR

#15-10-3-2 WELL PAD FOR
#2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

FIGURE #1

SCALE: 1" = 60'
DATE: 11-19-12
DRAWN BY: S.F.
REVISED: 12-14-12
REVISED: 05-14-13
REVISED: 07-05-13



CONFIDENTIAL

Elev. Ungraded Ground At #1-15-22-3-2WH Loc. Stake = 5362.3'
FINISHED GRADE ELEV. AT #1-15-22-3-2WH LOC. STAKE = 5357.0'

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

RECEIVED: July 23, 2013

NEWFIELD EXPLORATION COMPANY

TYPICAL CROSS SECTIONS FOR

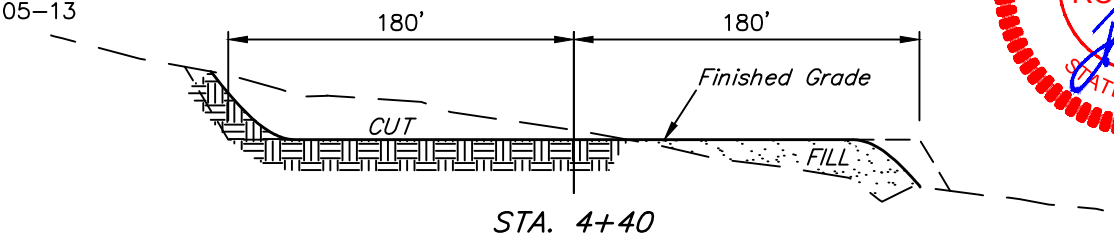
#15-10-3-2 WELL PAD FOR
#2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

FIGURE #2

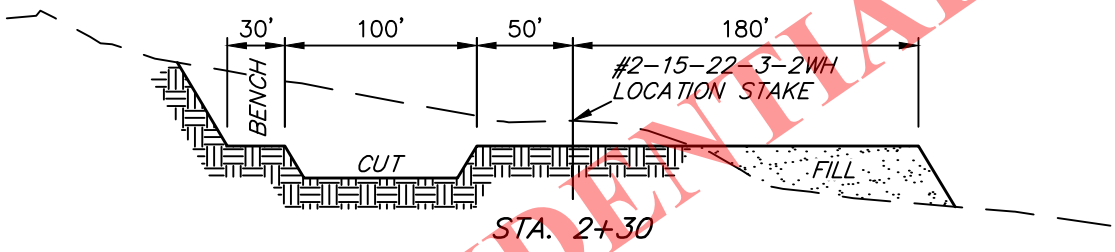
1" = 40'
X-Section Scale
1" = 100'

DATE: 11-19-12
DRAWN BY: S.F.
REVISED: 12-14-12
REVISED: 05-14-13
REVISED: 07-05-13

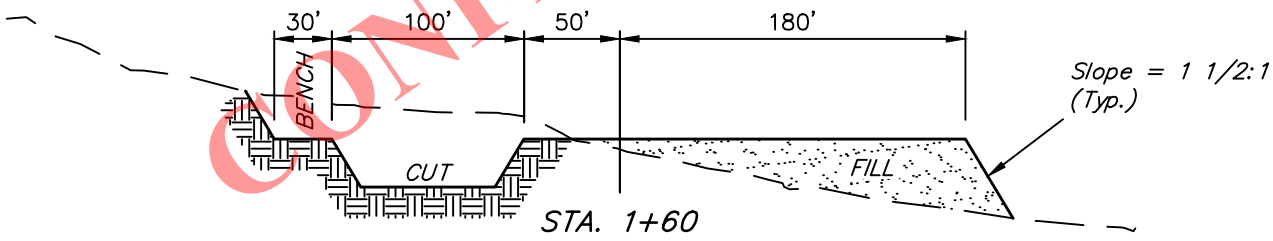
REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH
07-05-13



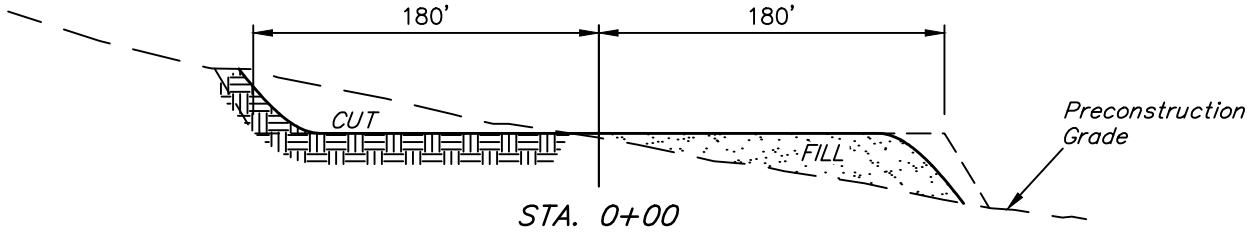
STA. 4+40



STA. 2+30



STA. 1+60



STA. 0+00

NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE ACREAGE

WELL SITE DISTURBANCE = ± 5.702 ACRES
ACCESS ROAD DISTURBANCE = ± 0.394 ACRES
PIPELINE DISTURBANCE = ± 0.393 ACRES
TOTAL = ± 6.489 ACRES

* NOTE:
FILL QUANTITY INCLUDES 5% FOR COMPACTION

APPROXIMATE YARDAGES

(6") Topsoil Stripping	=	3,420 Cu. Yds.
Remaining Location	=	26,170 Cu. Yds.
TOTAL CUT	=	29,590 CU. YDS.
FILL	=	24,190 CU. YDS.

EXCESS MATERIAL	=	5,400 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	=	5,400 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	=	0 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

RECEIVED: July 23, 2013

API Well Number: 43013521050000

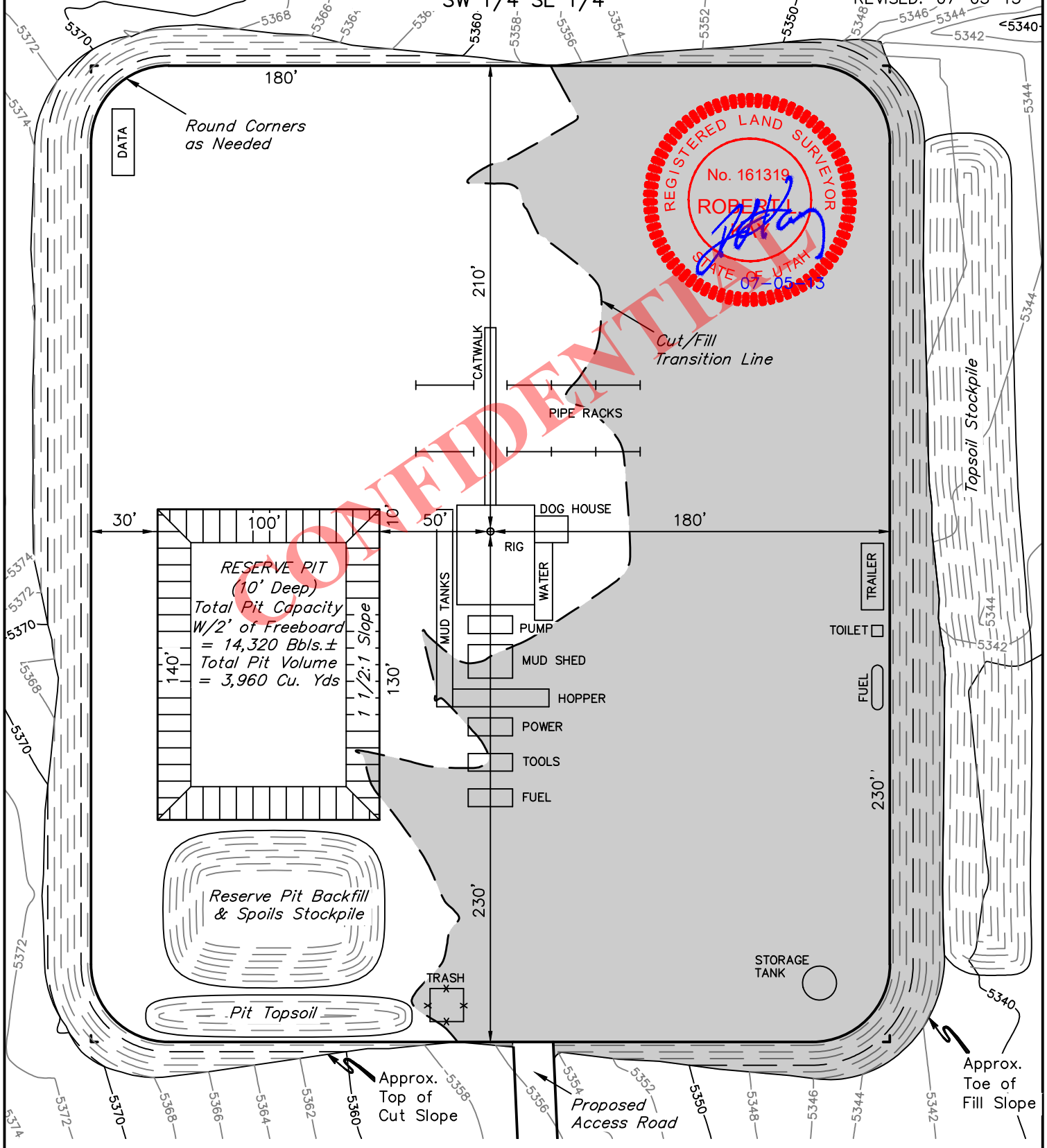
NEWFIELD EXPLORATION COMPANY

TYPICAL RIG LAYOUT FOR

#15-10-3-2 WELL PAD FOR
#2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

FIGURE #3

SCALE: 1" = 60'
DATE: 11-19-12
DRAWN BY: S.F.
REVISED: 12-14-12
REVISED: 05-14-13
REVISED: 07-05-13



CONFIDENTIAL

UINTAH ENGINEERING & LAND SURVEYING
*85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017*

RECEIVED: July 23, 2013

API Well Number: 43013521050000

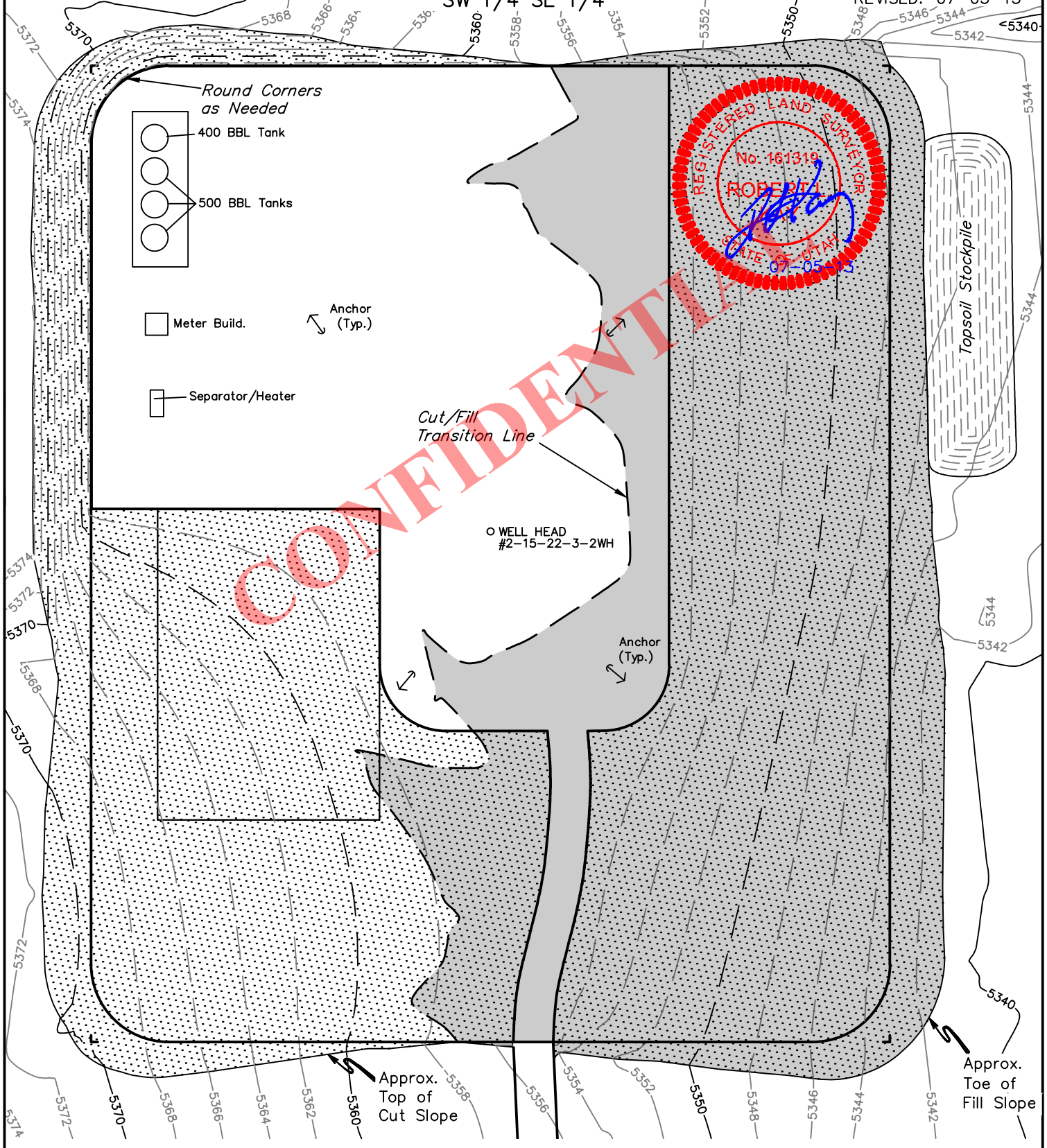
NEWFIELD EXPLORATION COMPANY

PRODUCTION FACILITY LAYOUT FOR

#15-10-3-2 WELL PAD FOR
#2-15-22-3-2WH
SECTION 10, T3S, R2W, U.S.B.&M.
SW 1/4 SE 1/4

FIGURE #4

SCALE: 1" = 60'
DATE: 11-19-12
DRAWN BY: S.F.
REVISED: 12-14-12
REVISED: 05-14-13
REVISED: 07-05-13



RECLAIMED AREA

APPROXIMATE ACREAGES
UN-RECLAIMED = ± 1.537 ACRES

UINTAH ENGINEERING & LAND SURVEYING
*85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017*

RECEIVED: July 23, 2013

NEWFIELD

August 12, 2013

State of Utah
Division of Oil, Gas & Mining
ATTN: Brad Hill
PO Box 145801
Salt Lake City, UT 84114

Newfield Exploration Company
1001 17th Street | Suite 2000
Denver, Colorado 80202
PH 303-893-0102 | FAX 303-893-0103

RE: Aubrey 2-15-22-3-2WH

Dear Mr. Hill,

Newfield Production Company ("Newfield") proposes to drill the Aubrey 2-15-22-3-2WH from a surface location of 381' FSL and 1838' FEL of Section 10, T3S R2W, to a bottom hole location of 660' FSL and 1980' FEL of Section 22, T3S R2W.

The Aubrey 2-15-22-3-2WH is covered by Order No. 139-103, which requires no portion of the producing interval of the horizontal lateral be closer than 660' from the northern or southern section boundaries and no closer than 660' from the eastern or western section boundaries, and requires proper surface and sub-surface authorization be obtained when the surface location is located off of the drilling unit.

In compliance with the above referenced Order, the top of the uppermost producing zone of the Aubrey 2-15-22-3-2WH is 660' FNL and 1980' FEL of 3S 2W Section 15. Newfield shall case and cement the Aubrey 2-15-22-3-2WH wellbore from the surface location to the point where the wellbore reaches the legal setback, and the wellbore will only be completed within the legal setback. In the event a future recompletion outside of this setback is proposed, Newfield shall attempt to acquire consent from all the owners in Section 10 of T3S R2W, and shall file the appropriate application with the State. The bottom hole location of the Aubrey 2-15-22-3-2WH is 660' FSL and 1980' FEL of 3S 2W Sec 22, which is within the legal setback.

In further compliance of the above referenced Order, Newfield has obtained authorization from the surface owner of the drilling location, as is evidenced by the Affidavit of Easement, Right-of-Way and Surface Use Agreement attached to the APD. Newfield and its partners are the leasehold owners of the minerals underlying the surface location and all that portion of the wellbore of the Aubrey 2-15-22-3-2WH lying outside the drilling unit.

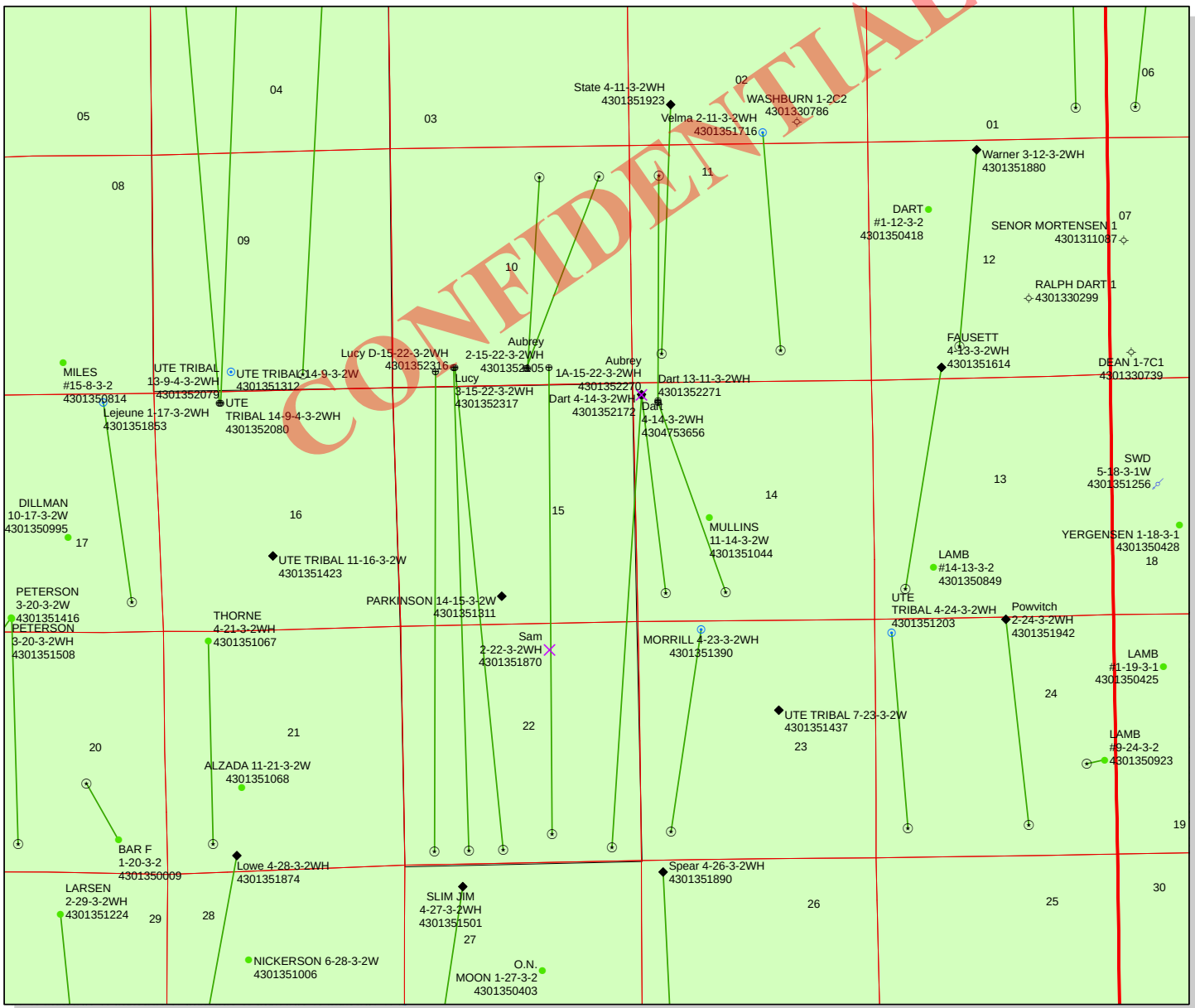
Based on Newfield's compliance with the requirements of Order No. 139-103, Newfield respectfully requests the approval of our APD for the Aubrey 2-15-22-3-2WH.

If you have any questions or require further information, please do not hesitate to contact the undersigned at 303-382-4466 or by email at rmiller@newfield.com. Your consideration of this matter is greatly appreciated.

Sincerely,

Robert N. Miller II
Landman

API Well Number: 43013521050000



API Number: 4301352105

Well Name: Aubrey 2-15-22-3-2WH

Township T03.0S Range R02.0W Section 10

Meridian: UBM

Operator: NEWFIELD PRODUCTION COMPANY

Map Prepared:
Map Produced by Diana Mason

Units
STATUS
ACTIVE
EXPLORATORY
GAS STORAGE
NF PP OIL
NF SECONDARY
PI OIL
PP GAS
PP GEOTHERML
PP OIL
SECONDARY
TERMINATED

2,900 1,450 0 2,900 Feet

1:27,370

RECEIVED: July 26, 2013

API Well Number: 43013521050000

BOPE REVIEW NEWFIELD PRODUCTION COMPANY Aubrey 2-15-22-3-2WH 43013521050000

Well Name	NEWFIELD PRODUCTION COMPANY Aubrey 2-15-22-3-2WH 430135			
String	COND	SURF	I1	PROD
Casing Size(")	20.000	13.375	9.625	5.500
Setting Depth (TVD)	60	1600	8477	8964
Previous Shoe Setting Depth (TVD)	0	60	1600	8477
Max Mud Weight (ppg)	8.3	8.4	11.0	14.5
BOPE Proposed (psi)	0	500	5000	5000
Casing Internal Yield (psi)	1000	2730	5750	12360
Operators Max Anticipated Pressure (psi)	5984			12.8

Calculations	COND String	20.000	"	
Max BHP (psi)	.052*Setting Depth*MW=	26		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	19	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	13	NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	13	NO	
Required Casing/BOPE Test Pressure=		60	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient	

Calculations	SURF String	13.375	"	
Max BHP (psi)	.052*Setting Depth*MW=	699		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	507	NO	diverter
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	347	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	360	NO	OK
Required Casing/BOPE Test Pressure=		1600	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		60	psi *Assumes 1psi/ft frac gradient	

Calculations	I1 String	9.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	4849		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	3832	YES	5M BOPE, 2 ram preventers, annular
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	2984	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	3336	NO	OK
Required Casing/BOPE Test Pressure=		4025	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		1600	psi *Assumes 1psi/ft frac gradient	

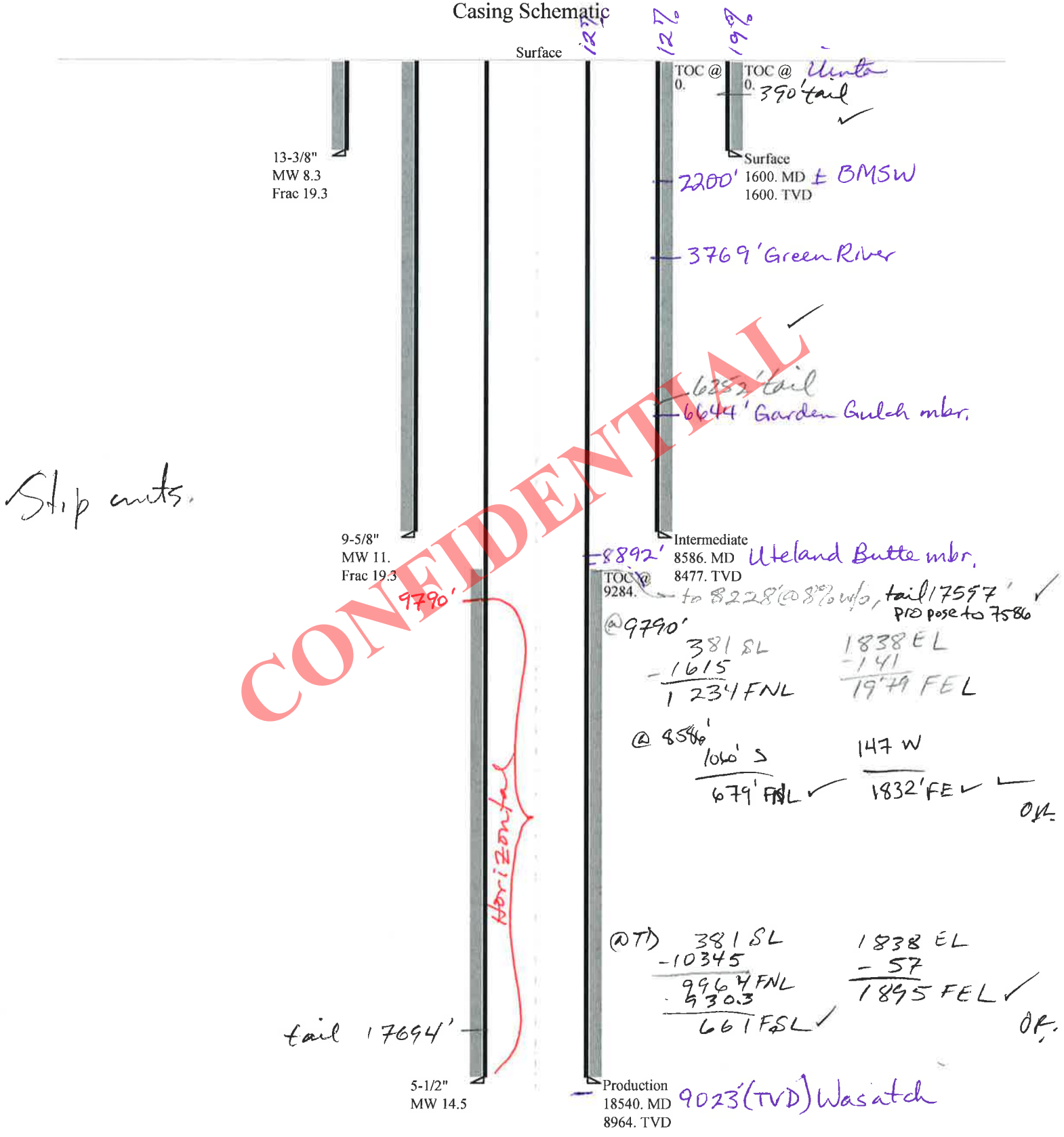
Calculations	PROD String	5.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	6759		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5683	NO	5M BOPE, 2 ram preventers, annular
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4787	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	6652	YES	
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		5750	psi *Assumes 1psi/ft frac gradient	

RECEIVED: August 01, 2013

API Well Number: 43013521050000

43013521050000 Aubry 2-15-22-3-2WH

Casing Schematic



Slip cmts.

Well name:	**43013521050000 Aubry 2-15-22-3-2WH**
Operator:	**NEWFIELD PRODUCTION COMPANY**
String type:	Surface
Project ID:	43-013-52105
Location:	DUCHESNE COUNTY

Design parameters:

Collapse
Mud weight: 8.330 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 1,408 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 1,600 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on buoyed weight.
Neutral point: 1,403 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 97 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: Surface

Non-directional string.

Re subsequent strings:
Next setting depth: 8,477 ft
Next mud weight: 11.000 ppg
Next setting BHP: 4,844 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 1,600 ft
Injection pressure: 1,600 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	1600	13.375	54.50	J-55	ST&C	1600	1600	12.49	19853

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	692	1130	1.632	1600	2730	1.71	76.5	514	6.72 J

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801.538.5357
FAX: 501.359.3940
Date: July 31,2013
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 1600 ft, a mud weight of 8.33 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Engineering responsibility for use of this design will be that of the purchaser.

API Well Number: 43013521050000

Well name:	**43013521050000 Aubry 2-15-22-3-2WH**
Operator:	**NEWFIELD PRODUCTION COMPANY**
String type:	Intermediate
Project ID:	43-013-52105
Location:	DUCHESNE COUNTY

Design parameters:

Collapse

Mud weight:	11.000 ppg
Internal fluid density:	4.800 ppg

Burst

Max anticipated surface pressure:	4,780 psi
Internal gradient:	0.220 psi/ft
Calculated BHP	6,645 psi
Annular backup:	2.33 ppg

Minimum design factors:

Collapse:

Design factor	1.125

Burst:

Design factor	1.00

Tension:

8 Round STC:	1.80 (J)
8 Round LTC:	1.80 (J)
Buttress:	1.60 (J)
Premium:	1.50 (J)
Body yield:	1.60 (B)

Tension is based on buoyed weight.
Neutral point: 7,185 ft

Environment:

H2S considered?	No
Surface temperature:	75 °F
Bottom hole temperature:	194 °F
Temperature gradient:	1.40 °F/100ft
Minimum section length:	1,000 ft
Cement top:	Surface

Directional well information:

Kick-off point	3000 ft
Departure at shoe:	1070 ft
Maximum dogleg:	1.5 °/100ft
Inclination at shoe:	0 °

Re subsequent strings:

Next setting depth:	8,964 ft
Next mud weight:	14.500 ppg
Next setting BHP:	6,752 psi
Fracture mud wt:	19.250 ppg
Fracture depth:	8,477 ft
Injection pressure:	8,477 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	8586	9.625	40.00	N-80	Buttress	8477	8586	8.75	116905

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	2730	3090	1.132	5619	5750	1.02	283.6	916.3	3.23 B

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801.538.5357
FAX: 501.359.3940
Date: July 31,2013
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 8477 ft, a mud weight of 11 ppg An internal gradient of .249 psi/ft was used for collapse from TD to
Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

API Well Number: 43013521050000

Well name:	**43013521050000 Aubry 2-15-22-3-2WH**
Operator:	**NEWFIELD PRODUCTION COMPANY**
String type:	Production
Project ID:	43-013-52105
Location:	DUCHESNE COUNTY

Design parameters:

Collapse
Mud weight: 14.500 ppg
Design is based on evacuated pipe.

Burst
Max anticipated surface pressure: 4,780 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 6,752 psi

No backup mud specified.

Minimum design factors:

Collapse:
Design factor 1.125

Burst:
Design factor 1.00

Tension:
8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Tension is based on buoyed weight.
Neutral point: 7,089 ft

Environment:
H2S considered? No
Surface temperature: 75 °F
Bottom hole temperature: 200 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 1,000 ft

Cement top: 9,284 ft

Directional well information:
Kick-off point 3000 ft
Departure at shoe: 10345 ft
Maximum dogleg: 11 °/100ft
Inclination at shoe: 92.59 °

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost ($)
1	18540	5.5	20.00	P-110	Buttress	8964	18540	4.653	153812

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	6752	11100	1.644	6839	12360	1.81	139.9	641.1	4.58 B

Prepared by: Helen Sadik-Macdonald
Div of Oil,Gas & Mining
Phone: 801.538.5357
FAX: 501.359.3940
Date: July 31,2013
Salt Lake City, Utah

Remarks:
Collapse is based on a vertical depth of 8964 ft, a mud weight of 14.5 ppg The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.
Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION
Utah Division of Oil, Gas and Mining

Operator NEWFIELD PRODUCTION COMPANY
Well Name Aubrey 2-15-22-3-2WH

API Number 43013521050000 **APD No** 7813 **Field/Unit** NORTH MYTON BENCH

Location: 1/4,1/4 SWSE **Sec** 10 **Tw** 3.0S **Rng** 2.0W 381 FSL 1838 FEL
GPS Coord (UTM) 577172 4453748 **Surface Owner** Dart Homestead Ranch, Inc.

Participants

Bruce Dart - land owner; Corie Miller, Mandie Crozier - Newfiled; Jim Burns - Starpoint

Regional/Local Setting & Topography

The location is proposed on fallow grazing lands on the edge of the North Myton Bench. Drainages from the bench impact the site in two places. The area is rather barren of vegetation and the soils are clays. There are numerous eroded knolls and slight swales with an historic floodpalin below. The location is one mile West of Highway 40 and 2 1/2 miles North of Myton just off Dart lane. The region is comprised of benches of differing levels and floodplains form the Duchesne River that has moved from its historic route. The soils are highly erodible and vegetation is sparse with the exception of the floodplains that are quite productive farmlands. Occassional buttes and numerous deep cut erosional features describe the region that is experiencing rapid growth in petroleum development.

Surface Use Plan

Current Surface Use
Wildlfe Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.5	**Width** 300 **Length** 400	Onsite	UNTA

Ancillary Facilities

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

High desert shrubland ecosystem. Expected vegetation consists of black sagebrush, shadscale, Atriplex spp., mustard spp, rabbit brush, horsebrush, broom snakeweed, Opuntia spp and spring annuals.
Dominant vegetation;
Galletta, mat atriplex and broom snake weed
Wildlife;
Adjacent habitat contains forbs that may be suitable browse for deer, antelope, prairie dogs or rabbits. Wild turkeys have moved in and were encountered multiple times.
DWR did not respond with comments / issues

Soil Type and Characteristics

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Heavy light colored clay soils

Erosion Issues Y

soils are huighly eroded

Sedimentation Issues Y

Site Stability Issues N

Drainage Diverson Required? Y

plans show deiversion placement

Berm Required? Y

Erosion Sedimentation Control Required? N

Paleo Survey Run? N **Paleo Potental Observed?** N **Cultural Survey Run?** N **Cultural Resources?** N

Reserve Pit

Site-Specific Factors		Site Ranking	
Distance to Groundwater (feet)	75 to 100	10	
Distance to Surface Water (feet)		20	
Dist. Nearest Municipal Well (ft)	1320 to 5280	5	
Distance to Other Wells (feet)	>1320	0	
Native Soil Type	Mod permeability	10	
Fluid Type	Oil Base Mud Fluid	15	
Drill Cuttings	Normal Rock	0	
Annual Precipitation (inches)		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	60	1 Sensitivity Level

Characteristics / Requirements

Operator intends to use an oil based drilling mud and is therefore required to use a closed loop system. If a reserve pit and freshwater is used, Pit to be dug to a depth of 8'. Because of the likely hood of disturbance to existing sandstone bedrock , pit underlayment is to be used to protect the liner from potential puncture. Pit should be fenced to prevent entry by deer, other wildlife and domestic animals. Pit to be closed within one year after drilling activities are complete.

Closed Loop Mud Required? Y **Liner Required?** **Liner Thickness** **Pit Underlayment Required?**

Other Observations / Comments

Chris Jensen	4/3/2013
Evaluator	**Date / Time**

RECEIVED: August 21, 2013

Application for Permit to Drill
Statement of Basis
Utah Division of Oil, Gas and Mining

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
7813	43013521050000	LOCKED	OW	P	No
Operator	NEWFIELD PRODUCTION COMPANY		**Surface Owner-APD**	Dart Homestead Ranch, Inc.	
Well Name	Aubrey 2-15-22-3-2WH		**Unit**		
Field	NORTH MYTON BENCH		**Type of Work**	DRILL	
Location	SWSE 10 3S 2W U 381 FSL 1838 FEL GPS Coord (UTM) 577174E 4453736N				

Geologic Statement of Basis

Newfield proposes to set 60' of conductor and 1,000' of surface casing at this location. The base of the moderately saline water at this location is estimated to be at a depth of 2,200'. A search of Division of Water Rights records shows 23 water wells within a 10,000 foot radius of the center of Section 10. Depth is listed as ranging from 32 to 800 feet. Depths are not listed for 4 wells. Water use is listed as irrigation, stock watering, municipal and domestic use. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. Intermediate casing cement should be brought up to or above the estimated base of the moderately saline ground water.

Brad Hill	4/16/2013
APD Evaluator	**Date / Time**

Surface Statement of Basis

Location is proposed in a good location although outside the spacing window typical of a horizontal well. Access road enters the pad from the east. The landowner was in attendance for the pre-site inspection.
The soil type and topography at present do combine to pose a small threat to erosion or sediment/ pollution transport in these regional climate conditions.
Usual construction standards of the Operator appear to be adequate for the proposed purpose as submitted. Operator has plans to use a closed loop system an oil based mud not indicated on plans.
I recognize no special flora or animal species or cultural resources on site that the proposed action may harm. The location was previously surveyed for cultural and paleontological resources as the operator saw fit. I have advised the operator take all measures necessary to comply with ESA and MBTA and that actions insure no disturbance to species that may have not been seen during onsite visit.
The location should be bermed to prevent fluids from entering or leaving the confines of the pad. Fencing around the reserve pit will be necessary to prevent wildlife and livestock from entering. A synthetic liner of 16 mils (minimum) should be utilized in the reserve pit. Measures (BMP's) shall be taken to protect steep slopes and topsoil pile from erosion, sedimentation and stability issues. A diversion is to be built sufficient to conduct overland or channel flow according to plans submitted

RECEIVED: August 21, 2013

Chris Jensen	4/3/2013
Onsite Evaluator	**Date / Time**

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Surface	The reserve pit shall be fenced upon completion of drilling operations.
Surface	Measures (BMP's) shall be taken to protect steep slopes and topsoil pile from erosion, sedimentation and stability issues.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.

RECEIVED: August 21, 2013

API Well Number: 43013521050000

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 3/20/2013 **API NO. ASSIGNED:** 43013521050000

WELL NAME: Aubrey 2-15-22-3-2WH

OPERATOR: NEWFIELD PRODUCTION COMPANY (N2695) **PHONE NUMBER:** 435 719-2018

CONTACT: Don Hamilton

PROPOSED LOCATION: SWSE 10 030S 020W **Permit Tech Review:** ☑

SURFACE: 0381 FSL 1838 FEL **Engineering Review:** ☑

BOTTOM: 0660 FSL 1980 FEL **Geology Review:** ☑

COUNTY: DUCHESNE

LATITUDE: 40.23051 **LONGITUDE:** -110.09284

UTM SURF EASTINGS: 577174.00 **NORTHINGS:** 4453736.00

FIELD NAME: NORTH MYTON BENCH

LEASE TYPE: 2 - Indian

LEASE NUMBER: 14-20-H62-6269 **PROPOSED PRODUCING FORMATION(S):** WASATCH

SURFACE OWNER: 4 - Fee **COALBED METHANE:** NO

RECEIVED AND/OR REVIEWED:

- ☑ **PLAT**
- ☑ **Bond:** INDIAN - WYB000493
- ☐ **Potash**
- ☐ **Oil Shale 190-5**
- ☐ **Oil Shale 190-3**
- ☐ **Oil Shale 190-13**
- ☑ **Water Permit:** 437478
- ☐ **RDCC Review:**
- ☑ **Fee Surface Agreement**
- ☐ **Intent to Commingle**

Commingling Approved

LOCATION AND SITING:

- ☐ **R649-2-3.**

Unit:

- ☐ **R649-3-2. General**
- ☑ **R649-3-3. Exception**
- ☑ **Drilling Unit**

Board Cause No: Cause 139-98

Effective Date: 12/14/2012

Siting: See Order

- ☐ **R649-3-11. Directional Drill**

Comments: Presite Completed

Stipulations:

1 - Exception Location - bhill
4 - Federal Approval - dmason
5 - Statement of Basis - bhill
8 - Cement to Surface -- 2 strings - hmacdonald
12 - Cement Volume (3) - ddoucet
27 - Other - bhill

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GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

Permit To Drill
****

Well Name: Aubrey 2-15-22-3-2WH
API Well Number: 43013521050000
Lease Number: 14-20-H62-6269
Surface Owner: FEE (PRIVATE)
Approval Date: 8/21/2013

Issued to:
NEWFIELD PRODUCTION COMPANY , Rt 3 Box 3630 , Myton, UT 84052

Authority:
Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 139-98. The expected producing formation or pool is the WASATCH Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:
This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Exception Location:
Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby granted.

General:
Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:
State approval of this well does not supercede the required federal approval, which must be obtained prior to drilling.

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

In accordance with Utah Admin. R.649-3-21, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

Cement volumes for the 13 3/8" and 9 5/8" casing strings shall be determined from

actual hole diameters in order to place cement from the pipe setting depths back to the surface.

Cement volume for the 5 1/2" production string shall be determined from actual hole diameter in order to place cement from the pipe setting depth back inside intermediate shoe (7586' MD minimum) as indicated in the submitted drilling plan.

Notification Requirements:
The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels at 801-538-5284
  (please leave a voicemail message if not available)
  OR
  submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
  at http://oilgas.ogm.utah.gov

Reporting Requirements:
All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or plugging

Approved By:

For John Rogers
Associate Director, Oil & Gas

Form 3160-3
(August 2007)

RECEIVED

MAR 2 2 2013

BLM

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

CONFIDENTIAL

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. 1420H626269
	6. If Indian, Allottee or Tribe Name UINTAH AND OURAY
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone	8. Lease Name and Well No. AUBREY 2-15-22-3-2WH
2. Name of Operator NEWFIELD EXPLORATION COMPANY Contact: DON S HAMILTON Email: starpoint@etv.net	9. API Well No. 43-013-52105
3a. Address ROUTE 3 BOX 3630 MYTON, UT 84052 3b. Phone No. (include area code) Ph: 435-719-2018 Fx: 435-719-2019	10. Field and Pool, or Exploratory UNDESIGNATED
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface SWSE 381FSL 1838FEL 40.230592 N Lat, 110.092844 W Lon At proposed prod. zone SWSE 330FSL 1980FEL 40.230592 N Lat, 110.092844 W Lon Sec. 28	11. Sec., T., R., M., or Blk. and Survey or Area Sec 10 T3S R2W Mer UBM
14. Distance in miles and direction from nearest town or post office* 9.6 MILES SOUTHWEST OF ROOSEVELT, UT	12. County or Parish DUCHESNE 13. State UT
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 381 16. No. of Acres in Lease 4130.84	17. Spacing Unit dedicated to this well 40.00
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 30 19. Proposed Depth 19271 MD 8524 TVD	20. BLM/BIA Bond No. on file RLB0010462
21. Elevations (Show whether DF, KB, RT, GL, etc. 5362 GL 22. Approximate date work will start 04/01/2013	23. Estimated duration 60 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) DON S HAMILTON Ph: 435-719-2018	Date 03/20/2013
Title PERMITTING AGENT		
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka	Date JUL 17 2013
Title ~~Assistant Field Manager~~ Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED
JUL 25 2013
DIV. OF OIL, GAS & MINING

Additional Operator Remarks (see next page)

Electronic Submission #202108 verified by the BLM Well Information System
For NEWFIELD EXPLORATION COMPANY, sent to the Vernal
Committed to AFMSS for processing by JOHNETTA MAGEE on 03/26/2013 (13JM0899AE)

NOTICE OF APPROVAL

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

13JM0899AE

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Newfield Production Company**	**Location:**	**SWSE, Sec. 10, T3S, R2W**
Well No:	**Aubrey 2-15-22-3-2WH**	**Lease No:**	**14-20-H62-6269**
API No:	**43-013-52105**	**Agreement:**	

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to:blm_ut_vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)

CONDITIONS OF APPROVAL:

- It is recommend that Newfield consult with the Utah Division of Wildlife Resources to minimize impacts to birds, particularly protected under the Migratory Bird Treaty Act and to ensure compliance with Federal and State laws protecting Migratory Birds.

- Newfield will not pump surface water from the Green River. Specifically, for Newfield's development, water collection wells will be connected to a centralized pumping station via underground waterlines. The water wells will be developed using conventional drilling methods. Each well will extend to a depth of approximately 100 feet below the surface.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Cement for the intermediate casing will be brought to a minimum of 200 feet above the surface casing shoe.
- A CBL shall be run in the intermediate casing to TOC.
- Variances to OO2, Section III.E shall be granted as requested regarding the air drilling program for the surface hole.
- Cement samples shall be caught for all stages of cement work for the Surface and Intermediate casing strings and tested for compressive strength.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.

- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

Form 3160-3
(August 2007)

RECEIVED

MAR 2 2 2013

BLM

FORM APPROVED
OMB No. 1004-0136
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

CONFIDENTIAL

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. 1420H626269
	6. If Indian, Allottee or Tribe Name UINTAH AND OURAY
	7. If Unit or CA Agreement, Name and No.
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone	8. Lease Name and Well No. AUBREY 2-15-22-3-2WH
2. Name of Operator NEWFIELD EXPLORATION COMPANY Contact: DON S HAMILTON Email: starpoint@etv.net	9. API Well No. 43-013-52105
3a. Address ROUTE 3 BOX 3630 MYTON, UT 84052 3b. Phone No. (include area code) Ph: 435-719-2018 Fx: 435-719-2019	10. Field and Pool, or Exploratory UNDESIGNATED
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface SWSE 381FSL 1838FEL 40.230592 N Lat, 110.092844 W Lon At proposed prod. zone SWSE 330FSL 1980FEL 40.230592 N Lat, 110.092844 W Lon Sec. 28	11. Sec., T., R., M., or Blk. and Survey or Area Sec 10 T3S R2W Mer UBM
14. Distance in miles and direction from nearest town or post office* 9.6 MILES SOUTHWEST OF ROOSEVELT, UT	12. County or Parish DUCHESNE 13. State UT
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 381 16. No. of Acres in Lease 4130.84	17. Spacing Unit dedicated to this well 40.00
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 30 19. Proposed Depth 19271 MD 8524 TVD	20. BLM/BIA Bond No. on file RLB0010462
21. Elevations (Show whether DF, KB, RT, GL, etc. 5362 GL 22. Approximate date work will start 04/01/2013	23. Estimated duration 60 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature (Electronic Submission)	Name (Printed/Typed) DON S HAMILTON Ph: 435-719-2018	Date 03/20/2013
Title PERMITTING AGENT		
Approved by (Signature)	Name (Printed/Typed) Jerry Kenczka	Date JUL 17 2013
Title ~~Assistant Field Manager~~ Lands & Mineral Resources	Office VERNAL FIELD OFFICE	

Application approval does not warrant or certify the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. CONDITIONS OF APPROVAL ATTACHED

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

RECEIVED
JUL 25 2013
DIV. OF OIL, GAS & MINING

Additional Operator Remarks (see next page)

Electronic Submission #202108 verified by the BLM Well Information System
For NEWFIELD EXPLORATION COMPANY, sent to the Vernal
Committed to AFMSS for processing by JOHNETTA MAGEE on 03/26/2013 (13JM0899AE)

NOTICE OF APPROVAL

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

13JM0899AE

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
VERNAL FIELD OFFICE
170 South 500 East VERNAL, UT 84078 (435) 781-4400

CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL

Company:	**Newfield Production Company**	**Location:**	**SWSE, Sec. 10, T3S, R2W**
Well No:	**Aubrey 2-15-22-3-2WH**	**Lease No:**	**14-20-H62-6269**
API No:	**43-013-52105**	**Agreement:**	

OFFICE NUMBER: (435) 781-4400

OFFICE FAX NUMBER: (435) 781-3420

A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR FIELD REPRESENTATIVE TO INSURE COMPLIANCE

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a two (2) year period, or until lease expiration, whichever occurs first. An additional extension, up to two (2) years, may be applied for by sundry notice prior to expiration.**

NOTIFICATION REQUIREMENTS

Construction Activity (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	The Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist shall be notified at least 48 hours in advance of any construction activity. The Ute Tribal office is open Monday through Thursday.
Construction Completion (Notify Ute Tribe Energy & Minerals Dept. and BLM Environmental Scientist)	-	Upon completion of the pertinent APD/ROW construction, notify the Ute Tribe Energy & Minerals Dept. for a Tribal Technician to verify the Affidavit of Completion. Notify the BLM Environmental Scientist prior to moving on the drilling rig.
Spud Notice (Notify BLM Petroleum Engineer)	-	Twenty-Four (24) hours prior to spudding the well.
Casing String & Cementing (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to running casing and cementing all casing strings to:blm_ut_vn_opreport@blm.gov.
BOP & Related Equipment Tests (Notify BLM Supv. Petroleum Tech.)	-	Twenty-Four (24) hours prior to initiating pressure tests.
First Production Notice (Notify BLM Petroleum Engineer)	-	Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

SURFACE USE PROGRAM
CONDITIONS OF APPROVAL (COAs)

CONDITIONS OF APPROVAL:

- It is recommend that Newfield consult with the Utah Division of Wildlife Resources to minimize impacts to birds, particularly protected under the Migratory Bird Treaty Act and to ensure compliance with Federal and State laws protecting Migratory Birds.

- Newfield will not pump surface water from the Green River. Specifically, for Newfield's development, water collection wells will be connected to a centralized pumping station via underground waterlines. The water wells will be developed using conventional drilling methods. Each well will extend to a depth of approximately 100 feet below the surface.

DOWNHOLE PROGRAM
CONDITIONS OF APPROVAL (COAs)

SITE SPECIFIC DOWNHOLE COAs:

- Cement for the intermediate casing will be brought to a minimum of 200 feet above the surface casing shoe.
- A CBL shall be run in the intermediate casing to TOC.
- Variances to OO2, Section III.E shall be granted as requested regarding the air drilling program for the surface hole.
- Cement samples shall be caught for all stages of cement work for the Surface and Intermediate casing strings and tested for compressive strength.

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS

- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.
- All requirements listed in Onshore Order #2 III. E. Special Drilling Operations are applicable for air drilling of surface hole.
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.

- **Cement baskets shall not be run on surface casing.**

- The operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled, analyzed, and a copy of the analyses submitted to the BLM Vernal Field Office.

- The operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, trona, etc.) to the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) should the BLM need to obtain additional information.

- A complete set of angular deviation and directional surveys of a directional well will be submitted to the Vernal BLM office engineer within 30 days of the completion of the well.

- While actively drilling, chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.

- A cement bond log (CBL) will be run from the production casing shoe to the top of cement and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.

- **Please submit an electronic copy of all other logs run on this well in CD (compact disc) format to the Vernal BLM Field Office. This submission will supersede the requirement for submittal of paper logs to the BLM.**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. Any changes in operation must have prior approval from the BLM Vernal Field Office.

OPERATING REQUIREMENT REMINDERS:

- All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well.

- For information regarding production reporting, contact the Office of Natural Resources Revenue (ONRR) at www.ONRR.gov.

- Should the well be successfully completed for production, the BLM Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:

    - Operator name, address, and telephone number.

    - Well name and number.

    - Well location (¼¼, Sec., Twn, Rng, and P.M.).

    - Date well was placed in a producing status (date of first production for which royalty will be paid).

    - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).

    - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.

    - Unit agreement and/or participating area name and number, if applicable.

    - Communitization agreement number, if applicable.

- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from the BLM Vernal Field Office.

- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events, as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if

performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease, shall have prior written approval from the BLM Vernal Field Office.

- Oil and gas meters shall be calibrated in place prior to any deliveries. The BLM Vernal Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement. All measurement points shall be identified as the point of sale or allocation for royalty purposes.

- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.

- Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan and need prior approval of the BLM Vernal Field Office. Emergency approval may be obtained orally, but such approval does not waive the written report requirement.

- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM Vernal Field Office shall be obtained and notification given before resumption of operations.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.

- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.

BLM - Vernal Field Office - Notification Form CONFIDENTIAL

Operator Newfield Exploration Rig Name/# Pete Martin Rig #16
Submitted By Kylan Cook Phone Number 435-790-8236
Well Name/Number Aubrey 2-15-22-3-2WH
Qtr/Qtr SW/SE Section 10 Township 3S Range 2W
Lease Serial Number 14-20-H62-6269
API Number 43-013-52105

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 10/18/2013 08:00 AM ☒ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☐ Production Casing
- ☐ Liner
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
- ☐ BOPE test at intermediate casing point
- ☐ 30 day BOPE test
- ☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks _____

CONFIDENTIAL

SWSE S-10 T03S R02W 4301352105

Surface Casing Notification for AUBREY 2-15-22-3-2WH

Pro Petro Rig 10 <den_01@nfxrig.com> Mon, Oct 21, 2013 at 7:10 PM
To: Alexis Huefner <alexishuefner@utah.gov>, BLM <blm_ut_vn_opreport@blm.gov>, Carol Daniels <caroldaniels@utah.gov>, Cherei Neilson <cneilson@newfield.com>, Chris Jensen <chrisjensen@utah.gov>, Colby Wilson <cwilson@newfield.com>, Dan Jarvis <danjarvis@utah.gov>, Dennis Ingram <dennisingram@utah.gov>, Doug Keithly <DKeithly@newfield.com>, Jesse Tatman <jt.oilfield@yahoo.com>, Jesse Tatman <jtatman@contractor.newfield.com>, Joe Johnson <jbjohnson@newfield.com>, John Aslakson <jaslakson@newfield.com>, Mark Mooring <den_eps2@nfxrig.com>, Ray Herrera <rherrera@newfield.com>, Sean Stevens <sstevens@newfield.com>, Teresa Bromley <tbromley@newfield.com>

We will be running surface casing on the AUBREY 2-15-22-3-2WH on 10/22/2013.

If you have any questions please call.

Kylan Cook

435-790-8236

Surface Casing Notice AUBREY 2-15-22-3-2WH.doc
39K

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-6269

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Oil Well

8. WELL NAME and NUMBER:
Aubrey 2-15-22-3-2WH

2. NAME OF OPERATOR:
NEWFIELD PRODUCTION COMPANY

9. API NUMBER:
43013521050000

3. ADDRESS OF OPERATOR:
Rt 3 Box 3630 , Myton, UT, 84052

PHONE NUMBER:
435 646-4825 Ext

9. FIELD and POOL or WILDCAT:
NORTH MYTON BENCH

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0381 FSL 1838 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SWSE Section: 10 Township: 03.0S Range: 02.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
✓ SPUD REPORT Date of Spud: 10/18/2013	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Pete Martin Rig #16 spudded 26" hole on 10/18/2013 and drilled to 60' GL. Set 20", 52.78# (0.250" wall), SA53B conductor pipe at 60' GL and cemented to surface with Redi Mix. Kylan Cook notified UDOGM and BLM by e-mail @ 20:00 PM on 10/16/2013 to spud conductor hole on 10/18/2013.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
November 05, 2013

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Cherei Neilson	435 646-4883	Drilling Techinacian
SIGNATURE		**DATE**
N/A		11/5/2013

NEWFIELD

Casing

Conductor

Legal Well Name	Wellbore Name
Aubrey 2-15-22-3-2WH	Original Hole

API/UWI	Surface Legal Location	Field Name	Well Type	Well Configuration Type
43013521050000	SWSE 381FSL 1838FEL Sec10 T3S R2W Mer U	UINTA CB-WASATCH HORZ	Development	Horizontal

Well RC	County	State/Province	Spud Date	Final Rig Release Date
500335307	Duchesne	Utah		

Wellbore

Wellbore Name	Kick Off Depth (ftKB)
Original Hole	

Section Des	Size (in)	Actual Top Depth (MD) (ftKB)	Actual Bottom Depth (MD) (ftKB)	Start Date	End Date
Conductor	26	27	87	10/18/2013	10/18/2013

Wellhead

Type	Install Date	Service	Comment

Wellhead Components

Des	Make	Model	SN	WP Top (psi)

Casing

Casing Description	Set Depth (ftKB)	Run Date	Set Tension (kips)
Conductor	87	10/18/2013	

Centralizers	Scratchers

Casing Components

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Jts	Len (ft)	Top (ftKB)	Btm (ftKB)	Mk-up Tq (ft•lb)	Class	Max OD (in)
Conductor Pipe	20	19.500				2	60.00	27.0	87.0			

Jewelry Details

External Casing Packer

Type	Setting Requirement	Release Requirements	Inflation Method	Vol Inflation (gal)	Equiv Hole Sz (in)

Inflation Fluid Type	Infl Fl Dens (lb/gal)	P AV Set (psi)	AV Acting Pressure (psi)	P ICV Set (psi)	P ICV Act (psi)	ECP Load (1000lbf)	Seal Load (1000lbf)

Slotted Liner

% Open Area (%)	Perforation Min Dimension (in)	Perforation Max Dimension (in)	Axial Perf Spacing (ft)	Perf Rows	Blank Top Length (ft)	Blank Bottom Length (ft)

Slot Description	Slot Pattern	Slot Length (in)	Slot Width (in)	Slot Frequency	Screen Gauge (ga)

Liner Hanger

Retrievable?	Elastomer Type	Element Center Depth (ft)	Polish Bore Size (in)	Polish Bore Length (ft)

Slip Description	Set Mechanics

Setting Procedure

Unsetting Procedure

NEWFIELD

Casing

Surface

Legal Well Name	Wellbore Name
Aubrey 2-15-22-3-2WH	Original Hole

API/UWI	Surface Legal Location	Field Name	Well Type	Well Configuration Type
43013521050000	SWSE 381FSL 1838FEL Sec10 T3S R2W Mer U	UINTA CB-WASATCH HORZ	Development	Horizontal

Well RC	County	State/Province	Spud Date	Final Rig Release Date
500335307	Duchesne	Utah		

Wellbore

Wellbore Name	Kick Off Depth (ftKB)
Original Hole	

Section Des	Size (in)	Actual Top Depth (MD) (ftKB)	Actual Bottom Depth (MD) (ftKB)	Start Date	End Date
Conductor	26	27	87	10/18/2013	10/18/2013
Vertical	17 1/2	87	1,672	10/20/2013	10/22/2013

Wellhead

Type	Install Date	Service	Comment

Wellhead Components

Des	Make	Model	SN	WP Top (psi)

Casing

Casing Description	Set Depth (ftKB)	Run Date	Set Tension (kips)
Surface	1,650	10/23/2013	

Centralizers	Scratchers
14 centralizers spaced 10' from the shoe, on top of joints #2 & #3 then every 3rd collar to surface.	

Casing Components

Item Des	OD (in)	ID (in)	Wt (lb/ft)	Grade	Top Thread	Jts	Len (ft)	Top (ftKB)	Btm (ftKB)	Mk-up Tq (ft•lb)	Class	Max OD (in)
Casing Joints	13 3/8	12.615	54.50	J-55	Buttress Thread	39	1,577.76	26.9	1,604.6			
Float Collar	13 3/8	12.615	54.50	j-55	Buttress Thread	1	1.50	1,604.6	1,606.1			
Casing Joints	13 3/8	12.615	54.50	J-55	Buttress Thread	1	42.88	1,606.1	1,649.0			
Guide Shoe	13 3/8	12.615	54.50	j-55	Buttress Thread	1	1.00	1,649.0	1,650.0			

Jewelry Details

External Casing Packer

Type	Setting Requirement	Release Requirements	Inflation Method	Vol Inflation (gal)	Equiv Hole Sz (in)

Inflation Fluid Type	Infl Fl Dens (lb/gal)	P AV Set (psi)	AV Acting Pressure (psi)	P ICV Set (psi)	P ICV Act (psi)	ECP Load (1000lbf)	Seal Load (1000lbf)

Slotted Liner

% Open Area (%)	Perforation Min Dimension (in)	Perforation Max Dimension (in)	Axial Perf Spacing (ft)	Perf Rows	Blank Top Length (ft)	Blank Bottom Length (ft)

Slot Description	Slot Pattern	Slot Length (in)	Slot Width (in)	Slot Frequency	Screen Gauge (ga)

Liner Hanger

Retrievable?	Elastomer Type	Element Center Depth (ft)	Polish Bore Size (in)	Polish Bore Length (ft)

Slip Description	Set Mechanics

Setting Procedure

Unsetting Procedure

CONFIDENTIAL

BLM - Vernal Field Office - Notification Form

Operator Newfield Exploration Rig Name/# Pioneer 78
Submitted By Tim Dreiling Phone Number 970-812-0022
Well Name/Number Aubrey 2-15-22-3-2WH
Qtr/Qtr SW/SE Section 10 Township 3S Range 2W
Lease Serial Number 14-20-H62-6269
API Number 43013521050000

TD Notice – TD is the final drilling depth of hole.

Date/Time _____ _____ AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

☐ Surface Casing
☒ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

Date/Time 11/20/13 1500 AM ☐ PM ☐

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BLM - Vernal Field Office - Notification Form

Operator Newfield Exploration Rig Name/# Pioneer 78
Submitted By Darryll Reeder Phone Number 970-812-0022
Well Name/Number Aubrey 2-15-22-3-2WH
Qtr/Qtr SW/SE Section 10 Township 3S Range 2W
Lease Serial Number 14-20-H62-6269
API Number 43013521050000

Rig Move Notice – Move drilling rig to new location.

Date/Time 11/7/2013 7:00 AM ☐ PM ☐

BOPE

☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ _____ AM ☐ PM ☐

Remarks _____

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BLM - Vernal Field Office - Notification Form

Operator Newfield Exploration Rig Name/# Pioneer 78
Submitted By Darryl Reeder Phone Number 970-812-0022
Well Name/Number Aubrey 2-15-22-3-2WH
Qtr/Qtr SW/SE Section 10 Township 3S Range 2W
Lease Serial Number 14-20-H62-6269
API Number 43013521050000

Rig Move Notice – Move drilling rig to new location.

Date/Time ___ _____ AM ☐ PM ☐

BOPE
☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time 11/12/2013 0:01 AM ☐ PM ☐

Remarks Initial BOP Test on Pioneer 78

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EAGER BEAVER TESTERS INC.

P.O. BOX 1616
ROCK SPRINGS, WY 82902

PHONE:
ROCK SPRINGS (307) 382-3350

BOP TEST REPORT

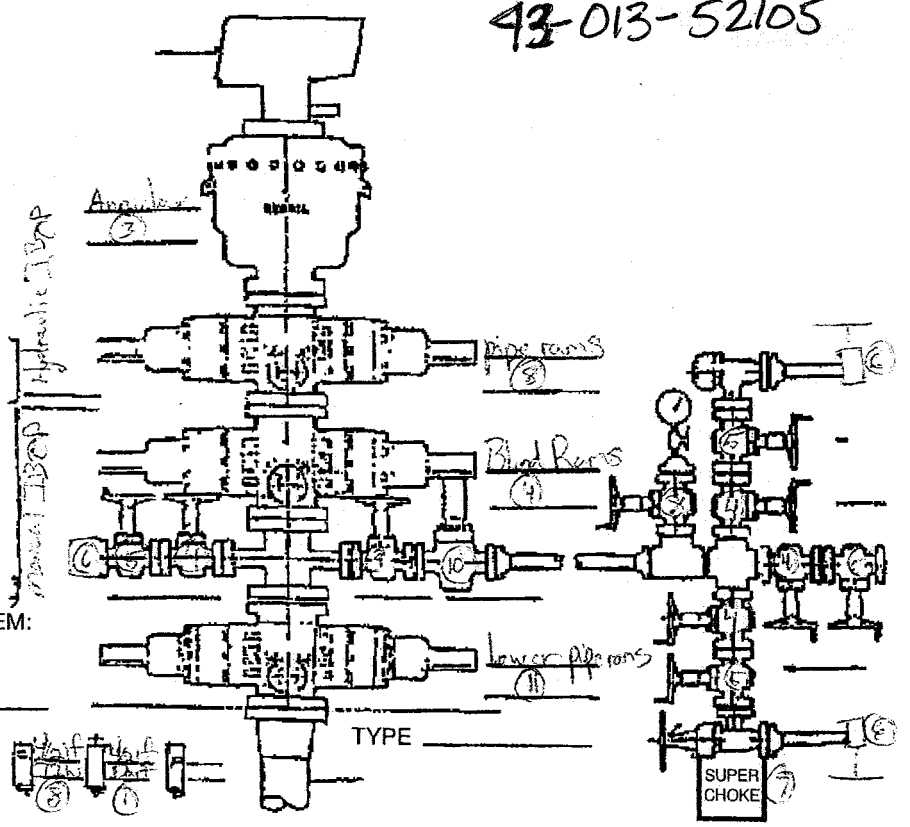
DATE: 11-12-13 OPERATOR: Newfield RIG OR SITE #: Frontier 78 SEC: 10 TNSHIP: 3S RANGE: 2W

FIELD: Central Basin WELL #: Aubrey 2-15-22-3-2WH TEST PRESSURE: 250/5000 psi

43-013-52105

EQUIPMENT PRESSURE TESTED:

ANNULAR 50%	3
UPPER PIPE RAMS	8
LOWER PIPE RAMS	11
BLIND RAMS	4
KILL LINE VALAVES	4 5
HCR VALVE	10
CHOKE VALVES	9
MANIFOLD VALVES	8 4 5 6
SUPER CHOKE	7
MANUAL CHOKE	N/A
UPPER KELLY VALVE	14, 16
LOWER KELLY VALVE	15
INSIDE BOP	13
FLOOR VALVE	1
CASING PRE. 1500 psi	12



ACCUMULATOR AND CLOSING SYSTEM:

NITROGEN PRECHARGE PSI 950
FIELD CHECK ✓ GUAGE CHECK ____
BOTTLES ✓ SPHERES ____

FUNCTION CHECK 24 sec
PUMP CHECK 1400
REMOTE OPERATION CHECK ✓
HYDRAULIC FLUID LEVEL ✓

TYPE ____

OTHER TESTS:

EQUIPMENT TYPE ____ PRESSURE ____

REPAIRS OR POTENTIAL PROBLEMS:

Midline hand to be replaced

EAGER BEAVER TESTERS

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NOV 18 2013
DIV. OF OIL, GAS & MINING

DATE: 11-12-13 COMPANY: Newfield RIG: Pioneer 78 WELL NAME & #: Abrey 2-15-22-5 2WH

ACCUMULATOR FUNCTION TESTS

TO CHECK THE USABLE FLUID STORED IN THE NITROGEN BOTTLES ON THE ACCUMULATOR

(O.S.O. #2 SECTION iii, A.3.C.1. OR II OR III)

1. Make sure all rams and annular are open and if applicable HCR is closed
2. Ensure accumulator is pumped up to working pressure! (shut off pumps)
3. Open HCR Valve (if applicable)
4. Close annular
5. Close all pipe rams
6. Open one set of the pipe rams to simulate closing the blind ram
7. If you have a 3 ram stack open the annular to achieve the 50%+ safety factor for 5M and greater systems
8. Accumulator pressure should be 200 psi over desired precharge pressure, (accumulator working pressure (1500 psi= 750 desired psi) (2000 and 3000 psi= 100 desired psi)
9. Record the remaining pressure 1400 PSI

TO CHECK THE CAPACITY OF THE ACCUMULATOR PUMPS

(O.S.O. #2 SECTION III.A.2.F.)

1. Shut the accumulator bottles or spherical, (isolate them from the pumps and manifold) Open the bleed off valve to the tank, (manifold psi should go to 0 psi) close bleed valve.
2. Open the HCR valve (if applicable)
3. Close annular
4. With pumps only, time how long it takes to regain manifold pressure to 200 psi over desired precharge pressure! (Accumulator working pressure {1500 psi=750 desired psi} {2000 and 3000 psi= 1000 desired psi})
5. Record elapsed time 24 sec (2 minutes or less)

TO CHECK THE PRECHARGE ON BOTTLES OR SPHERICAL

(O.S.O. #2 SECTION III.A.2.D.)

1. Open bottles back up to the manifold (pressure should be above the desired precharge pressure, (1500 psi=750 desired psi) (2000 and 3000 psi= 1000 desired psi) may need to use pumps to pressure back up.
2. With power to pumps shut off open bleed line to the tank
3. Watch and record where the pressure drops (accumulator psi)
4. Record the pressure drop 950 PSI

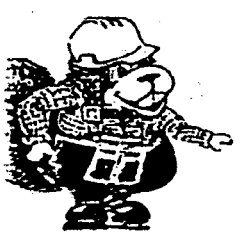
If pressure drops below the minimum precharge, (accumulator working pressure {1500 psi=700 min}{2000 and 3000 psi= 900 psi min.}) each bottle shall be independently checked with a gauge.

EAGER BEAVER TESTERS

DATE: 11-12-13 COMPANY: Newfield RIG: Pioneer 76 WELL NAME & #: Aubrey 2-15-22-3-2wtH

Time	Test No.		Results
6:30 AM ☑PM☐	1	Dart Valve	Pass ☑Fail ☐
8:38 AM ☑PM☐	2	Mud line	Pass ☐Fail ☑
9:17 AM ☑PM☐	3	Annular	Pass ☑Fail ☐
10:34 AM ☑PM☐	4	Blind Rams, inside kill valve, inside manifold valves	Pass ☑Fail ☐
10:55 AM ☑PM☐	5	outside kill valve, outside manifold valves	Pass ☑Fail ☐
11:27 AM ☑PM☐	6	Check valve, Downstream manifold valves	Pass ☑Fail ☐
11:49 AM ☑PM☐	7	Superchoke	Pass ☑Fail ☐
12:46 AM ☐PM☑	8	TIW, Riser, upper pipe rams	Pass ☑Fail ☐
1:10 AM ☐PM☑	9	inside Choke valve	Pass ☑Fail ☐
1:21 AM ☐PM☑	10	HCR	Pass ☑Fail ☐
1:29 AM ☐PM☑	11	lower pipe rams	Pass ☑Fail ☐
2:12 AM ☐PM☑	12	Casing	Pass ☑Fail ☐
7:59 AM ☐PM☑	13	Mud line (Retest)	Pass ☐Fail ☐
9:38 AM ☐PM☐	14	Hydraulic IBOP (Fail)	Pass ☐Fail ☐
9:47 AM ☐PM☐	Retest 15	Manual IBOP	Pass ☐Fail ☐
11:03 AM ☐PM☐	Retest 16	Hydraulic IBOP	Pass ☐Fail ☐
AM ☐PM☐	Retest		Pass ☐Fail ☐
AM ☐PM☐	Retest		Pass ☐Fail ☐
AM ☐PM☐	Retest		Pass ☐Fail ☐
AM ☐PM☐	Retest		Pass ☐Fail ☐
AM ☐PM☐	Retest		Pass ☐Fail ☐

Acc. Tank Size (inches) (_____ W _____ D _____ L) ÷ 231= _____ gal.



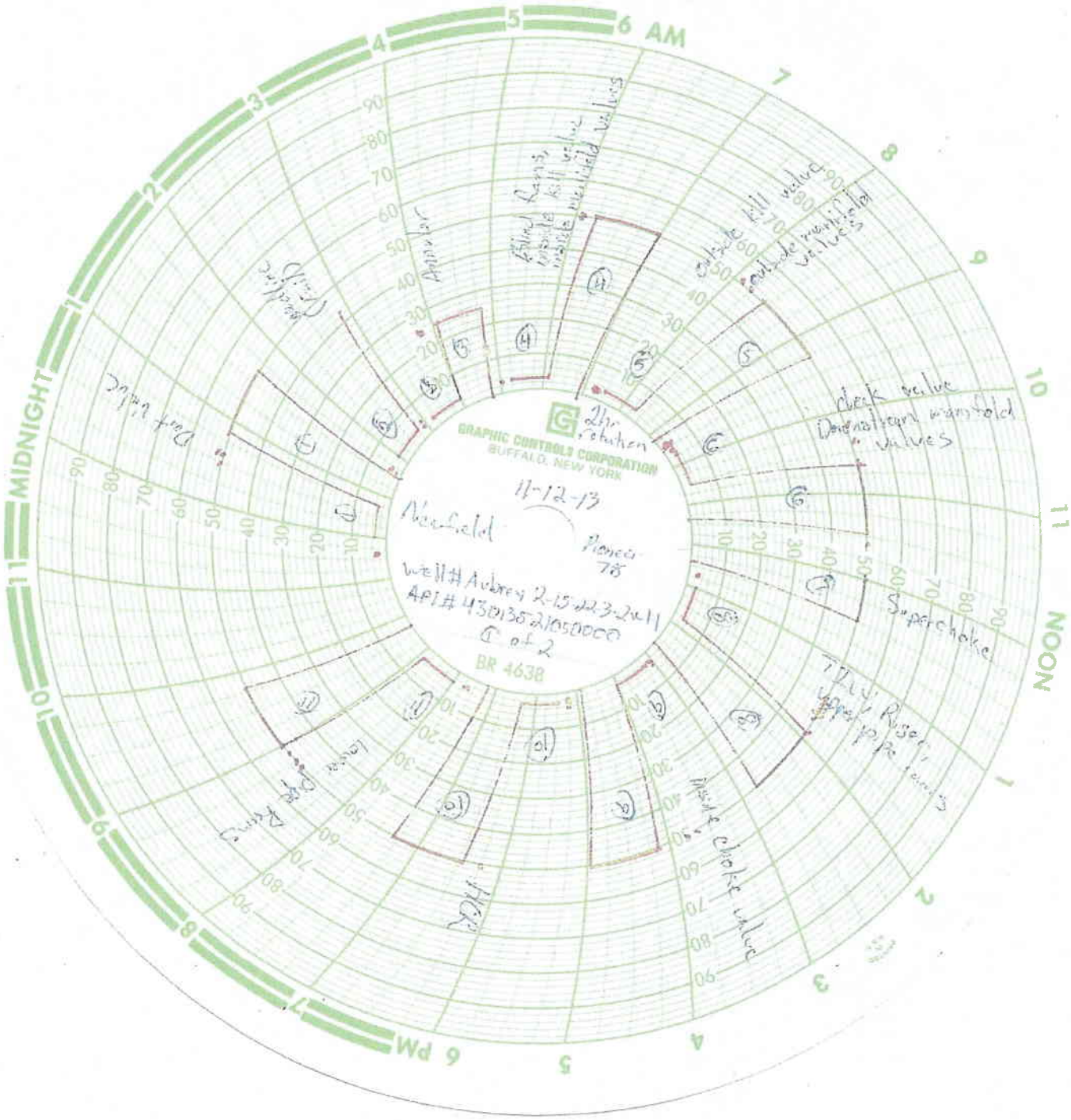
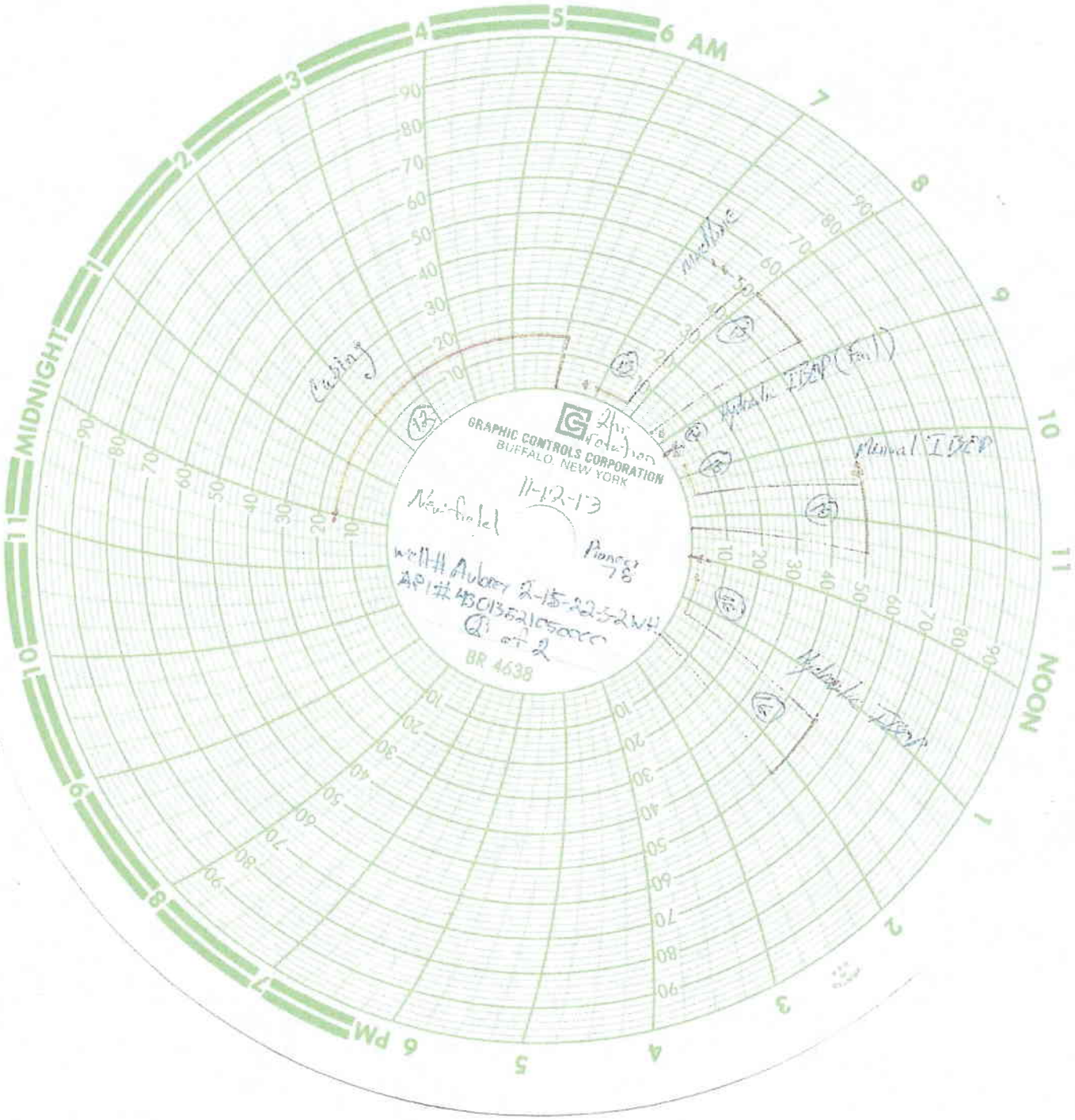


Chart #2 on Reverse


MIDNIGHT
6 AM
NOON
6 PM
GRAPHIC CONTROLS CORPORATION
BUFFALO, NEW YORK
11-12-13
Pioneer
78
BR 4638

CONFIDENTIAL

BLM - Vernal Field Office - Notification Form

Operator Newfield Exploration Rig Name/# Pioneer 78
Submitted By Tim Dreiling Phone Number 970-812-0022
Well Name/Number Aubrey 2-15-22-3-2WH
Qtr/Qtr SW/SE Section 10 Township 3S Range 2W
Lease Serial Number 14-20-H62-6269
API Number 43013521050000

TD Notice – TD is the final drilling depth of hole.

Date/Time 12/17/13 0100 AM ☒ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☐ Surface Casing
- ☐ Intermediate Casing
- ☒ Production Casing
- ☐ Liner
- ☐ Other

Date/Time 12/20/13 1600 AM ☐ PM ☒

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DIV. OF OIL, GAS & MINING

API Well Number: 43013521050000

Form 3160-4
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.: 1420H626269

1a. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion: ☑ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.,
Other:

6. If Indian, Allottee or Tribe Name: UINTAH AND OURAY

7. Unit or CA Agreement Name and No.:

2. Name of Operator: NEWFIELD PRODUCTION COMPANY

8. Lease Name and Well No.: AUBREY 2-15-22-3-2WH

3. Address: ROUTE #3 BOX 3630, MYTON, UT 84052

3a. Phone No. *(include area code)*: Ph:435-646-3721

9. API Well No.: 43-013-52105

4. Location of Well *(Report location clearly and in accordance with Federal requirements)**

At surface: 381' FSL 1838' FEL (SWSE) SEC 10 T3S R2W

10. Field and Pool or Exploratory: UNDESIGNATED

11. Sec., T., R., M., on Block and Survey or Area: SEC 10 T3S R2W Mer UBM

At top prod. interval reported below: 982' FNL 1969' FEL (NW/NW) SEC 15 T3S R2W

At total depth: 558' FSL 1929' FEL (SW/SE) SEC 22 T3S R2W

12. County or Parish: DUCHESNE

13. State: UT

14. Date Spudded: 10/18/2013

15. Date T.D. Reached: 12/26/2013

16. Date Completed: 02/04/2014 ☐ D & A ☑ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)*: 5362' GL 5389' KB

18. Total Depth: MD 19108' TVD 8959'

19. Plug Back T.D.: MD 19038' TVD

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
DUAL IND GRD, SP, COMP. NEUTRON, GR, CALIPER, CMT BOND

22. Was well cored? ☑ No ☐ Yes (Submit analysis)
Was DST run? ☑ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☑ Yes (Submit copy)

23. Casing and Liner Record *(Report all strings set in well)*

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
19-1/2"	13-3/8" J-55	54.50	0'	1650'		1225 CLASS G			
12-5/8"	9-5/8" N-80	40.00	0'	8573'		248 Varicem		6202'	
						1118 Versacem			
						562 Bondcem			
8-7/8"	5-1/2" P-110	20	0'	19084'		1205 Bondcem			
						1385Elastiseal			

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2-7/8"	EOT@9412'	XN@9363'						

25. Producing Intervals / 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WASATCH	9891'	18911'	9891' - 18991' MD	0.34	1782	
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
9891' - 18991' MD	Frac w/47736#s of 100 Mesh and 5701635#s of 30/50 white and 663435#s of 30/50RCP sand in 176262 bbls of Delta20 fluid in 50 stages.

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
2/4/14	2/14/14	24	→	1163	1004	794			GAS LIFT

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
			→					PRODUCING

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
			→					

*(See instructions and spaces for additional data on page 2)

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

29. Disposition of Gas *(Solid, used for fuel, vented, etc.)*

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

GEOLOGICAL MARKERS

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
				GARDEN GULCH MARK	6631'
				GARDEN GULCH 1	6882'
				BI CARBONATE MRK	8241
				BASAL CARBONATE	8851'
				WASATCH	8986'

32. Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☐ Electrical/Mechanical Logs (1 full set req'd.) ☐ Geologic Report ☐ DST Report ☑ Directional Survey

☐ Sundry Notice for plugging and cement verification ☐ Core Analysis ☑ Other: Drilling daily activity

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name *(please print)* Heather Calder Title Regulatory Technician

Signature Heather Calder Date 02/26/2014

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

RECEIVED: Feb. 27, 2014

API Well Number: 43013521050000

LEAM
Drilling Systems LLC

NEWFIELD EXPLORATION ROCKY MOUNTAINS

DUCHESNE COUNTY, UT (NAD 83)
CENTRAL BASIN (NAD 83)
2-15-22-3-2WH

2-15-22-3-2WH AUBREY

Design: 2-15-22-3-2WH AUBREY (Actual)

Standard Survey Report

17 December, 2013

NEWFIELD
ROCKY MOUNTAINS

RECEIVED: Feb. 27, 2014

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Project DUCHESNE COUNTY, UT (NAD 83),

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Utah Central Zone		

Site CENTRAL BASIN (NAD 83)

Site Position:		**Northing:**	7,255,843.21 usft	**Latitude:**	40° 13' 50.461 N
From:	Map	**Easting:**	2,033,280.24 usft	**Longitude:**	110° 5' 34.149 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	20 "	**Grid Convergence:**	0.90 °

Well 2-15-22-3-2WH

Well Position	**+N/-S**	0.00 usft	**Northing:**	7,255,809.56 usft	**Latitude:**	40° 13' 50.130 N
	+E/-W	0.00 usft	**Easting:**	2,033,273.69 usft	**Longitude:**	110° 5' 34.240 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	5,384.00 usft	**Ground Level:**	5,357.00 usft

Wellbore 2-15-22-3-2WH AUBREY

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/15/2013	11.04	65.88	52,129

Design 2-15-22-3-2WH AUBREY (Actual)

Audit Notes:

Version:	Actual	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.00

Survey Program **Date** 12/17/2013

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
27.00	1,580.00	VES GYRO Survey 0'- 1,580' MD (2-15-22	Gyroscope	Gyroscope
1,991.00	9,773.00	Weatherford MWD-1,801'MD-9,773'MD (2	MWD-ISCWSA	MWD - Standard
9,835.00	19,108.00	Pathfinder MWD 9835'-19043' MD(TD=191	MWD-ISCWSA	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sec. 15, T3S-R2W, - Sec. 22, T3S-R2W, - SEC. 15 & 22, T3S-R2W, 660' SETBACK HARDLINE - SEC. 10, T3S-R2W, - Lateral Target Box (2-1									
27.00	0.00	0.00	27.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	0.47	357.48	127.00	0.41	-0.02	-0.41	0.47	0.47	0.00
227.00	0.15	347.12	227.00	0.94	-0.06	-0.94	0.32	-0.32	-10.37
327.00	0.22	357.54	327.00	1.26	-0.10	-1.26	0.08	0.08	10.42

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
427.00	0.08	149.17	427.00	1.40	-0.07	-1.40	0.30	-0.14	151.63
527.00	0.13	4.47	527.00	1.45	-0.03	-1.45	0.20	0.05	-144.70
627.00	0.10	356.76	627.00	1.65	-0.03	-1.65	0.03	-0.02	-7.71
727.00	0.34	352.46	727.00	2.03	-0.07	-2.03	0.24	0.24	-4.30
827.00	0.15	282.75	826.99	2.36	-0.23	-2.36	0.32	-0.20	-69.71
927.00	0.11	210.80	926.99	2.30	-0.41	-2.30	0.15	-0.04	-71.94
1,027.00	0.20	145.74	1,026.99	2.08	-0.36	-2.08	0.18	0.08	-65.06
1,127.00	0.73	258.57	1,126.99	1.81	-0.89	-1.81	0.82	0.53	112.83
1,227.00	0.58	249.86	1,226.99	1.51	-1.98	-1.51	0.17	-0.14	-8.71
1,327.00	0.77	258.74	1,326.98	1.20	-3.12	-1.20	0.21	0.19	8.88
1,427.00	0.59	298.87	1,426.97	1.32	-4.23	-1.32	0.50	-0.18	40.13
1,527.00	0.34	298.18	1,526.97	1.71	-4.95	-1.71	0.25	-0.25	-0.70
1,580.00	0.18	252.53	1,579.97	1.76	-5.17	-1.76	0.48	-0.31	-86.12
VES Gyro 0'- 1,580' MD - 13-3/8" Csg (1580' MD)									
1,991.00	1.11	199.95	1,990.94	-2.17	-7.15	2.17	0.25	0.23	-12.79
2,180.00	1.79	183.33	2,179.88	-6.84	-7.94	6.84	0.42	0.36	-8.79
2,369.00	1.88	177.31	2,368.78	-12.88	-7.97	12.88	0.11	0.05	-3.19
2,559.00	1.40	231.47	2,558.71	-17.44	-9.64	17.44	0.82	-0.25	28.51
2,749.00	1.66	236.80	2,748.65	-20.40	-13.76	20.40	0.16	0.14	2.81
2,938.00	2.19	241.18	2,937.54	-23.64	-19.21	23.64	0.29	0.28	2.32
3,222.00	2.57	242.18	3,221.29	-29.22	-29.60	29.22	0.13	0.13	0.35
3,506.00	2.67	234.33	3,505.00	-36.05	-40.60	36.05	0.13	0.04	-2.76
3,790.00	3.52	232.36	3,788.58	-45.23	-52.88	45.23	0.30	0.30	-0.69
4,074.00	3.57	214.50	4,072.05	-57.85	-64.79	57.85	0.39	0.02	-6.29
4,358.00	3.37	210.30	4,355.52	-72.34	-74.01	72.34	0.11	-0.07	-1.48
4,643.00	3.23	206.64	4,640.05	-86.75	-81.84	86.75	0.09	-0.05	-1.28
4,927.00	3.75	192.00	4,923.53	-102.99	-87.36	102.99	0.36	0.18	-5.15
5,211.00	5.14	171.31	5,206.69	-124.65	-87.36	124.65	0.74	0.49	-7.29
5,242.00	4.68	177.02	5,237.57	-127.28	-87.09	127.28	2.16	-1.48	18.42
5,432.00	3.97	175.38	5,427.03	-141.58	-86.16	141.58	0.38	-0.37	-0.86
5,526.00	4.14	183.16	5,520.80	-148.21	-86.08	148.21	0.61	0.18	8.28
5,621.00	4.19	184.36	5,615.55	-155.10	-86.53	155.10	0.11	0.05	1.26
5,715.00	4.38	184.74	5,709.28	-162.10	-87.09	162.10	0.20	0.20	0.40
5,810.00	4.64	182.71	5,803.99	-169.55	-87.57	169.55	0.32	0.27	-2.14
5,905.00	5.03	180.18	5,898.65	-177.55	-87.77	177.55	0.47	0.41	-2.66
5,999.00	5.42	178.95	5,992.26	-186.11	-87.70	186.11	0.43	0.41	-1.31
6,094.00	6.03	177.81	6,086.79	-195.59	-87.43	195.59	0.65	0.64	-1.20
6,189.00	6.48	175.27	6,181.22	-205.91	-86.79	205.91	0.56	0.47	-2.67
6,283.00	6.80	183.28	6,274.59	-216.76	-86.67	216.76	1.04	0.34	8.52
6,378.00	6.84	185.14	6,368.92	-228.01	-87.50	228.01	0.24	0.04	1.96
6,472.00	6.93	184.35	6,462.24	-239.24	-88.43	239.24	0.14	0.10	-0.84
6,567.00	7.00	184.18	6,556.54	-250.72	-89.29	250.72	0.08	0.07	-0.18

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,662.00	6.97	181.12	6,650.84	-262.26	-89.83	262.26	0.39	-0.03	-3.22
6,757.00	8.07	177.35	6,745.02	-274.68	-89.63	274.68	1.27	1.16	-3.97
6,852.00	7.60	186.37	6,839.13	-287.59	-90.02	287.59	1.38	-0.49	9.49
6,946.00	8.22	183.17	6,932.24	-300.48	-91.08	300.48	0.81	0.66	-3.40
7,041.00	6.62	183.78	7,026.44	-312.72	-91.82	312.72	1.69	-1.68	0.64
7,135.00	5.65	181.06	7,119.90	-322.76	-92.26	322.76	1.08	-1.03	-2.89
7,230.00	5.67	192.74	7,214.44	-332.01	-93.38	332.01	1.21	0.02	12.29
7,325.00	5.16	200.52	7,309.02	-340.59	-95.91	340.59	0.94	-0.54	8.19
7,420.00	4.45	206.37	7,403.69	-347.89	-99.05	347.89	0.91	-0.75	6.16
7,514.00	5.60	202.20	7,497.32	-355.40	-102.40	355.40	1.28	1.22	-4.44
7,609.00	6.26	196.99	7,591.81	-364.65	-105.67	364.65	0.90	0.69	-5.48
7,704.00	6.67	192.12	7,686.21	-375.00	-108.34	375.00	0.72	0.43	-5.13
7,799.00	5.75	197.56	7,780.65	-384.93	-110.93	384.93	1.15	-0.97	5.73
7,894.00	5.53	193.46	7,875.19	-393.92	-113.43	393.92	0.48	-0.23	-4.32
7,903.23	5.53	193.02	7,884.38	-394.78	-113.64	394.78	0.46	0.00	-4.80
Nudge Pt. (2-15-22-3-2WH)									
7,989.00	5.55	188.91	7,969.75	-402.91	-115.21	402.91	0.46	0.02	-4.79
8,084.00	4.76	195.32	8,064.37	-411.25	-116.96	411.25	1.03	-0.83	6.75
8,179.00	4.43	191.46	8,159.06	-418.65	-118.73	418.65	0.48	-0.35	-4.06
8,273.00	4.86	184.53	8,252.75	-426.17	-119.77	426.17	0.75	0.46	-7.37
8,368.00	5.67	185.06	8,347.35	-434.86	-120.50	434.86	0.85	0.85	0.56
8,463.00	6.27	183.85	8,441.84	-444.71	-121.26	444.71	0.65	0.63	-1.27
8,530.00	6.28	183.34	8,508.43	-452.02	-121.72	452.02	0.08	0.01	-0.76
8,573.00	6.30	182.81	8,551.18	-456.73	-121.98	456.73	0.15	0.06	-1.22
9-5/8" Casing (8573' MD- 8551.18' TVD) - 9-5/8" Csg (8573' MD)									
8,636.00	6.34	182.05	8,613.79	-463.66	-122.27	463.66	0.15	0.06	-1.21
8,730.00	5.98	179.01	8,707.25	-473.74	-122.37	473.74	0.52	-0.38	-3.23
8,825.00	5.38	180.79	8,801.78	-483.14	-122.35	483.14	0.66	-0.63	1.87
8,920.00	5.14	177.21	8,896.38	-491.84	-122.20	491.84	0.43	-0.25	-3.77
8,952.00	8.92	172.88	8,928.14	-495.74	-121.82	495.74	11.92	11.81	-13.53
8,983.00	12.94	175.39	8,958.57	-501.59	-121.25	501.59	13.06	12.97	8.10
9,013.00	16.68	175.99	8,987.57	-509.23	-120.68	509.23	12.48	12.47	2.00
9,047.00	21.35	177.91	9,019.70	-520.29	-120.11	520.29	13.86	13.74	5.65
9,078.00	25.48	178.07	9,048.14	-532.60	-119.68	532.60	13.32	13.32	0.52
9,110.00	28.88	177.24	9,076.61	-547.20	-119.07	547.20	10.69	10.63	-2.59
9,141.00	32.57	178.70	9,103.25	-563.03	-118.52	563.03	12.14	11.90	4.71
9,173.00	36.01	181.00	9,129.69	-581.05	-118.49	581.05	11.49	10.75	7.19
9,205.00	39.20	182.18	9,155.03	-600.56	-119.04	600.56	10.22	9.97	3.69
9,236.00	43.75	183.01	9,178.26	-621.07	-119.98	621.07	14.78	14.68	2.68
9,268.00	47.63	183.10	9,200.60	-643.93	-121.20	643.93	12.13	12.13	0.28
9,300.00	50.27	182.59	9,221.62	-668.03	-122.39	668.03	8.34	8.25	-1.59
9,331.00	54.02	181.06	9,240.64	-692.49	-123.16	692.49	12.71	12.10	-4.94

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,363.00	57.52	180.08	9,258.64	-718.94	-123.42	718.94	11.23	10.94	-3.06
9,394.00	60.77	179.37	9,274.53	-745.55	-123.29	745.55	10.67	10.48	-2.29
9,426.00	64.09	179.21	9,289.34	-773.91	-122.94	773.91	10.38	10.38	-0.50
9,458.00	66.49	180.48	9,302.72	-802.98	-122.86	802.98	8.32	7.50	3.97
9,489.00	69.35	180.88	9,314.37	-831.70	-123.21	831.70	9.30	9.23	1.29
9,521.00	73.27	181.10	9,324.62	-862.00	-123.73	862.00	12.27	12.25	0.69
9,552.00	77.39	180.50	9,332.47	-891.98	-124.15	891.98	13.42	13.29	-1.94
9,584.00	80.88	180.36	9,338.50	-923.40	-124.38	923.40	10.91	10.91	-0.44
9,616.00	83.97	179.66	9,342.72	-955.12	-124.39	955.12	9.90	9.66	-2.19
9,647.00	85.73	180.23	9,345.50	-985.99	-124.36	985.99	5.97	5.68	1.84
9,678.00	87.97	180.65	9,347.21	-1,016.94	-124.60	1,016.94	7.35	7.23	1.35
9,702.03	89.60	180.77	9,347.72	-1,040.96	-124.89	1,040.96	6.80	6.78	0.48
Top Production (2-15-22-3-2WH)									
9,742.00	92.31	180.96	9,347.05	-1,080.92	-125.50	1,080.92	6.80	6.78	0.48
9,773.00	93.15	181.25	9,345.57	-1,111.88	-126.09	1,111.88	2.87	2.71	0.94
Weatherford MWD (1,580'MD)1,801'- 9,773' MD									
9,835.00	93.21	180.50	9,342.13	-1,173.77	-127.04	1,173.77	1.21	0.10	-1.21
9,930.00	91.89	181.24	9,337.91	-1,268.67	-128.48	1,268.67	1.59	-1.39	0.78
10,024.00	92.24	182.25	9,334.52	-1,362.56	-131.34	1,362.56	1.14	0.37	1.07
10,119.00	91.80	181.23	9,331.17	-1,457.46	-134.22	1,457.46	1.17	-0.46	-1.07
10,214.00	91.19	181.90	9,328.69	-1,552.39	-136.82	1,552.39	0.95	-0.64	0.71
10,306.00	90.31	180.07	9,327.49	-1,644.36	-138.40	1,644.36	2.21	-0.96	-1.99
10,399.00	90.40	180.57	9,326.91	-1,737.36	-138.92	1,737.36	0.55	0.10	0.54
10,492.00	90.22	180.79	9,326.41	-1,830.35	-140.02	1,830.35	0.31	-0.19	0.24
10,585.00	92.33	179.46	9,324.34	-1,923.32	-140.22	1,923.32	2.68	2.27	-1.43
10,678.00	91.63	179.28	9,321.13	-2,016.26	-139.20	2,016.26	0.78	-0.75	-0.19
10,770.00	92.86	178.92	9,317.52	-2,108.17	-137.76	2,108.17	1.39	1.34	-0.39
10,863.00	92.68	177.46	9,313.03	-2,201.02	-134.82	2,201.02	1.58	-0.19	-1.57
10,954.00	92.33	177.55	9,309.05	-2,291.84	-130.87	2,291.84	0.40	-0.38	0.10
11,049.00	91.54	177.18	9,305.84	-2,386.69	-126.50	2,386.69	0.92	-0.83	-0.39
11,141.00	92.77	177.33	9,302.38	-2,478.51	-122.10	2,478.51	1.35	1.34	0.16
11,232.00	94.70	176.80	9,296.46	-2,569.20	-117.45	2,569.20	2.20	2.12	-0.58
11,331.00	94.62	176.31	9,288.41	-2,667.69	-111.52	2,667.69	0.50	-0.08	-0.49
11,424.00	93.39	178.41	9,281.92	-2,760.36	-107.25	2,760.36	2.61	-1.32	2.26
11,519.00	92.77	180.23	9,276.81	-2,855.21	-106.12	2,855.21	2.02	-0.65	1.92
11,614.00	92.07	179.61	9,272.80	-2,950.12	-105.99	2,950.12	0.98	-0.74	-0.65
11,709.00	90.84	179.22	9,270.39	-3,045.09	-105.02	3,045.09	1.36	-1.29	-0.41
11,803.00	91.89	179.12	9,268.15	-3,139.05	-103.66	3,139.05	1.12	1.12	-0.11
11,899.00	94.18	180.88	9,263.07	-3,234.90	-103.66	3,234.90	3.01	2.39	1.83
11,993.00	94.09	179.50	9,256.29	-3,328.66	-103.97	3,328.66	1.47	-0.10	-1.47
12,088.00	93.03	179.37	9,250.39	-3,423.47	-103.03	3,423.47	1.12	-1.12	-0.14
12,183.00	92.07	177.50	9,246.16	-3,518.33	-100.44	3,518.33	2.21	-1.01	-1.97

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,277.00	93.56	178.52	9,241.55	-3,612.16	-97.18	3,612.16	1.92	1.59	1.09
12,372.00	93.30	178.23	9,235.86	-3,706.95	-94.49	3,706.95	0.41	-0.27	-0.31
12,467.00	93.12	178.08	9,230.54	-3,801.75	-91.44	3,801.75	0.25	-0.19	-0.16
12,561.00	92.95	180.70	9,225.56	-3,895.61	-90.44	3,895.61	2.79	-0.18	2.79
12,656.00	93.65	182.14	9,220.10	-3,990.42	-92.79	3,990.42	1.68	0.74	1.52
12,751.00	93.21	181.99	9,214.41	-4,085.18	-96.21	4,085.18	0.49	-0.46	-0.16
12,846.00	93.39	182.54	9,208.94	-4,179.95	-99.95	4,179.95	0.61	0.19	0.58
12,940.00	92.77	182.44	9,203.89	-4,273.73	-104.03	4,273.73	0.67	-0.66	-0.11
13,035.00	92.33	182.93	9,199.67	-4,368.53	-108.48	4,368.53	0.69	-0.46	0.52
13,130.00	91.98	182.53	9,196.09	-4,463.35	-113.00	4,463.35	0.56	-0.37	-0.42
13,225.00	92.51	182.95	9,192.37	-4,558.17	-117.54	4,558.17	0.71	0.56	0.44
13,319.00	93.91	182.27	9,187.11	-4,651.92	-121.81	4,651.92	1.66	1.49	-0.72
13,414.00	93.65	181.38	9,180.85	-4,746.67	-124.83	4,746.67	0.97	-0.27	-0.94
13,509.00	93.21	181.95	9,175.16	-4,841.46	-127.59	4,841.46	0.76	-0.46	0.60
13,604.00	92.77	181.87	9,170.21	-4,936.28	-130.75	4,936.28	0.47	-0.46	-0.08
13,699.00	90.75	179.44	9,167.29	-5,031.21	-131.83	5,031.21	3.33	-2.13	-2.56
13,794.00	93.03	178.40	9,164.16	-5,126.14	-130.04	5,126.14	2.64	2.40	-1.09
13,889.00	93.30	179.07	9,158.91	-5,220.97	-127.95	5,220.97	0.76	0.28	0.71
13,983.00	92.51	178.45	9,154.15	-5,314.82	-125.92	5,314.82	1.07	-0.84	-0.66
14,078.00	92.15	179.25	9,150.28	-5,409.72	-124.01	5,409.72	0.92	-0.38	0.84
14,173.00	91.54	179.04	9,147.23	-5,504.66	-122.60	5,504.66	0.68	-0.64	-0.22
14,268.00	92.07	179.68	9,144.23	-5,599.61	-121.53	5,599.61	0.87	0.56	0.67
14,363.00	93.03	180.39	9,140.01	-5,694.51	-121.59	5,694.51	1.26	1.01	0.75
14,457.00	91.01	180.51	9,136.69	-5,788.45	-122.33	5,788.45	2.15	-2.15	0.13
14,551.00	91.89	182.59	9,134.31	-5,882.38	-124.87	5,882.38	2.40	0.94	2.21
14,646.00	93.30	184.37	9,130.01	-5,977.10	-130.63	5,977.10	2.39	1.48	1.87
14,741.00	92.15	185.65	9,125.50	-6,071.63	-138.92	6,071.63	1.81	-1.21	1.35
14,836.00	92.33	185.43	9,121.78	-6,166.11	-148.08	6,166.11	0.30	0.19	-0.23
14,930.00	91.19	184.04	9,118.90	-6,259.74	-155.84	6,259.74	1.91	-1.21	-1.48
14,991.00	90.17	183.52	9,118.17	-6,320.60	-159.86	6,320.60	1.88	-1.67	-0.85
15,087.00	90.45	177.43	9,117.65	-6,416.55	-160.65	6,416.55	6.35	0.29	-6.34
15,184.00	91.62	175.65	9,115.90	-6,513.35	-154.80	6,513.35	2.20	1.21	-1.84
15,278.00	93.13	175.97	9,112.01	-6,607.02	-147.94	6,607.02	1.64	1.61	0.34
15,373.00	92.30	175.29	9,107.51	-6,701.64	-140.71	6,701.64	1.13	-0.87	-0.72
15,468.00	91.18	172.32	9,104.62	-6,796.03	-130.46	6,796.03	3.34	-1.18	-3.13
15,563.00	91.62	172.00	9,102.30	-6,890.11	-117.51	6,890.11	0.57	0.46	-0.34
15,595.00	90.66	172.39	9,101.66	-6,921.81	-113.16	6,921.81	3.24	-3.00	1.22
15,689.00	93.83	174.68	9,097.98	-7,015.12	-102.59	7,015.12	4.16	3.37	2.44
15,784.00	95.85	177.19	9,089.96	-7,109.53	-95.87	7,109.53	3.38	2.13	2.64
15,879.00	96.11	176.77	9,080.07	-7,203.88	-90.90	7,203.88	0.52	0.27	-0.44
15,974.00	92.68	177.76	9,072.79	-7,298.48	-86.38	7,298.48	3.76	-3.61	1.04
16,069.00	92.51	177.17	9,068.49	-7,393.29	-82.18	7,393.29	0.65	-0.18	-0.62

RECEIVED: Feb. 27, 2014

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
16,163.00	93.03	178.82	9,063.94	-7,487.12	-78.90	7,487.12	1.84	0.55	1.76
16,258.00	91.01	179.35	9,060.59	-7,582.04	-77.38	7,582.04	2.20	-2.13	0.56
16,353.00	92.24	179.39	9,057.90	-7,676.99	-76.34	7,676.99	1.30	1.29	0.04
16,448.00	91.45	178.57	9,054.84	-7,771.93	-74.65	7,771.93	1.20	-0.83	-0.86
16,543.00	90.22	180.19	9,053.46	-7,866.91	-73.62	7,866.91	2.14	-1.29	1.71
16,638.00	91.45	179.88	9,052.07	-7,961.90	-73.68	7,961.90	1.34	1.29	-0.33
16,733.00	91.36	181.51	9,049.74	-8,056.86	-74.83	8,056.86	1.72	-0.09	1.72
16,827.00	90.66	180.68	9,048.09	-8,150.82	-76.63	8,150.82	1.15	-0.74	-0.88
16,922.00	91.10	180.04	9,046.63	-8,245.81	-77.22	8,245.81	0.82	0.46	-0.67
17,017.00	91.19	180.57	9,044.73	-8,340.79	-77.73	8,340.79	0.57	0.09	0.56
17,111.00	90.40	180.73	9,043.43	-8,434.77	-78.79	8,434.77	0.86	-0.84	0.17
17,206.00	92.59	181.48	9,040.95	-8,529.72	-80.62	8,529.72	2.44	2.31	0.79
17,301.00	93.30	181.38	9,036.07	-8,624.56	-82.99	8,624.56	0.75	0.75	-0.11
17,396.00	93.83	181.38	9,030.16	-8,719.35	-85.28	8,719.35	0.56	0.56	0.00
17,491.00	92.77	180.47	9,024.69	-8,814.18	-86.81	8,814.18	1.47	-1.12	-0.96
17,585.00	90.92	178.55	9,021.66	-8,908.12	-86.00	8,908.12	2.84	-1.97	-2.04
17,680.00	91.28	181.56	9,019.84	-9,003.09	-86.09	9,003.09	3.19	0.38	3.17
17,775.00	93.74	178.17	9,015.68	-9,097.98	-85.87	9,097.98	4.41	2.59	-3.57
17,870.00	93.83	178.64	9,009.41	-9,192.73	-83.23	9,192.73	0.50	0.09	0.49
17,964.00	93.47	179.29	9,003.42	-9,286.52	-81.54	9,286.52	0.79	-0.38	0.69
18,059.00	93.83	179.60	8,997.37	-9,381.33	-80.62	9,381.33	0.50	0.38	0.33
18,154.00	94.79	179.81	8,990.24	-9,476.06	-80.13	9,476.06	1.03	1.01	0.22
18,249.00	92.42	180.33	8,984.26	-9,570.86	-80.25	9,570.86	2.55	-2.49	0.55
18,343.00	91.36	179.40	8,981.16	-9,664.81	-80.03	9,664.81	1.50	-1.13	-0.99
18,438.00	90.84	179.40	8,979.34	-9,759.78	-79.03	9,759.78	0.55	-0.55	0.00
18,533.00	92.33	180.82	8,976.71	-9,854.74	-79.22	9,854.74	2.17	1.57	1.49
18,628.00	92.24	181.99	8,972.92	-9,949.64	-81.54	9,949.64	1.23	-0.09	1.23
18,723.00	91.98	182.47	8,969.42	-10,044.50	-85.24	10,044.50	0.57	-0.27	0.51
18,818.00	91.63	181.26	8,966.43	-10,139.40	-88.33	10,139.40	1.33	-0.37	-1.27
18,913.00	92.07	181.39	8,963.37	-10,234.33	-90.52	10,234.33	0.48	0.46	0.14
19,007.00	91.19	180.24	8,960.69	-10,328.28	-91.86	10,328.28	1.54	-0.94	-1.22
19,017.44	91.16	180.08	8,960.48	-10,338.71	-91.89	10,338.71	1.55	-0.25	-1.53
TD-PBHL (2-15-22-3-2WH)									
19,043.00	91.10	179.69	8,959.97	-10,364.27	-91.84	10,364.27	1.55	-0.25	-1.53
SBL- Pathfinder MWD 9,835'- 19,043' MD									
19,108.00	91.10	179.69	8,958.72	-10,429.26	-91.49	10,429.26	0.00	0.00	0.00
Projected to T.D.= 19108' MD- 8958.73' TVD - T.D.- Rathole (2-15-22-3-4WH)									

LEAM Drilling Systems LLC

Survey Report

NEWFIELD ROCKY MOUNTAINS

Company:	NEWFIELD EXPLORATION ROCKY MOUNTAINS	**Local Co-ordinate Reference:**	Well 2-15-22-3-2WH
Project:	DUCHESNE COUNTY, UT (NAD 83)	**TVD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Site:	CENTRAL BASIN (NAD 83)	**MD Reference:**	WELL(5357'+ 27'= 5,384' MSL) @ 5384.00usft (Pioneer 78 (KB= 27'))
Well:	2-15-22-3-2WH	**North Reference:**	True
Wellbore:	2-15-22-3-2WH AUBREY	**Survey Calculation Method:**	Minimum Curvature
Design:	2-15-22-3-2WH AUBREY (Actual)	**Database:**	EDM 5000.1 Lynn Db

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,580.00	1,579.97	13-3/8" Csg (1580' MD)	13-5/8	17-1/4
8,573.00	8,551.18	9-5/8" Csg (8573' MD)	9-5/8	12-1/4

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,580.00	1,579.97	1.76	-5.17	VES Gyro 0'- 1,580' MD
8,573.00	8,551.18	-456.73	-121.98	9-5/8" Casing (8573' MD- 8551.18' TVD)
9,773.00	9,345.57	-1,111.88	-126.09	Weatherford MWD (1,580'MD)1,801'- 9,773' MD
19,043.00	8,959.97	-10,364.27	-91.84	SBL- Pathfinder MWD 9,835'- 19,043' MD
19,108.00	8,958.72	-10,429.26	-91.49	Projected to T.D.= 19108' MD- 8958.73' TVD

Checked By: _____ Approved By: _____ Date: _____

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Job Category	Job Start Date	Job End Date

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
1/4/2014	1/5/2014	Move in spot Frac & FB tanks. Prepare to Log well

Start Time	End Time	Comment
08:00	22:00	Wireline is rigged up and currently pressure testing the lubricator and preparing to RIH and log well. Flowback is rigged up to the wellhead and pressure testing lines and manifolds. 15 frac tanks and 2 salt tanks are on location. 6 flowback tanks are spotted and rigged in. 1 Flow tank is spotted and rigged in to the junk catcher and sand trap. Rig Up Wireline and pressure test lubricator. Prepare to Rih with logging tools. 1430pm-Pressure tested Lubricator. Ran in well @225 ft per min. Ran in well to 8920 KOP. Continued in well to 9572. Preparing to log well with 1500 psi on casing
22:00	00:00	Found ring groove on FMC's flowcross with bad spot, Call in for replacemrnt flowcross. Pictures taken of ring groove,

Report Start Date	Report End Date	24hr Activity Summary
1/5/2014	1/6/2014	Move in spot Frac & FB tanks. Prepare to Log well

Start Time	End Time	Comment
00:00	01:00	Finish NU 10K 7-1/16" 'Lower Master' hydraulic frac valve (HCR) (already installed), 10K 7-1/16" 'Upper Master' manual frac valve, 10K 7-1/16" flowcross with dual, double 4-1/16" outlets, 10K 7-1/16" 'Crown' manual frac valve, 10K 7-1/16" goat head. Test frac stack, ball catcher and flowback lines as per Newfield's test procedures.
01:00	06:00	Confirm lower master HCR frac valve is closed and test Frac stack as per Newfield Pressure testing Guidelines. 250 psi low / 10,000 psi high. Testing of frac stack as per Newfield's testing procedures.
06:00	08:00	Rig up and test Halliburton pump iron.
08:00	10:00	Pressure tested the casing to 8000 psi and held for 15 min. Turned pumping over to pressure tester. Pressured up to 9400 psi. Ruptured the disk. Pressure dropped to 7146. Begin pumping on well. 18.2 bbls per min. Well broke back to 6150 pumping 18.2 bbls per min. Currently-Preparing to pump in with perf guns
10:00	18:30	Rig up wireline and pressure test to 10000 psi. RIH with 3 perf guns and gamma and CCL including pump down sub. 1300- Correlate logs at the short jt. 1315- Begin pumping guns in well. 21.8 bbls per min @ 7227 psi. 200'ft per min LT-1120. Perfs as follows.18910 to 911. 18848 to 849. 18793 to 794. Max pressure for Pump down-7800 psi. Max rate -22.5. Total bbls pumped-1414.7 1446 pm- Begin pooh with wireline. out of hole, all shots fired and all tools recovered,
18:30	23:00	Continue to prep location for frac. Howco has set 1 sand can and second sand castle, Wrap tarp around well head and put on heater, Location ready for frac operations.

Report Start Date	Report End Date	24hr Activity Summary
1/6/2014	1/7/2014	Location ready for frac.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
00:00	13:00	Wait on frac equipment.
13:00	00:00	PJSM. Unload sand and begin rigging up frac iron.

Report Start Date	Report End Date	24hr Activity Summary
1/7/2014	1/8/2014	MIRU Howco frac equip, start 50 stage frac

Start Time	End Time	Comment
00:00	14:00	Wait on frac crew to finish RU. Wait on Rockwater to transfer fluid to location. 3am Rockwater began transfering fluid to location. By 7am we had 2798 bbls of fluid on location that was 50 DEG. From 8 AM to 12 noon waited on a super heater to heat up the fluid on location in preparation for frac.
14:00	18:00	Heat water in tanks and prepare for frac.
18:00	21:00	Frac stage 1
21:00	00:00	RIH W/L and P&P stage #2 Stage #2 Rig up wireline and pressure test to 10,000 psi. RIH with 3 perf guns, 1315- Begin pumping guns in well. 17.2 bbls per min @ 6540 psi. 240'ft per min LT-880. Perfs as follows.18,728 – 29.5', Max pressure for Pump down-7054 psi. Max rate -17.2. Total bbls pumped-726, Tried to shot second shot with no response from well head or from wireline panel, called in and decision made to pull wireline and see what guns has fired and rerun stage #2 guns as needed to perf stage #2 (after talking with wireline crew, we think that #1 and #2 guns fired at first perf setting. Had double echo on first shot.) POH and check guns.

Report Start Date	Report End Date	24hr Activity Summary
1/8/2014	1/9/2014	Reperf stage #2, Frac well

Start Time	End Time	Comment
00:00	01:00	POH guns and see what guns had fired down hole, Two guns shot, third gun not shot. Tool was set up to shoot as follows: Pos for plug, Neg for #1 gun, Pos for #2 gun, and Neg for #3 gun, After checking guns we found top gun was set up for Neg, which was correct, Plug set as per design, #1 shot was felt at well head when fired, (wireline hand felt a double echo on first shot,) POH and found Guns #1 & 2 were shot, unknown why both guns shot at same time, PUMU two (2) replacement guns and RIH in hole, will see where tools stop at during pump down. Pump down guns and find out where tools stop at, P&P stage #2, Will shot only guns needed to finish perf's for stage #2,
01:00	06:30	PUMU two (2) replacement guns and RIH in hole, will see where tools stop at during pump down. Pump down guns, Will shot only guns needed to finish perf's for stage #2, Rig up wireline and pressure test to 10000 psi. RIH with 2 perf guns and setting sleeve as a pump down sub. Begin pumping guns in well. 19.3 bbls per min @ 6,345 psi. 237'ft per min LT-830. Tools stopped at the first set perf of stage #2 at 18,724.5', (Top shots from #2 gun of first run) Pulled up and found color at 18,695' tools on depth. Pull to perf depth and continued to shoot stage #2 as designed, Stage #2 Perfs as follows.18,728' – 29.5', 18,724.5' – 26', 18,655– 56.5', 18,570' – 71.5'. Four clusters for total 0f 36 holes. Max pressure for Pump down-7,650 psi. Max rate -19.3. Total bbls pumped-1,512.5 (Total of both pump down for stage #2.) POOH with wireline, All shots fired and all tools recovered,
06:30	10:30	Waiting on Halliburton to get more hoses made for the missile.
10:30	14:30	Started to frac stage 2. The sensor for the transmission went out. Waiting on parts to fix frac equipment.
14:30	15:30	Finish fracing stage 2. Had to cut sand and flush early.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
15:30	20:00	Rig up wireline. Pressure test to 9000 psi Begin rih for P&P stage 3. RIH W/L to P&P stage #3, All going well until around 17,200' line speed slowing, increased pump rate from 20.0 bpm to 20.8 bpm, line speed increased slowly up to 105 fpm, 1047 LT, 20.8 bpm, 6,523 psi, all was stabilized and going in hole, when line speed hit 245 fpm, other parameters were normal, shut down pumps and wireline, pulled up on line to restart pump down and found guns were pumped off wireline, called in and reported event and Wait on further orders. Pulled wireline from well, well shut in and secured.
20:00	22:30	Wait on orders as to next well operations.
22:30	00:00	Plan forward: Begin pumping on well head, slowly ramp up to as high a rate as the well will allow and pump down fish into stage #2 perfs. Pump 2.5 well bore volumes. Note any breaks in pressure. Then proceed to pump down plug and guns for stage 3. slow pumps and wireline to 100 ft/min or less at 16,500' being alert to problem area and be prepared to shut down and pumps and start out of hole at any point from 16,500' to plug depth if there is any indication of repeating the problem or tagging the fish. Continue to plug and perf stage#3 and continue with frac operations, Water temps: Goliath water tank heated to 95 deg at present time, Frac row on location at 85 deg. Slipped and cut 800' of line off and reheaded line. Wrap tested line and line is good. (wire on truck little over a month old), Prep wireline to rerun stage #3 P&P. Pumped total of 1,027 bbls water at ave rate of 24 bpm, Max psi 9,800, ave psi 8,370, After pumping 27 bbls we had a slight drop in pump pressure then pressure increase as rate was increased to 24 bpm, pressure held stable to 42 bbls and pressure maxed out 9,800 psi, rate dropped and finished pump at 22.7 bpm at 8,512 psi. Dropped rate to 20 bpm to check injection and pressure for pump down, shut down and brine up lines and well head, turn well over to wireline for pump down.

Report Start Date	Report End Date	24hr Activity Summary
1/9/2014	1/10/2014	Rerun stage #3 P&P run, frac stage #3

Start Time	End Time	Comment
00:00	00:30	Proceed to pump down plug and guns for stage 3. slow pumps and wireline to 100 ft/min or less at 16,500' being alert to problem area and be prepared to shut down and pumps and start out of hole at any point from 16,500' to plug depth if there is any indication of repeating the problem or tagging the fish. Continue to plug and perf stage#3 and continue with frac operations,
00:30	04:30	PU guns and start in hole for rerun on stage #3 pump down for P&P of stage #3.Proceed to pump down plug and guns for stage 3. slow pumps and wireline to 100 ft/min or less at 16,500' being alert to problem area and be prepared to shut down and pumps and start out of hole at any point from 16,500' to plug depth if there is any indication of repeating the problem or tagging the fish. Continue to plug and perf stage#3 and continue with frac operations, RIH with guns and pumped down guns at 17.9 bpm @ 7,632 Psi, @217 fpm, 1044 LT, pumped guns to 16,500' and dropped rate to 16.1 bpm @ 7,635 Psi 122 fpm, 1048 LT, continued in hole, 16.1 bpm @ 7,625 Psi, 119 fpm 1033 LT @ 18,000', Tools stopped at 18,543', (TOP OF FISH 18,543') fish just inside of top perf's of stage #2, (Stage #2 top perf @18,570') Picked up off fish Pulled up and got line tension and set plug @ 18,535', POH and perf'ed at 18,505' – 06.5', 18,438' – 39.5', 18,372' – 73.5', POH with tools, all shots fired and all tools recovered. Ball dropped.
04:30	07:00	Fix hydrualic leak on the Growler pump.
07:00	07:15	Frac stage 3

Start Time	End Time	Comment
07:15	10:45	Wait on Halliburton to fix BC-200 for XL fluid.
10:45	12:00	Frac stage 3
12:00	16:30	12:40pm-RIH with guns and Plug to KOP. pumped down guns at 20.2 bpm @ 6690 Psi, @140.8 fpm, 1015 LT, pumped guns to 18,350, Pulled up and got line tension and set plug @18,321 POH and perf'ed at18,318-319.5', 18,258' – 259.5', 18,188' – 189.5', , POOH with tools,Max pressure for pump down-6690 Max rate for pump down- 21. Total BBls pumped-1521
16:30	19:00	Begin fracing stage 4
19:00	22:00	RIH with guns and Plug to KOP. pumped down guns at 18.0 bpm @ 6,785 Psi, @231 fpm, 1014 LT, pumped guns to 18,176', Pulled up and got line tension and set plug @18,177' POH and perf'ed at18,125- 26.5', 18,065' – 66.5', 18,005' – 06.5', POOH with tools, Max pressure for pump down-6781, Max rate for pump down-18.1 bpm, Total BBls pumped- 681. Out of hole with tools and found guns #2 & 3 didn't fire. All tools recovered.
22:00	00:00	Run in with new guns and PD/Sub and shoot #2 & 3 clusters for stage #5. RIH with guns and Plug to KOP. pumped down guns at 18.8 bpm @ 6,095 Psi, @ 193 fpm, 1012 LT, pumped guns to 18,076', Pulled up and got line tension Pull up to depth and perf at 18,065' – 66.5', 18,005' – 06.5', POOH with tools, Max pressure for pump down- 6,165, Max rate for pump down- 18.8 bpm, Total BBls pumped-816. Perf's for stage #5 as follows: 18,125- 26.5', 18,065' – 66.5', 18,005' – 06.5', POH with tools.

Report Start Date	Report End Date	24hr Activity Summary
1/10/2014	1/11/2014	POHW/L, grease stack, frac stages 5,6,7

Start Time	End Time	Comment
00:00	01:00	finish POH with guns. All shots fired and All tools recovered.
01:00	03:30	Grease frac stack valve and function test same, FMC hand on location to Get'Er done.
03:30	16:30	frac stage 5 Had to shut down BC-200 micro motion was not working correctly. Also had to swap out another pump. Pumped around 450 bbls and could not get gel to line out Swap out frac equipment and frac crews.
16:30	18:00	Frac stage #5 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 17 holes open, 1293 psi perf friction, 0 psi NWB as per Fracpro. 3. Could not get BC-200 to come up to set point, came off during Xlink pad to fix @ 4:10 AM. 4. Swapped out HHP, Blender, Growler, Frac Van and Crew and performed maintenance on other HHP while down for ~12.25 hrs. 5. Resumed job @ 4:25 PM with crosslink pad and pumped proppant as designed. 6. Started losing the blender tub during flush. Extended flush to compensate for the rate flucuations. 7. Job Treated well.
18:00	20:30	RIH with guns and Plug to KOP. pumped down guns at 17.3 bpm @ 5,682 Psi, @ 202 fpm, 1087 LT, pumped guns to 18,070', Pulled up and got line tension and set plug @17,973' POH and perf'ed at17,939- 40.5', 17,870' - 71.5', 17,800' - 01.5', POOH with tools, Max pressure for pump down- 5,751, Max rate for pump down 1.3 bpm, Total BBls pumped- 622. All shots fired, All tools recovered. Ball dropped. Turn over to Howco for frac.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
20:30	22:00	Frac stage #6 as designed no issues. 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 12 holes open, 1958 psi perf friction, 102 psi NWB as per Fracpro. 3. Able to place job with no problems, overall good effort by crew.
22:00	00:00	RIH with wireline guns and Plug to P&P stage #7

Report Start Date	Report End Date	24hr Activity Summary
1/11/2014	1/12/2014	Continue to frac well 6 og 50 completed.

Start Time	End Time	Comment
00:00	02:00	Stage #7 RIH with guns and Plug to KOP. pumped down guns at 17.3 bpm @ 5,682 Psi, @ 202 fpm, 1087 LT, pumped guns to 18,070', Pulled up and got line tension and set plug @17,973' POH and perf'ed at17,939- 40.5', 17,870' - 71.5', 17,800' - 01.5', POOH with tools, Max pressure for pump down- 5,751, Max rate for pump down 18.3 bpm, Total BBls pumped- 646. All shots fired, All tools recovered. Ball dropped. Turn over to Howco for frac.
02:00	04:30	Frac stage #7 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 14 holes open, 1694 psi perf friction, 0 psi NWB as per Fracpro. 3. Pumped revised sand schedule with 4.0ppg max, able to place job completely. Good job by crew.
04:30	08:30	P&P 8. 0550am- Correlate at the short jt from 8889-8879. 0620am- Begin pumping plug down the well.Line speed-229. Line tension-1061. Max rate-18.1. Max pressure-5859. Total bbls pumped- 716. Pumped plug to 17,555. 0705-Pull plug up to 17,545 and set. LT before set-1061. Line tension After set-992. 0710 begin perfing well as follows- 17,510-511.5.- 17,472-473.5.- and 17,30-391.5. 0720am-begin pooh with wireline tools.
08:30	10:30	Frac stage 8-Stage 8 frac is complete. All sand placed on formation. Had to drop rate to 40 bbls per min on flush. Pressure at the end of flush was 7500 psi. overflushed 25 bbls.
10:30	14:00	P&P 9. 1050am- Correlate at the short jt from 8889-8879. 1140am- Begin pumping plug down the well.Line speed-220. Line tension-1035. Max rate-18.1. Max pressure-6996. Total bbls pumped- 708. Pumped plug to 17,394. 0705-Pull plug up to 17,384 and set. LT before set-1163. Line tension After set-1075. 1225pm begin perfing well as follows- 17,318-319.5.- 17,248-249.5.- and 17,178-179.5. 1235pm-begin pooh with wireline tools.
14:00	15:00	Grease the frac stack
15:00	17:00	Begin fracing stage 9. Had pressure issues. No sand placed on formation. Flushed wellbore with slickwater at 35 bbls per min. Brine up tree for wireline.
17:00	21:30	Stage #10 - RIH with guns and Plug to KOP. pumped down guns at 16.8 bpm @ 7,800 Psi, @ 165 fpm, 1010 LT, pumped guns to 17,200', Pulled up and got line tension and set plug @17,170' POH and perf'ed at17,108- 09.5', 17,040' - 41.5', 16,968' - 69.5', POOH with tools, Max pressure for pump down- 7,866, Max rate for pump down 16.8 bpm, Total BBls pumped- 876. POH. All tools recovered. All shots fired.
21:30	23:00	Pump s10 frac. High pressure. Pump 4000 gallons ¼# 100 mesh sand, pressured to 8900 at 10 bpm. Flush with slick water..

Start Time	End Time	Comment
23:00	00:00	Stage 11 - RIH with guns and plug to KOP.

Report Start Date	Report End Date	24hr Activity Summary
1/12/2014	1/13/2014	Continue to frac well. 10 of 50 completed

Start Time	End Time	Comment
00:00	01:00	Wait on HES to get rate and pressure monitor working in WL truck.
01:00	02:30	RIH with guns and plug to KOP. Pumped down guns at 17.8 bpm @ 7,300 Psi, @ 215 fpm, 1005 LT, pumped guns to 16,970', Pulled up and got line tension and set plug @16,958' POH and perf'ed at16,904- 05.5', 16,830' - 31.5', 16,770' - 71.5', POOH with tools, Max pressure for pump down- 7,360, Max rate for pump down 17.9 bpm, Total bbls pumped- 850. All shots fired, All tools recovered. Ball dropped.
02:30	04:30	Pump stage 11 frac as designed, no pressure issues.
04:30	08:30	Stage #12 RIH with guns and Plug to KOP. pumped down guns at 18.8 bpm @ 6,210 Psi, @ 200 fpm, 1010 LT, pumped guns to 16,775', Pulled up and got line tension and set plug @16,752' POH and perfed at16,720'- 21.5', 16,630' - 31.5', 16,580' - 81.5', POOH with tools, Max pressure for pump down- 6,220. Max rate for pump down 18.8 bpm, Total bbls pumped- 656. All tools recovered. All shots fired. Ball dropped.
08:30	10:00	Frac stage 12
10:00	13:30	Stage #13 RIH with guns and Plug to KOP. pumped down guns at 18. bpm @ 5750 Psi, @ 220 fpm, 1062 LT, pumped guns to 16,555', Pulled up and got line tension and set plug @16,546' POH and perfed at16,498'- 499.5', 16,426' - 427.5', 16,400' - 401.5', POOH with tools, Max pressure for pump down- 5,750. Max rate for pump down 18. bpm, Total bbls pumped- 561. All tools recovered. All shots fired. Ball dropped.
13:30	14:30	Grease frac stack.
14:30	16:00	Frac stage 13
16:00	19:00	Stage #14 RIH with guns and Plug to KOP. pumped down guns at 17.9 bpm @ 6,149 Psi, @ 228 fpm, 1024 LT, pumped guns to 16,395', Pulled up and got line tension and set plug @16,385' POH and perfed at16,368'- 09.5', 16,328' - 29.5', 16,280' - 81.5', POOH with tools, Max pressure for pump down- 6,149. Max rate for pump down 18 bpm, Total bbls pumped- 614. All tools recovered. All shots fired. Ball dropped.
19:00	21:00	Pump stage 14 frac as designed. No pressure issues.
21:00	00:00	Stage #15 RIH with guns and Plug to KOP. pumped down guns at 18 bpm @ 5,997 psi, @ 230 fpm, 1005 LT, pumped guns to 16,270', Pulled up and got line tension and set plug @16,256' POH and perfed at16,227'- 08.5', 16,175' - 76.5', 16,135' - 36.5', POOH with tools, Max pressure for pump down- 6,080. Max rate for pump down 18 bpm, Total bbls pumped- 603. All tools recovered. All shots fired. Ball dropped.

Report Start Date	Report End Date	24hr Activity Summary
1/13/2014	1/14/2014	Continue to frac well 14 0f 50 completed

Start Time	End Time	Comment
00:00	02:00	Pump stage #15 frac as designed, no pressure issues.

Start Time	End Time	Comment
02:00	05:00	Stage #16 RIH with guns and Plug to KOP. pumped down guns at 18 bpm @ 6,025 psi, @ 230 fpm, 1005 LT, pumped guns to 16,150', Pulled up and got line tension and set plug @16,130' POH and perfed at16,080'- 81.5', 15,990' - 91.5', 15,930' - 31.5', POOH with tools, Max pressure for pump down- 6,099 psi. Max rate for pump down 18 bpm, Total bbls pumped- 528. POH. All tools recovered. All shots fired.
05:00	06:00	Frac stage 16
06:00	10:00	Stage #17 RIH with guns and Plug to KOP. pumped down guns at 19.1 bpm @ 6,196 psi, @ 102 fpm, 983 LT, pumped guns to 15,801', Pulled up and got line tension and set plug @15,794' POH and perfed at15,740'- 741.5', 15,680' - 681.5', 15,610' - 611.5', POOH with tools, Max pressure for pump down- 6,292 psi. Max rate for pump down 19.2 bpm, Total bbls pumped- 970. POH. All tools recovered. All shots fired.
10:00	11:00	Grease frac stack
11:00	12:00	Frac stage 17
12:00	15:30	Stage #18 RIH with guns and Plug to KOP. pumped down guns at 18.2 bpm @ 5700 psi, @ 228 fpm, 1050 LT, pumped guns to 15,585', Pulled up and got line tension and set plug @15,600' POH and perfed at15,580'- 581.5', 15,530' - 531.5', 15,490' - 491.5', POOH with tools, Max pressure for pump down- 5,700 psi. Max rate for pump down 18.2 bpm, Total bbls pumped- 985. POH. All tools recovered. All shots fired.
15:30	17:00	Frac stage #18
17:00	19:30	Wind is blowing to hard to lift anything with the crane. J-W Wirelines policy is nothing over 35mph gusts The wind meter on the crane is showing 37-38mph gusts right now
19:30	21:45	Stage #19 RIH with guns and Plug to KOP. Pumped down guns at 19 bpm at 6,450 psi, @ 250 fpm, 970 LT, pumped guns to 15,470', Pulled up and got line tension and set plug @15,448' POH and perfed at15,430'- 31.5', 15,380' - 81.5', 15,330' - 31.5', POOH with tools, Max pressure for pump down- 6,511 psi. Max rate for pump down 19 bpm, Total bbls pumped- 480. All shots fired, all tools recovered.
21:45	23:00	Pump stage 19 frac as designed, no pressure issues.
23:00	00:00	RIH with WL to P&P stage 20.

Report Start Date	Report End Date	24hr Activity Summary
1/14/2014	1/15/2014	Continue to frac well, 19 0f 50 completed/

Start Time	End Time	Comment
00:00	02:00	Stage #20 RIH with guns and Plug to KOP. Pumped down guns at 19.1 bpm at 6,440 psi, @ 250 fpm, 1030 LT, pumped guns to 15,335', Pulled up and got line tension and set plug @15,322' POH and perfed at15,288'- 89.5', 15,238' - 39.5', 15,190' - 91.5', POOH with tools, Max pressure for pump down- 6,458 psi. Max rate for pump down 19.1 bpm, Total bbls pumped- 483. All shots fired, all tools recovered.

Start Time	End Time	Comment
02:00	07:30	Pump stage #20 frac as designed. Pressured out with 100 bbl flush left to pump. Pumped 190 bbl at 3-4.5 bbl per minute, well kept pressuring up. Flowed back 600 bbls. 36/64" choke at 3000 psi. Flowing approx 10 bbls per min. Plan to flow back 700 bbls before reflushing wellbore. Flowed back 750 bbls. 2900 psi on well. Checking ball catcher and preparing to sweep well bore. Flushed well bore with 565 bbls of fresh water and FR. Pressure was 8100 psi pumping 40 bbls per min. Slowed rate to 20 bbl per min for last 50 bbls of flush and the pressure was at 6300 psi. No ball in the ball catcher.
07:30	10:30	Stage #21 RIH with guns and Plug to KOP. Pumped down guns at 19.2 bpm at 7,084 psi, @ 218 fpm, 983 LT, pumped guns to 15,165', Pulled up and got line tension and set plug @15,156' POH and perfed at15,100'- 101.5', 15,090' - 091..5', 14,955' - 956.5', POOH with tools, Max pressure for pump down- 7084 psi. Max rate for pump down 19.2 bpm, Total bbls pumped- 597. All shots fired, all tools recovered.
10:30	11:30	Grease frac stack
11:30	13:00	Frac stage 21
13:00	16:30	Stage #22 RIH with guns and Plug to KOP. Pumped down guns at 18.3 bpm at 6,271 psi, @ 208 fpm, 1008 LT, pumped guns to 14,955', Pulled up and got line tension and set plug @14,944' POH and perfed at14,890'- 891.5', 14,840' - 841..5', 14,788' - 789.5', POOH with tools, Max pressure for pump down- 6271 psi. Max rate for pump down 18.3 bpm, Total bbls pumped- 505. All shots fired, all tools recovered.
16:30	20:00	Frac stage 22
20:00	22:00	Stage #23 RIH with guns and Plug to KOP. Pumped down guns at 18.7 bpm at 7575 psi, @ 215 fpm, 1028 LT, pumped guns to 14,777', Pulled up and got line tension and set plug @14,780' POH and perfed at14,740'- 411.5', 14,698' - 99.5', 14,645' - 46.5', POOH with tools, Max pressure for pump down- 7590 psi. Max rate for pump down 18.7 bpm, Total bbls pumped- 582. POH. All tools recovered. All shots fired.
22:00	00:00	Pump stage #23 frac.

Report Start Date	Report End Date	24hr Activity Summary
1/15/2014	1/16/2014	Continue to frac well

Start Time	End Time	Comment
00:00	02:00	Stage #24 RIH with guns and Plug to KOP. Pumped down guns at 18.7 bpm at 6,800 psi, @ 233 fpm, 1000 LT, pumped guns to 14,610', Pulled up and got line tension and set plug @14,622' POH and perfed at14,603'- 04.5', 14,560' - 61.5', 14,530' - 31.5', POOH with tools, Max pressure for pump down- 6,843 psi. Max rate for pump down 18.8 bpm, Total bbls pumped- 523. All tools recovered. All shots fired.
02:00	03:30	Frac stage #24.

Start Time	End Time	Comment
03:30	07:00	Stage #25 RIH with guns and Plug to KOP. Pumped down guns at 18.8 bpm at 6,719 psi, @ 220 fpm, 1031 LT, pumped guns to 14,505', Pulled up and got line tension and set plug @14,495' POH and perfed at14,470'- 471.5', 14,400' - 401.5', 14,330' - 331.5', POOH with tools, Max pressure for pump down- 6,723 psi. Max rate for pump down 18.9 bpm, Total bbls pumped- 474. All tools recovered. All shots fired.
07:00	09:00	Frac stage 25
09:00	12:30	Stage #26 RIH with guns and Plug to KOP. Pumped down guns at 18.8 bpm 8,039 psi, @ 166 fpm, 1039 LT, pumped guns to 14,298', Pulled up and got line tension and set plug @14,288' POH and perfed at14,264'- 265.5', 14,260' - 261.5', 14,257' - 259.5', POOH with tools, Max pressure for pump down- 8042 psi. Max rate for pump down 22.2 bpm, Total bbls pumped- 676. All tools recovered. All shots fired.
12:30	13:30	Grease the frac stack
13:30	15:30	Frac stage #26 Pressured out on pad and Xlink fluid. Flushed wellbore with FR fluid and continued to pump to get pressures down enough for the pump down P&P for stage 27.
15:30	19:00	Stage #27 RIH with guns and Plug to KOP. Pumped down guns at 20.9 bpm 7,460 psi, @ 102 fpm, 1026 LT, pumped guns to 14,161', Pulled up and got line tension and set plug @14,119' POH and perfed at14,065'- 066.5', 13,980' - 981.5', 13,896' - 898.5', POOH with tools, Max pressure for pump down- 7,475 psi. Max rate for pump down 20.9 bpm, Total bbls pumped- 1,114. POH. All tools recovered. All shots fired.
19:00	22:00	Pump stage #27 frac with 30# gel at 35 bpm. All sand placed on formation.
22:00	00:00	RIH to P&P stage #28

Report Start Date	Report End Date	24hr Activity Summary
1/16/2014	1/17/2014	Continue to frac well 27 of 50

Start Time	End Time	Comment
00:00	02:00	Stage #28 RIH with guns and Plug to KOP. Pumped down guns at 18.9 bpm 6,500 psi, @ 106 fpm, 1000 LT, pumped guns to 13,895', Pulled up and got line tension and set plug @13,871' POH and perfed at13,836'- 837.5', 13,752' – 752.5', 13,678' - 679.5', POOH with tools, Max pressure for pump down- 6,511 psi. Max rate for pump down 18.9 bpm, Total bbls pumped- 661. POH. All tools recovered. All shots fired.
02:00	03:00	Frac stage #28 as designed. No pressure issues.
03:00	06:00	Stage #29 RIH with guns and Plug to KOP. Pumped down guns at 18.9 bpm 6,500 psi, @ 106 fpm, 1000 LT, pumped guns to 13,895', Pulled up and got line tension and set plug @13,871' POH and perfed at13,836'- 837.5', 13,752' – 752.5', 13,678' - 679.5', POOH with tools, Max pressure for pump down- 6,511 psi. Max rate for pump down 18.9 bpm, Total bbls pumped- 661. POH. All tools recovered. All guns fired.
06:00	07:00	Frac stage 29

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
07:00	10:00	Stage #30 RIH with guns and Plug to KOP. Pumped down guns at 18.1 bpm 6,175 psi, @ 200 fpm, 1030 LT, pumped guns to 13,466', Pulled up and got line tension and set plug @13,456' POH and perfed at13,440'- 441.5', 13,372' – 373.5', 13,306' - 307.5', POOH with tools, Max pressure for pump down- 6,254 psi. Max rate for pump down 19.2 bpm, Total bbls pumped- 343. POOH. All tools recovered. All guns fired.
10:00	11:00	Grease frac stack.
11:00	12:00	Frac stage 30
12:00	14:30	P&P #31 RIH with guns and Plug to KOP. Pumped down guns at 18.1 bpm 5787 psi, @ 205 fpm, 1017 LT, pumped guns to 13,295', Pulled up and got line tension and set plug @13,258' POH and perfed at13,258'- 259.5', 13,181' – 182.5', 13,141' - 142.5', POOH with tools, Max pressure for pump down- 5787 psi. Max rate for pump down 18.1 bpm, Total bbls pumped- 310. POOH. All tools recovered. All guns fired.
14:30	15:30	Frac stage #31 as designed. No pressure issues.
15:30	17:30	Stage #32 RIH with guns and Plug to KOP. pumped down guns at 18.1 bpm @ 6,315 psi, @ 215 fpm, 1,000 LT, pumped guns to 13,123', Pulled up and got line tension and set plug @13,116' POH and perf'ed at13,086'- 87.5', 13,023' - 24.5', 12,978' - 79.5', POOH with tools, Max pressure for pump down- 6,336 psi. Max rate for pump down 18.1 bpm, Total bbls pumped- 379. All tools recovered. All shots fired. Ball dropped.
17:30	19:00	Frac #32
19:00	22:00	Stage #33 RIH with guns and Plug to KOP. pumped down guns at 18.7 bpm @ 6,115 psi, @ 202 fpm, 1,040 LT, pumped guns to 12,954', Pulled up and got line tension and set plug @12,954' POH and perf'ed at12,934'- 35.5', 12,904' - 05.5', 12,862' - 63.5', POOH with tools, Max pressure for pump down- 6,193 psi. Max rate for pump down 18.7 bpm, Total bbls pumped- 384. All tools recovered. All shots fired. Ball dropped.
22:00	00:00	Frac stage 33. Pressured out on 6# sand. Winterize frac equipment in preparation for flowback.

Report Start Date	Report End Date	24hr Activity Summary
1/17/2014	1/18/2014	Continue to frac well 32 0f 50

Start Time	End Time	Comment
00:00	03:00	Winterize frac equipment. Flow back 700 bbl at 3000 psi on 28/64 choke. Recovered ball. Pump 450 bbl sweep at 35 bpm and 8200 psi.
03:00	06:30	Stage #34 RIH with guns and Plug to KOP. pumped down guns at 19.2 bpm @ 6,849 psi, @ 254 fpm, 1,075 LT, pumped guns to 12,854', Pulled up and got line tension and set plug @12,834' POH and perf'ed at12,806'- 07.5', 12,781' - 82.5', 12,704' - 05.5', POOH with tools, Max pressure for pump down- 6,890 psi. Max rate for pump down 19.2 bpm, Total bbls pumped- 275. All tools recovered. All shots fired. Ball dropped.
06:30	07:30	Frac 34

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
07:30	09:30	Stage #35 RIH with guns and Plug to KOP. pumped down guns at 17.9 bpm @ 5,772 psi, @ 222 fpm, 986 LT, pumped guns to 12,691', Pulled up and got line tension and set plug @12,694' POH and perf'ed at12,652'- 53.5', 12,613' - 14.5', 12,563' - 64.5', POOH with tools, Max pressure for pump down- 5,772 psi. Max rate for pump down 17.9 bpm, Total bbls pumped- 287. All tools recovered. All shots fired. Ball dropped.
09:30	10:30	FMC to grease frac valves on stack,
10:30	11:30	stage 35
11:30	14:00	Stage #36 RIH with guns and Plug to KOP. pumped down guns at 17.6 bpm @ 5,530 psi, @ 189 fpm, 958 LT, pumped guns to 12,570', Pulled up and got line tension and set plug @12,552' POH and perf'ed at12,552'- 23.5', 12,467' - 68.5', 12,401' - 02.5', POOH with tools, Max pressure for pump down- 5,530 psi. Max rate for pump down 17.6 bpm, Total bbls pumped- 317. All tools recovered. All shots fired. Ball dropped.
14:00	16:00	Stage #36
16:00	17:15	Stage #37 RIH with guns and Plug to KOP. pumped down guns at 17.2 bpm @ 5,5,698 psi, @ 161 fpm, 940 LT, Pulled up and got line tension and set plug @12,390' POH and perf'ed at12,352'- 53.5', 12,307'- 08.5', 12,252'- 53.5', POOH with tools, Max pressure for pump down 5,707 psi. Max rate for pump down 17.2 bpm, Total bbls pumped 294. All tools recovered. All shots fired. Ball dropped.
17:15	19:45	Freac stage 37
19:45	22:00	Stage #38 RIH with guns and Plug to KOP. pumped down guns at 17.3 bpm @ 5,825 psi, @ 231 fpm, 945 LT. Set plug @12,204' POH and perf'ed at12,202'- 03.5', 12,152'- 53.5', 12,099'- 100.5', POOH with tools, Max pressure for pump down 5,842 psi. Max rate for pump down 17.3 bpm, Total bbls pumped 214. All tools recovered. All shots fired. Ball dropped.
22:00	00:00	Pump stage 38 frac with 30# gel, 4000 lbs 100 mesh, and 3000 lbs 30/50. High pressure.

Report Start Date	Report End Date	24hr Activity Summary
1/18/2014	1/19/2014	Continue to frac well 38 of 50

Start Time	End Time	Comment
00:00	02:30	Stage #39 RIH with guns and Plug to KOP. pumped down guns at 17.3 bpm @ 7,280 psi, @ 230 fpm, 850 LT. Set plug @12,064' POH and perf'ed at12,042'- 43.5', 11,952'- 53.5', 11,900'- 01.5', POOH with tools, Max pressure for pump down 7,330 psi. Max rate for pump down 17.4 bpm, Total bbls pumped 203. All tools recovered. All shots fired. Ball dropped.
02:30	05:30	Pump stage 38 frac with 30# gel. High pressure.
05:30	08:00	P&P stage #40
08:00	09:30	FMC to grease frac stack valves
09:30	13:00	Pump repaires, Unable to repair pump, have to wait on replacement parts to arrive and be exchanged..

Start Time	End Time	Comment
13:00	15:00	Pump on stage #40. Pressured out, Unable to pump stage due to pressure lock, Flow back well to recover ball and try to pump into well as to be able to pump down wireline and perf stage #41.
15:00	17:00	Flow back well to recover ball, well volume 260 bbls, Flow back 410 bbls to flush well bore and recover ball, Pump into well for injection rate and pressure reading. 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Fresh water. 2. Calculated 12 holes open, 891 psi perf friction, 425 psi NWB as per FracPro. 3. Had higher pressure and quick leak off during step down so proceeded with higher gel loadings and lower rate & conc design. 3. Started losing rate when gel hit formation until bringing all pumps off line. 4. Attempted to pump into formation without success. Flowing back the well to clean up and get wireline down.
17:00	19:15	Stage #41. RIH with guns and Plug to KOP. pumped down guns at 17 bpm @ 7,945 psi, @ 194 fpm, 815 LT. Set plug @11,689' POH and perfed at11,655'- 56.5', 11,571'- 72.5', 11,490'- 91.5', POOH with tools, Max pressure for pump down 8,065 psi. Max rate for pump down 17 bpm, Total bbls pumped 219. All tools recovered. All shots fired. Ball dropped.
19:15	21:00	Pump stage 41 frac. No pressure issues.
21:00	22:00	Lubricator would not test. reapar stripper head.
22:00	00:00	Stage #42 RIH with guns and Plug to KOP. pumped down guns at 15.3 bpm @ 5,444 psi, @ 226 fpm, 8832 LT. Set plug @11,474' POH and perfed at11,430'- 31.5', 11,375'- 76.5', 11,287'- 88.5', POOH with tools, Max pressure for pump down 5,447 psi. Max rate for pump down 15.3 bpm, Total bbls pumped 152.

Report Start Date	Report End Date	24hr Activity Summary
1/19/2014	1/20/2014	Continue to frac well 42 of 50 done

Start Time	End Time	Comment
00:00	00:30	Finish POH with guns. All tools recovered. All shots fired. Ball dropped.
00:30	02:30	Pump stage 42 frac. No pressure issues.
02:30	04:00	Stage #43 RIH with guns and Plug to KOP. pumped down guns at 15.8 bpm @ 5,392 psi, @ 236 fpm, 8856 LT. Set plug @11,218' POH and perfed at11,195'- 96.5', 11,129'- 30.5', 11,009'- 10.5', POOH with tools, Max pressure for pump down 5,432 psi. Max rate for pump down 15.9 bpm, Total bbls pumped 134. All tools recovered. All shots fired. Ball dropped.
04:00	06:00	Pump stage 43 frac. Pumped 1000 lbs 30/50 sand, pressured to 9050#. Flush with slick water and establish rate at 20 bpm and 8100 psi
06:00	09:00	RIH with guns and Plug to KOP. pumped down guns at 17.1 bpm @ 8,302 psi, @ 129 fpm, 888 LT. Set plug @10,963' POH and perfed at10,910'- 11.5', 10,864'- 65.5', 10,812'- 13.5', POOH with tools, Max pressure for pump down 8,423 psi. Max rate for pump down 17.1 bpm, Total bbls pumped 236. All tools recovered. All shots fired. Ball dropped.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
09:00	10:30	Frac stage #44, Frac stage with no issues. 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 15 holes open, 1627 psi perf friction, 448 psi NWB as per FracPro. 3. Started losing prime at the beginning of flush. Dropped rate and resolved issue before losing the tub completely. 4. All proppant was placed. WG-36-5.4% (84.1),
10:30	13:00	Stage #45 RIH with guns and Plug to KOP. pumped down guns at 17.1 bpm @ 5,345 psi, @ 233 fpm, 929 LT. Set plug @10,802' POH and perfed at10,785'- 86.5', 10,735'- 36.5', 10,670'- 671.5', POOH with tools, Max pressure for pump down 5.970 psi. Max rate for pump down 17.1 bpm, Total bbls pumped 170. All tools recovered. All shots fired. Ball dropped.
13:00	14:30	Frac stage #45, Greased valves (1/2hr). 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 15 holes open, 1579 psi perf friction, 264 psi NWB as per FracPro. 3. Dropped rate and went to CRC early due to rising pressure. 4. Dropped rate through flush to ~43 bpm. Was able to fully flush the well. Ball Seat Stage Pressures and Rate: 5255 psi @ 14.9 bpm , 5133 psi Pressure before Seating , 5255 psi Pressure after Seating, WG-36-4.4% (65.3), MX 2-2738 -6% (1.9).
14:30	16:30	Stage #46 RIH with guns and Plug to KOP. pumped down guns at 17.1 bpm @ 6,766 psi, @ 173 fpm, 978 LT. Set plug @10,660' POH and perfed at10,629'- 30.5', 10,585'- 86.5', 10,536'- 37.5', POOH with tools, Max pressure for pump down 7,061 psi. Max rate for pump down 17.1 bpm, Total bbls pumped 165.
16:30	17:45	Pump stage 46 frac. All sand placed on formation, no pressure issues.
17:45	19:15	Stage #46 RIH with guns and Plug to KOP. pumped down guns at 17.1 bpm @ 6,766 psi, @ 173 fpm, 978 LT. Set plug @10,660' POH and perfed at10,629'- 30.5', 10,585'- 86.5', 10,536'- 37.5', POOH with tools, Max pressure for pump down 7,061 psi. Max rate for pump down 17.1 bpm, Total bbls pumped 165. All tools recovered. All shots fired. Ball dropped
19:15	20:45	Pump stage 47 frac. All sand placed on formation, no pressure issues.
20:45	22:45	Stage #48 RIH with guns and Plug to KOP. pumped down guns at 14.8 bpm @ 5,491 psi, @ 224 fpm, 858 LT. Set plug @10,380' POH and perfed at10,361'- 62.5', 10,320'- 21.5', 10,244'- 45.5', POOH with tools, Max pressure for pump down 5,5491 psi. Max rate for pump down 14.8 bpm, Total bbls pumped 72. All tools recovered. All shots fired. Ball dropped
22:45	00:00	Pump stage 48 frac.

Report Start Date	Report End Date	24hr Activity Summary
1/20/2014	1/21/2014	Continue to frac well 48of 50 stages pumped

Start Time	End Time	Comment
00:00	01:30	Pump stage 48 frac. All sand placed on formation, no pressure issues.

Start Time	End Time	Comment
01:30	03:30	Stage #49 RIH with guns and Plug to KOP. pumped down guns at 14.8 bpm @ 5,575 psi, @ 212 fpm, 837 LT. Set plug @10,10212' POH and perfed at10,194'- 95.5', 10,144'- 45.5', 10,109'- 10.5', POOH with tools, Max pressure for pump down 5,625 psi. Max rate for pump down 14.9 bpm, Total bbls pumped 64. All tools recovered. All shots fired. Ball dropped
03:30	06:00	1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 14 holes open, 1177 psi perf friction, 172 psi NWB as per FracPro. 3. Saw good pressure relief when Acid reached perfs. 4. Had pressure start to increase after 3ppg Sand reached bottom, reduced rate to line out pressure. 5. Presssure continued to rise, cut White Sand and went to Resin, pressure rolled over shortly after. Pumped an additional 7K of Resin 6. Able to flush well completely with no other issues. Placed approx 109760lbs of prop or 71.3% of design. Ball Seat Stage Pressures and Rate: 6265 psi @ 12.8 bpm , 5785 psi Pressure before Seating , 6235 psi Pressure after Seating WG-36-5.3% (189.3), Scalesorb 7-8.8% (28.4), Optiflo H T E-6.2% (3.8),
06:00	07:30	Stage #50 RIH with guns and Plug to KOP. pumped down guns at 16.2 bpm @ 8,165 psi, @ 197 fpm, 877 LT. Set plug @10,086' POH and perfed at10,040'- 41.5', 9,973'- 74.5', 9,891'- 92.5', POOH with tools, Max pressure for pump down 8,643 psi. Max rate for pump down 16.2 bpm, Total bbls pumped 104. All tools recovered. All shots fired. Ball dropped
07:30	13:00	Frac stage #50 1. Global Kick Outs set at 9500 psi. Pressure tested to 9600 psi. Job pumped with Produced water. 2. Calculated 17 holes open, 803 psi perf friction, 295 psi NWB as per FracPro. 3. Pressure came up ~75 bbls into pad. Had to drop to 10 bpm. 4. Held rate and extended pad until pressure allowed us to started working it up. Started 100 mesh at 21 bpm. 5. Saw pressure relief from 100 mesh on formation. Got up to 27 bpm and started sand. 6. Pumped the sand as designed and worked the rate up to 30 bpm. 30/50 ran long from being cut short the previous stage. CLA-Web-4.7% (9.3),MCB 8642-3.4%(1.3)
13:00	16:30	RIH and set kill plug #1 @7,994', 4,300 psi under plug at setting time. POH and bleed off well pressure (15:00), Pull neg casing pressure test, good, RIH and set #2 kill plug a@7,940', SICP 0 Psi, POH (16:00), and RDMO JW Wireline unit.
16:30	20:30	rdmo frac equipment
20:30	22:00	Confirmed well was dead, Nipple down FMC's 10k upper master manual valve, flow cross, Upper 10k Crown manual valve, and frac head.

Start Time	End Time	Comment
22:00	00:00	MIRU Knight's BOP stack as follows: Install TWCV. 10K 7-1/16" HCR (Already Installed on Wellhead) 10K 7-1/16" BOP with Blind shear rams and double valve choke/kill outlets 10K 7-1/16" pipe BOP with 2-3/8" rams 10K 7-1/16" flow cross with dual, double valved 2-1/16" outlets 10K 7-1/16" single pipe BOP with 2-3/8" rams Annular preventer/Hydril Function and pressure test the bottom manual valve and each component of BOP stack per Newfield BOP Pressure Testing Procedures 250 psi low, 10,000 psi high.

Report Start Date	Report End Date	24hr Activity Summary
1/21/2014	1/22/2014	Finiished fracing

Start Time	End Time	Comment
00:00	03:00	Function and pressure test the bottom manual valve and each component of BOP stack per Newfield BOP Pressure Testing Procedures 250 psi low, 10,000 psi high.
03:00	07:30	Wait on daylight to move in WOR
07:30	15:00	MIRU MS WOR, Unload tubing and inspect same,
15:00	00:00	Tally 2-3/8" 5.95# P-110 PH6 tubing, PUMU BHA as follows: 4.65" OD x 1.25" ID x 1.78' L 4 blade concave insert mill (2 3/8" PAC pin), 2.960" OD x 1" ID x 2.16' L Bit Sub w/ Coil style dual back pressure valve (2 3/8" PH6 box x 2 3/8" PAC box), 1 jt of 2-3/8" 5.95# P-110 PH6, 2.909" OD x 1.560" ID x .75' L RN-Nipple, 2-3/8" 5.95# P-110 tubing. Filling every 30 jts, RIH with 257 jts to 7,925. Tie back on single line.

Report Start Date	Report End Date	24hr Activity Summary
1/22/2014	1/23/2014	MIRU WOR. PU work string.

Start Time	End Time	Comment
00:00	03:30	PU power swivel and 2 jts tbg. Tag kill plug #2 at 7,960' on jt # 260, EOT at 7960'. 25' stick up. Up weight 55, neutral 54, down weight 52. 1000 free tork, 1600 drill tork. 6-8 pts WOB. 2.6 bbl in/ 2.6 bbl out. Pump 3900 psi, WH 3200 psi on 28/64" choke. 14 minutes to drill plug. 49 bbl water, circ 15 bbl. Tag kill plug #1 at 7,994' on jt # 261, EOT at 7994'. 12' stick up. Up weight 54, neutral 52, down weight 50. 1000 free tork, 1600 drill tork. 6-8 pts WOB. 2.6 bbl in/ 4.5 bbl out. Pump 4,000 psi, WH 3200 psi on 28/64" choke. 30 minutes to drill plug. Pump 10 bbl sweep, circulate bottoms up.
03:30	09:30	RIH and Tag frac plug #49 at 10,086' on jt # 328, EOT at 10,086'. 20' stick up. Up weight 55, neutral 54, `down weight 52. 1000 free torque, 1600 drill torque. 6-8 pts WOB. 2.6 bbl in/ 2.6 bbl out. Pump 3900 psi, WH 3200 psi on 28/64" choke. 11 minutes to drill plug. 49 bbl water, circ 15 bbl.
09:30	12:30	Manifold washed out on choke insert and housing of manifold, We were flowing back 6 bpm @ 3,400 Psi after drilling thru frac plug @ #49, Found manifold washed out, Continued to circulate well bore clean, lowered pump rate and working pipe up and down, pipe free, well is under control and being watched for further problems, Continue to investigate problem on flowback equipment.Plan forward: POH tbg into vertical, brine up well head, Change out 5k annular bag with 10k bag, Repair flowback manifold, POH into vertical with tbg 8,845',

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
12:30	14:30	Rig up to land tbg on hanger, PUMU 2 3/8 eu X 2 3/8 PH-6 crossover Hanger 2 3/8 eu X 2 3/8 PH-6 crossover tbg jt with TIW valve, Lower in stack to equalize across hanger thru flowcross, unable to equalize above hanger, attempt to land hanger several times, unable to equalize stack. POH hanger from stack and trying to find shorter crossovers and lower hanger depth in stack and retry to equalize stack. Wait on nipples
14:30	16:00	Wait on 2 3/8 Eu L-80 tbg to land hanger with.
16:00	20:00	PU 2 3/8" EUE tbg with crossover. Equalize BOP and lower into well. PU tbg and 1 jt 2 3/8" PH6. Wash hanger bowl with 12 bbl 100 degree water. Land tbg. Run in lock pins.
20:00	00:00	Test tbg hanger to 10k against blind/shear rams, OK. ND 5K annular preventer. NU 10 K annular preventer

Report Start Date	Report End Date	24hr Activity Summary
1/23/2014	1/24/2014	Land tbg. Change from 5K to 10K annular preventer.

Start Time	End Time	Comment
00:00	04:30	Test tbg hanger to 10k against blind/shear rams, OK. ND 5K annular preventer. NU 10 K annular preventer. Test 10K annular preventer 250 low/7500 psi high. Equalize pressure in BOP. Back out lock in pins. Pull tbg hanger. Hang tarps around BOP stack, place heaters on BOP
04:30	06:00	Start to TIH. Pipe would not move in annular preventer. 3700 psi on csg. 300 psi hydraulic pressure on accumulator.
06:00	08:00	10K annular seal around 2-3/8 jt can't pull up or go down bled off psi, shut 2-3/8 pipe rams tube moved up & down. Can't get accum start to build psi Knight Tools working on accum. 3,500 psi on well
08:00	10:00	3,500 psi on well 10K annular seal around 2-3/8 jt can't pull up or go down bled off psi, shut 2-3/8 pipe rams tube moved up & down. Knight Tools accum running. Well tarp in with 2 heat tubs blow on B.O.P sack 43 degrees inside tarp.
10:00	12:00	3,750 psi on well Tubing weight 60,000 with 10K annular closed 400 psi, pull up 80,000 on tubing can't move tubing close pipe ram open 10K annular pipe move up & down at 60,000
12:00	13:00	3,750 psi on well Pumping 2 bpm @ 3,800 psi, returns 2 bpm @ 3,500 psi we get back oil.
13:00	14:00	3,750 psi on well Shut well in Knight Tools working on 10K annular 400 psi, turn down 50 psi in increments all 0 psi. pull up 80,000 cant move pipe cant go down.
14:00	15:00	Stand back swivel MU TIW valve p/u Kelly hose circulation on jt 276 @ 8,490 pumping 1 bpm in @ 4,000 psi 1 bpm out @ 3,950 psi making water.
15:00	17:00	Shut well in ND Kelly hose. PU 2 3/8" EUE tbg with crossover. *Equalize BOP and lower into well. PU 1 jt 2 3/8 w/* TIW Valve Eu L-80 tbg w/ land hanger
17:00	21:00	Winterize BOP stack and flow back lines with brine water. Equalize BOP and land tbg hanger and run in lock pins. Bleed pressure off BOP stack. Test tbg hanger against blind shear rams. ND 10K annular preventer. Install night cap. Tarp BOP's and put on heat.

Start Time	End Time	Comment
21:00	00:00	Wait on 10K annular preventer.

Report Start Date	Report End Date	24hr Activity Summary
1/24/2014	1/25/2014	NU annular preventer

Start Time	End Time	Comment
00:00	06:00	Wait on annular preventer.
06:00	11:00	Continue to wait on new annular preventer. 10k Shaffer annular be on Location around 14:00 hr.
11:00	12:00	New 10k Shaffer annular on Location, B&G Crane be on location @ 1:30 pm.
12:00	17:00	New 10k Shaffer annular on Location, full ice we have heaters on it. Weatherford is hear working on it get ice out.
17:00	22:00	Knight Oil Tools Shaffer annular is tested and arrives on location. Management decided to run it instead of Weatherford's.
22:00	00:00	NU and test annular preventer.

Report Start Date	Report End Date	24hr Activity Summary
1/25/2014	1/26/2014	Wait on anular. NU and test annular.

Start Time	End Time	Comment
00:00	03:00	Strip tbg hanger and 1 jt 2 3/8" EUE out of BOP stack. PU 2 jts 2 3/8" PH6 to determine everything is operational. 54 PU weight, 47 SO weight, hydraulic pressure on annular 750 psi.. Replace packing in stem on outside wing valve on flow cross(driller's side). Pressure test wing valve to 250 low/10,000 high per Newfield's standards. Place tarps around BOP stack with two heater vents.
03:00	04:00	TIH with 328 jts to 10,108'. PU power swivel and 5 jts.
04:00	05:30	Tag plug #48 at 10,278' on jt # 334 15 ft out, Up weight 58, neutral 54, down weight 48. 2,500 free tork, 2,700 drill tork. 6-8 pts WOB. 2. bbl in/ 2. bbl out. Pump 4,500 psi, WH 3,800 psi on 18/64" choke. 15 minutes to drill plug. 50 bbls water. Pump 20 bbl sweep
05:30	07:00	Tag plug #47 at 10,400' on jt # 338 8 ft out, Up weight 60k, neutral 58k, down weight 52k. 1600 free torque, 2100 drill torque. 6-8 pts. WOB. 2.5 bbl in@4200psi 2.5 bbl out@3600psi. on 18/64" choke. 18 minutes to drill plug. 53 bbls water. Pump 20 bbl sweep.
07:00	08:00	Tag kill plug #46 at 10,530' on jt # 342 8 ft out, Up weight 60, neutral 58, down weight 54. 1,400 free tork, 2,200 drill tork. 6-8 pts WOB. 2. bbl in/ 2. bbl out. Pump 4,200 psi, WH 3,600 psi on 18/64" choke. 16 minutes to drill plug. 50 bbls water. Pump 20 bbls sweet. Pump bottom's up 160 bbls.
08:00	09:00	Tag plug #45 at 10,660' on jt # 347 6 ft out, Up weight 60, neutral 58, down weight 54. 1,600 free torque, 2,200 drill torque. 6-8 pts WOB. 2.5 bbl in@4200psi 2.5 bbl out@3350psi. on 18/64" choke. 16 minutes to drill plug. 75 bbls water. Pump 20 bbl sweep

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
09:00	10:30	Tag plug #44 at 10,802' on jt # 352 4 ft out, Up weight 58k, neutral 58k, down weight 52k. 1600 free torque, 2000 drill torque. 6-8 pts. WOB. 2.5 bbl in@4400psi 2.5 bbl out@3600psi. on 18/64" choke. 16 minutes to drill plug. 33 bbls water. Pump 20 bbl sweep.
10:30	12:00	Tag plug #43 at 10,985' on jt # 357 15 ft out, Up weight 60k, neutral 56k, down weight 52k. 1600 free torque, 2000 drill torque. 6-8 pts. WOB. 2.5 bbl in@4400psi 3. bbl out@3600psi. on 18/64" choke. 22 minutes to drill plug. 59 bbls water. Pump 20 bbl sweep. RIH tag plug #42
12:00	13:00	Tag plug #42 at 11,241' on jt # 366, Up weight 60k, neutral 56k, down weight 52k. 1600 free torque, 2,200 drill torque. 6-8 pts. WOB. 2.5 bbl in@4400psi 3. bbl out@3500psi. on 20/64" choke. 28 minutes to drill plug. 70 bbls water. Pump 20 bbl sweep.
13:00	14:00	Tag plug #41 at 11,499' on jt # 374, Up weight 60k, neutral 56k, down weight 62k. 1600 free torque, 2,200 drill torque. 6-8 pts. WOB. 2.5 bbl in@4100psi 3. bbl out@3600psi. on 20/64" choke. 26 minutes to drill plug. 73 bbls water. Pump 20 bbl sweep.
14:00	15:00	Tag plug #40 at 11,710' on jt # 381, Up weight 62k, neutral 54k, down weight 52k. 1600 free torque, 2,000 drill torque. 6-8 pts. WOB. 2.5 bbl in@4200psi 3. bbl out@3600psi. on 20/64" choke. 20 minutes to drill plug. 64 bbls water. Pump 20 bbl sweep. Made 70 bbls oil.
15:00	16:00	Tag plug #39 at 11,914' on jt # 388, Up weight 60k, neutral 56k, down weight 52k. 1600 free torque, 2,500 drill torque. 6-8 pts. WOB. 3.0 bbl in@4200psi 3.0 bbl out@3500psi. on 20/64" choke. 28 minutes to drill plug. 72 bbls water. Pump 20 bbl sweep. Pump bottom's up 198 bbls. 3.0 bpm in @ 4,200 psi, 3.0 bpm out @ 3,550, w/1 gal FR to 1,000 gals (name) Western Chemical FR #7.
16:00	17:00	Tag plug #38 at 12,084' on jt # 393, Up weight 60k, neutral 54k, down weight 50k. 1600 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @4100psi 3.0 bbl out@3600psi. on 20/64" choke. 31 minutes to drill plug. Pump 79 bbls water . with1 gal FR to 1,000 gals (name) Western Chemical FR #7. Pump 20 bbl sweep.
17:00	18:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #37 at 12,251' on jt # 398, Up weight 64k, neutral 56k, down weight 48k. 2000 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @4160psi 3.0 bbl out@3500psi. on 20/64" choke. 48 minutes to drill plug. Pump 98 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
18:00	19:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #36 at 12,434' on jt # 404, Up weight 64k, neutral 52k, down weight 48k. 2000 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @4400psi 3.0 bbl out@3225psi. on 20/64" choke. 29 minutes to drill plug. Pump 76 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.

Start Time	End Time	Comment
19:00	20:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #35 at 12,434' on jt # 409, Up weight 64k, neutral 52k, down weight 48k. 2000 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @4400psi 3.0 bbl out@3000psi. on 20/64" choke. 25 minutes to drill plug. Pump 67 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
20:00	22:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #34 at 12,701' on jt # 413, Up weight 64k, neutral 52k, down weight 48k. 2000 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3250psi. on 18/64" choke. 37 minutes to drill plug. Pump 76 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep. We are going to Circulate Bottoms Up before drilling # 33.
22:00	00:00	Circulate bottoms up.

Report Start Date	Report End Date	24hr Activity Summary
1/26/2014	1/27/2014	Drilling Plugs

Start Time	End Time	Comment
00:00	00:30	Pump bottom's up before drilling # 33, 212 bbls. 3.0 bpm in @ 4600 psi, 3.3 bpm out @ 3200.
00:30	01:15	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #33 at 12,715' on jt # 418, Up weight 64k, neutral 52k, down weight 48k. 2000 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3250psi. on 18/64" choke. 30 minutes to drill plug. Pump 75 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
01:15	02:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #32 at 12,975' on jt # 422, Up weight 64k, neutral 52k, down weight 42k. 2000 free torque, 2,400 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3250psi. on 18/64" choke. 31 minutes to drill plug. Pump 81 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
02:00	02:30	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #31 at 13,133' on jt # 427, Up weight 64k, neutral 58k, down weight 40k. 2100 free torque, 2,700 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3150psi. on 18/64" choke. 25 minutes to drill plug. Pump 68 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
02:30	03:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #30 at 13,327' on jt # 433, Up weight 64k, neutral 58k, down weight 40k. 2100 free torque, 2,800 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3150psi. on 18/64" choke. 26 minutes to drill plug. Pump 64 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
03:00	04:00	Pump bottom's up before drilling # 28, 224 bbls. 3.0 bpm in @ 4600 psi, 3.3 bpm out @ 3200.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
04:00	05:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #29 at 13,327' on jt # 438, Up weight 68k, neutral 46k, down weight 38k. 2200 free torque, 2,800 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3150psi. on 18/64" choke. 32 minutes to drill plug. Pump 84 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl sweep.
05:00	06:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #28 at 13,676' on jt # 445, Up weight 60k, neutral 56k, down weight 50k. 2000 free torque, 2,600 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4500psi 2.5 bbl out@3700psi. on 18/64" choke. 32 minutes to drill plug. Pump 84 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep. Plan Forward: RIH Plug #27
06:00	07:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #27 at 13,918' on jt # 453, Up weight 60k, neutral 56k, down weight 50k. 2000 free torque, 2,600 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4500psi 2.5 bbl out@3700psi. on 18/64" choke. 25 minutes to drill plug. Pump 74 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
07:00	09:00	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #26 at 14,158' on jt # 460, Up weight 64k, neutral 52k, down weight 48k. 2,100 free torque, 2,800 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4500psi 2.5 bbl out@3700psi. on 18/64" choke. 28 minutes to drill plug. Pump 70 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
09:00	13:00	Circulate 2 bottom up 480 bbls in 2.5 bpm @ 4,600 psi 2.5 bbls out 2.5 @ 3,600. Annular started leaking turn psi up 1,500 psi,that max Knight Tools came out. Got 2 bottoms up shut pipe rams bleed top end and inspect bag, Knight inspect bag said it was bad Knight have a bag in Houston TX said be here morning @ 10:00 am.
13:00	15:00	Circulate 2 morn bottom up 480 bbls in 2.5 bpm @ 4,600 psi 2.5 bbls out 2.5 @ 3,600.
15:00	20:00	Circulate 240bbls in @ 2.5 bbls min @ 4600 psi flowback 2.5 bbls out WH pressure @3650psi .PU Crossover 2-3/8" PH-6 X 2 3/8" EUE jt, 2-3/8" eue Hanger w/ two way check, one jt 2-3/8 eue with TIW valve, Open 7" 10k annular bleed off pressure between upper & lower pipe rams. lower into well. Sliding through lower 2 3/8 10k pipe ram. shut top 2 3/8" 10k pipe ram equalize tbg hanger w/ 2 way check valve between upper & lower 2 3/8" 10k pipe rams . Open bottom 2 3/8" Wash hanger bowl with 12 bbl 120 degree water. Land tbg Hanger. Run in lock pins. bleed off pressure between hanger & top 2 3/8" ram. POOH w/ landing jt 2 3/8" eue. ND Knight 10K annular NU Weatherford 7" 10k annular. Close annular test to 7500psi between annular and hanger
20:00	21:00	Plan: We have landed Hanger w/two way check. Bleed off pressure and everything is holding. We will test Hanger to 10k once Test is Good, We will start nippling down Knight 10K annular NU Weatherford 7" 10k annular. Once Weatherford's annular is rigged up we will test it to 7500psi . Plan Forward: Change out BOP 2-3/8" rams, test & test annular.
21:00	00:00	Plan: We tried to test Hanger to 10k and when we tried to bleed pressure off it would not bleed down past 4000psi. Seal around hanger is leaking. We have shut in the well and secured well for the Night. Length of Change-over is 19" Distance between Lock Pins to Shear Rams is 2.6' Plan Forward: Group is having a meeting in the morning about how we will proceed with well operations. We will pump a junk shot in the morning to try and get it to seal off around the hanger.

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
1/27/2014	1/28/2014	Drilling plugs,,, Annular leaking, we have to land hanger & 2 way check and test.

Start Time	End Time	Comment
00:00	06:00	SDFN
06:00	18:00	Plan Forward: Group is having a meeting in the morning about how we will proceed with well operations. We will pump a junk shot in the morning to try and get it to seal off around the hanger. Plan: Hold safety meeting/ pre job meeting discuss. Plan going forward Mix Junk shot (sash cord , bicycle tube, Plastic tape , mix in Polymer) pour through 2 block valves set vertical Behind casing valves. Close block valves. Start pumping Through Casing valves into annulus. Shut casing valves and bleed off lines to pump. Bleed off pressure between blind shear rams & hanger through Needle valve to make sure we have hanger sealed off. Verify 0 psi through needle valve. Plan Forward: Re Group talk about how we will proceed with well operations. Plan: Hold safety meeting/ pre job meeting discuss. So far the junk shot is holding on the hanger. Have a man staged to monitor backside flow. If any flow we will shut down and pump again. If no flow. Rig the floor down and change the annular rubber. Plan forward-After rubber is changed, Screw into the hanger with the landing jt and shut top ram. PJSM and safety mtng to discuss further steps.
18:00	00:00	Plan: Annular bag is changed out. Rigging rig floor back up and getting everything ready to screw landing joint into hanger, pull hanger & wash bowl.... Hold safety meeting / pre job meeting discuss next steps before screwing joint into hanger.. So far the junk shot is holding on the hanger. Have a man staged to monitor backside flow. Plan: Flowback & Pump lines tested as per NFX Policy. Getting ready to screw Landing joint into hanger and attempt to wash junk shot out of well. Once wash is complete we will shut Top Pipe Rams and Equalize topside of stack and strip hanger out of well.. Status: We have screwed back into hanger and have successfully stripped it to rig floor. We are waiting on our 2 – 2 3/8" EUE L80 joints to arrive before we pull hanger etc. That way all equipment is here on location ready to go. When we opened well to FMC plug catcher a 3" cap leaked while a FMC hand was in area. It blew some Paraffin in face and went under his glasses into his eye. Medic checked him out and flushed his eye for 15mins. His eye was still red and irritated. The gentleman had just had Cataract surgery 2 months ago. So medic advised to send him to Hospital to have him checked out. FMC Field Supervisor took him to Roosevelt Hospital to be checked out. We will update his status when we hear back from FMC. Plan forward- Once 2 3/8" EUE L80 joints arrive we will pull hanger & TWCV out of string, lay down EUE joint under hanger as well. Then rig up to run new hanger back in well and test. Then change out BOP Rams and test as per NFX Policy.

Report Start Date	Report End Date	24hr Activity Summary
1/28/2014	1/29/2014	Test BOPS and Annular and start drilling plugs

Start Time	End Time	Comment
00:00	06:00	Status: We have screwed back into hanger and have successfully stripped it to rig floor. We are waiting on our 2 – 2 3/8" EUE L80 joints to arrive before we pull hanger etc. That way all equipment is here on location ready to go. When we opened well to FMC plug catcher a 3" cap leaked while a FMC hand was in area. It blew some Paraffin in face and went under his glasses into his eye. Medic checked him out and flushed his eye for 15mins. His eye was still red and irritated. The gentleman had just had Cataract surgery 2 months ago. So medic advised to send him to Hospital to have him checked out. FMC Field Supervisor took him to Roosevelt Hospital to be checked out. We will update his status when we hear back from FMC. Plan forward- Once 2 3/8" EUE L80 joints arrive we will pull hanger & TWCV out of string, lay down EUE joint under hanger as well. Then rig up to run new hanger back in well and test. Then change out BOP Rams and test as per NFX Policy. Status: We have landed Hanger. We Negative tested Hanger for 20 minutes (Good) & pressure tested Hanger 250psi Low & 10k High for 10mins. We closed HCR & Blind Rams and started changing out Tubing Rams in BOPs. Plan forward- Change Rams & Test Rams as per NFX Policy. Pull Hanger and start Drill Out Procedure again.
06:00	07:00	Equalize over and pull tbng hanger and 1 jt of tbng out of well.
07:00	10:30	Rig up Power swivel and begin circulating a bottoms up of 240 bbls. Pumping 2.5 bbls per min @ 4500 psi.Flowing 3700 psi on 18/64" choke. Returning 2.5 bbls per min.
10:30	11:30	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #25 at 14,297' on jt # 465, Up weight 58k, neutral 52k, down weight 50k. 1,700 free torque, 2,800 drill torque. 6-8 pts. WOB. 2.3 bbl in @ 4200psi 2.5 bbl out@3700psi. on 18/64" choke. 26 minutes to drill plug. Pump 59 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
11:30	12:30	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #24 at 14,501' on jt # 472, Up weight 58k, neutral 52k, down weight 50k. 1,700 free torque, 2,800 drill torque. 6-8 pts. WOB. 2.3 bbl in @ 4600psi 2.5 bbl out@3700psi. on 18/64" choke. 28 minutes to drill plug. Pump 59 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
12:30	13:30	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #23 at 14,670' on jt # 477, Up weight 62k, neutral 54k, down weight 48k. 1,700 free torque, 2,600 drill torque. 6-8 pts. WOB. 2.3 bbl in @ 4600psi 2.5 bbl out@3700psi. on 18/64" choke. 21 minutes to drill plug. Pump 68 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
13:30	14:30	w/1 gal FR to 1,000 gals Western Chemical FR #7. Tag plug #22 at 14,798' on jt # 481, Up weight 62k, neutral 54k, down weight 48k. 1,700 free torque, 2,600 drill torque. 6-8 pts. WOB. 2.3 bbl in @ 4900psi 2.5 bbl out@3700psi. on 18/64" choke. 25 minutes to drill plug. Pump 62 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
14:30	15:30	Pump a clean up cycle of 256 bbls after drilling 4 plugs.
15:30	16:30	Tag plug #21 at 15,005' on jt # 481, Up weight 60k, neutral 50k, down weight 48k. 1,800 free torque, 2,500 drill torque. 6-8 pts. WOB. 2.5 bbl in @ 4400psi 2.5 bbl out@3700psi. on 18/64" choke. 26 minutes to drill plug. Pump 79 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
16:30	17:30	Tag plug #20 at 15,172' on jt # 493, Up weight 64k, neutral 54k, down weight 44k. 2100 free torque, 2,700 drill torque. 6-8 pts, RPM @ 2200 . WOB. 2.5 bbl in @ 4600psi 2.5 bbl out@3700psi. on 18/64" choke. 25 minutes to drill plug. Pump 41 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
17:30	18:30	Tag plug #19 at 15,356' on jt # 499, Up weight 60k, neutral 54k, down weight 44k. 2100 free torque, 2,800 drill torque. 6-8 pts, RPM @ 2200 . WOB. 2.5 bbl in @ 4800psi 2.5 bbl out@3800psi. on 18/64" choke. 29 minutes to drill plug. Pump 58 bbls water with 1-gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
18:30	20:30	Circulating Bottoms Up before we drill up plug 17, 258bbls @ 2.5bpm @ 4800psi / 2.5bbls returns @ 3800psi
20:30	21:30	Tag plug #18 at 15,541' on jt # 505, Up weight 60k, down weight 40k, , neutral 52k. 2100 free torque, 2,800 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4800psi 2.5 bbl out@3800psi. on 18/64" choke. 22 minutes to drill plug. Pump 43 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
21:30	00:00	Circulating Bottoms Up before we drill up plug 17, 258bbls @ 2.5bpm @ 4800psi / 2.5bbls returns @ 3800psi We finished circulating bottoms up. Closed pipe rams and bleed off pressure, opened Annular and inspected. Chris with Knight Oil Tools was present and looked at Annular and said it still looks brand new. Attached are pictures. We have equalized and opened up pipe rams and started back drilling plugs.

Report Start Date	Report End Date	24hr Activity Summary
1/29/2014	1/30/2014	Drill plugs, Lay down pipe to change out Annular bag

Start Time	End Time	Comment
00:00	01:00	Tag plug #17 at 15,624' on jt # 508, Up weight 60k, down weight 36k, , neutral 52k. 2200 free torque, 2,900 drill torque. WOB 6-8 pts, RPM @ 90-110 . . 2.5 bbl in @ 4800psi 2.5 bbl out@3800psi. on 18/64" choke. 34 minutes to drill plug. Pump 70 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.

Start Time	End Time	Comment
01:00	02:00	Tag plug #16 at 15,807' on jt # 514, Up weight 64k, down weight 38k, , neutral 54k. 2300 free torque, 2,900 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4800psi 2.5 bbl out@3800psi. on 18/64" choke. 25 minutes to drill plug. Pump 51 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
02:00	02:30	Tag plug #15 at 16,146' on jt # 525, Up weight 64k, down weight 38k, , neutral 54k. 2200 free torque, 2,900 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4600psi 2.5 bbl out@3800psi. on 18/64" choke. 41 minutes to drill plug. Pump 80 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
02:30	03:30	Circulating Bottoms Up before we drill up plug 13, 271bbls @ 2.5bpm @ 4800psi / 2.5bbls returns @ 3900psi
03:30	04:00	Tag plug #14 at 16,146' on jt # 529, Up weight 64k, down weight 40k, , neutral 54k. 2200 free torque, 3,000 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4600psi 2.5 bbl out@3900psi. on 18/64" choke. 32 minutes to drill plug. Pump 62 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
04:00	07:00	We finished circulating bottoms up. Closed pipe rams and bleed off pressure, opened Annular and inspected. Chris with Knight Oil Tools was present and looked at Annular and said it still looks brand new. Attached are pictures. We have equalized and opened up pipe rams and started back drilling plugs
07:00	08:00	Tag plug #13 at 16,397' on jt # 533, Up weight 60k, down weight 48k, , neutral 52k. 2600 free torque, 3,000 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4800psi 2.5 bbl out@3600psi. on 18/64" choke. 31 minutes to drill plug. Pump 94 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
08:00	09:00	Tag plug #12 at 16,562' on jt # 539, Up weight 60k, down weight 48k, , neutral 52k. 2500 free torque, 3,000 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4600psi 2.5 bbl out@3800psi. on 18/64" choke. 24 minutes to drill plug. Pump 85 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
09:00	10:00	Tag plug #11 at 16,760' on jt # 545, Up weight 64k, down weight 50k, , neutral 52k. 2500 free torque, 3,000 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4800psi 2.5 bbl out@3700psi. on 18/64" choke. 30 minutes to drill plug. Pump 75 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
10:00	11:00	Tag plug #10 at 16,961' on jt # 552, Up weight 64k, down weight 48k, , neutral 54k. 2200 free torque, 3,000 drill torque. 6-8 pts, RPM @ 90-110 . WOB. 2.5 bbl in @ 4500psi 2.5 bbl out@3700psi. on 18/64" choke. 25 minutes to drill plug. Pump 64 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
11:00	15:00	We finished circulating bottoms up. Closed pipe rams and bleed off pressure, opened Annular and inspected. There is minimal wear on annular. Attached are pictures. We have equalized and opened up pipe rams and started back drilling plugs.
15:00	16:30	Tag plug #9 at 17,174' on jt # 559, Up weight 64k, down weight 40k, , neutral 54k. 2300 free torque, 3,000 drill torque. 6 pts on Mill. RPM @ 90-110 . WOB. 2.5 bbl in @ 4300psi 2.5 bbl out@3700psi. on 18/64" choke. 25 minutes to drill plug. Pump 112 bbls water with .25 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep. Plan forward- Change out annular bag, Circulate 580 bbls 2 bottom's up @ 2.5 bbls min @ 4300 psi flowback 2.5 bbls out WH pressure @3,700 psi . POOH lay down 4 jts PU Crossover 2-3/8" PH-6 X 2 3/8" EUE jt, 2-3/8" eue Hanger w/ two way check, one jt 2-3/8 eue with TIW valve, Open 7" 10k annular bleed off pressure between upper & lower pipe rams. lower into well. Sliding through lower 2 3/8 10k pipe ram. shut top 2 3/8 10k pipe ram equalize tbg hanger w/ 2 way check valve between upper & lower 2 3/8" 10k pipe rams . Open bottom 2 3/8" Wash hanger bowl with 12 bbl 120 degree water. Land tbg Hanger. Run in lock pins
16:30	18:00	Tag plug #8 at 17,366' on jt # 565
18:00	00:00	We have pumped 2 bottoms up 580bbls. We are tying back the swivel. We will start laying singles down until everyone is good with the weights. Once we have reached that point we will get ready and go through our steps to land the hanger. We have pulled 70 joints and we still cannot go down. Every 10 joints we try to go back down hole. We will keep laying singles down until everyone is good with the weights. Once we have reached that point we will get ready and go through our steps to land the hanger. We laid down 152 jts of pipe. We have 413 jts in the hole EOT @ 12,715ft ! We will PU Crossover 2-3/8" PH-6 X 2 3/8" EUE jt P110, 2-3/8" eue Hanger w/ two way check, one jt 2-3/8 eue P110 with TIW valve, Open 7" 10k annular bleed off pressure between upper & lower pipe rams and lower into well. Sliding through lower 2 3/8" 10k pipe ram, shut top 2 3/8" 10k pipe ram equalize tbg hanger w/ 2 way check valve between upper & lower 2 3/8" 10k pipe rams . Open bottom 2 3/8" Wash hanger bowl with 12 bbl 120 degree water. Land tbg Hanger. Run in All locking pins.

Report Start Date	Report End Date	24hr Activity Summary
1/30/2014	1/31/2014	Change annular bag, land hanger & RIH

Start Time	End Time	Comment
00:00	10:30	We laid down 152 jts of pipe. We have 413 jts in the hole EOT @ 12,715ft ! We will PU Crossover 2-3/8" PH-6 X 2 3/8" EUE jt P110, 2-3/8" eue Hanger w/ two way check, one jt 2-3/8 eue P110 with TIW valve, Open 7" 10k annular bleed off pressure between upper & lower pipe rams and lower into well. Sliding through lower 2 3/8" 10k pipe ram, shut top 2 3/8" 10k pipe ram equalize tbg hanger w/ 2 way check valve between upper & lower 2 3/8" 10k pipe rams . Open bottom 2 3/8" Wash hanger bowl with 40 bbl 130 degree water. Land tbg Hanger. Run in All locking pins. Had to wait on hotoiler to Heat fluid for bowl wash.

Start Time	End Time	Comment
10:30	14:30	Preformed negative test. Hanger is holding. Pressure tested hanger to 10 K. Good test. Layed down landing jt. Rigged down rig floor. Broke cap on annular preventer and changed out the bag rubber. Reinstalled annular cap. Rig down crane and rig up rig floor. Pick up Landing jt and Close Annular BOP. Pressure test annular rubber and cap to 250 psi low and 7500 psi high. Strip hanger out of well head.
14:30	15:30	Continue tripping in well with drill string. 1620pm– 425 jts in the well to be @ 13,081.84
15:30	20:30	RIH tag on 429 jt @ 13,204. P/U swivel circulating bottoms up 220 bbls, start swivel & circulating RIH
20:30	23:00	Finished pumping Bottoms up and we have run 6 jts in the hole 436 jt @ 13,430'. Plan Forward: Swivel in the hole working every 5th joint up & down without the pump just to make sure we don't have any sand stacking up behind the pipe. Basically doing a weight check just to be sure. Every 35 jts we will pump a polymer pill to the heel. Plan Forward: We have 464jts @ 14,281' in hole. We pumped a tubing volume of 53bbls along with @ 21bbl polymer sweep to the heel, 77bbls total pumped. Pump psi @ 2bpm @ 4600psi, Flowback @ 2bpm @ 3900psi. Swivel RPM @ 20-40. Swivel in the hole working every 5th joint up & down without the pump just to make sure we don't have any sand stacking up behind the pipe. Basically doing a weight check just to be sure. Every 35 jts we will pump a polymer pill to the heel.

Report Start Date	Report End Date	24hr Activity Summary
1/31/2014	2/1/2014	Finish drilling up Plugs and start pumping 800bbls botoms up.

Start Time	End Time	Comment
00:00	02:30	Plan Forward: We have 464jts @ 14,281' in hole. We pumped a tubing volume of 53bbls along with @ 21bbl polymer sweep to the heel, 77bbls total pumped. Pump psi @ 2bpm @ 4600psi, Flowback @ 2bpm @ 3900psi. Swivel RPM @ 20-40. Swivel in the hole working every 5th joint up & down without the pump just to make sure we don't have any sand stacking up behind the pipe. Basically doing a weight check just to be sure. Every 35 jts we will pump a polymer pill to the heel. Plan Forward: We have 499jts @ 15,356' in hole. We pumped a bottoms up 271bbls along with @ 20bbl polymer sweep, 291bbls total pumped. Pump psi @ 2.5bpm @ 4500psi, Flowback @ 2.5bpm @ 3800psi. Swivel RPM @ 20-40. Swivel in the hole working every 5th joint up & down without the pump just to make sure we don't have any sand stacking up behind the pipe. Basically doing a weight check just to be sure. Every 35 jts we will pump a polymer pill to the heel.

Start Time	End Time	Comment
02:30	07:30	Plan Forward: We have 535jts @ 16,463' in hole. We pumped a tubing volume of 61bbls along with @ 20bbl polymer sweep to the heel, 81bbls total pumped. Pump psi @ 2.5bpm @ 4500psi, Flowback @ 2.5bpm @ 3800psi. Swivel RPM @ 20-40. Swivel in the hole working every 5th joint up & down without the pump just to make sure we don't have any sand stacking up behind the pipe. Basically doing a weight check just to be sure. Every 35 jts we will pump a polymer pill to the heel. Currently circulating jt 561 down. Depth-17,263.13. 4 jts away from frac plug #8.
07:30	08:45	Tag plug #8 at 17,545' on jt # 566, Up weight 60k, down weight 50k, , neutral 54k. 2600 free torque, 3,000 drill torque. 6-8 pts, RPM @ 100-110 . WOB. 2. bbl in @ 4800psi 2. bbl out@3950psi. on 18/64" choke. 56 minutes to drill plug. Pump 111 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
08:45	10:00	Tag plug #7 at 17,560' on jt # 571, Up weight 62k, down weight 48k, , neutral 54k. 2000 free torque, 2,800 drill torque. 6-8 pts, RPM @ 100-110 . WOB. 2. bbl in @ 4800psi 2. bbl out@3650psi. on 18/64" choke. 17 minutes to drill plug. Pump 47 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
10:00	11:15	Tag plug #6 at 17,760' on jt # 578, Up weight 60k, down weight 48k, , neutral 52k. 2200 free torque, 3,000 drill torque. 6-8 pts, RPM @ 100-110 . WOB. 2. bbl in @ 4500psi 2. bbl out@3700psi. on 18/64" choke. 30 minutes to drill plug. Pump 66 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
11:15	12:30	Tag plug #5 at 17,975' on jt # 585, Up weight 62k, down weight 48k, , neutral 54k. 2200 free torque, 3,000 drill torque. 6-8 pts, RPM @ 100-110 . WOB. 2. bbl in @ 4800psi 2. bbl out@3750psi. on 18/64" choke. 30 minutes to drill plug. Pump 68 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
12:30	14:30	pumping bottoms up of 250 bbls. 2 bbls per min @ 4500 psi.
14:30	16:00	Tag plug #4 at 18,178' on jt # 591, Up weight 62k, down weight 46k, , neutral 54k. 2100 free torque, 3,000 drill torque. 6-8 pts, RPM @ 100-110 . WOB. 2. bbl in @ 4800psi 2. bbl out@3650psi. on 18/64" choke. 25 minutes to drill plug. Pump 55 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.

Start Time	End Time	Comment
16:00	17:30	Tag plug #3 at 18,355' on jt # 597, Up weight 58k, down weight 46k, , neutral 50k. 2300 free torque, 3,000 drill torque. 6-8 pts, RPM @ 100-110 . WOB. 2. bbl in @ 4900psi 2. bbl out@3850psi. on 18/64" choke. 35 minutes to drill plug. Pump 74 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep.
17:30	20:30	Tag plug #2 at 18,518' on jt # 603 15' out, Up weight 58k, down weight 44k, , neutral 52k. 2200 free torque, 3,200 drill torque. 6-8 pts, RPM @ 100-110 1.8bpm @ 4800psi 2bpm out@3800psi. on 18/64" choke. 84 minutes to drill plug. Pump 151 bbls water with .0 -gal FR to 1,000 gals. Pump 20 bbl Gel sweep. Well we tagged up on jt 604 w/10' out @ 18,576'drilled on the remainder of the plug for an hour and twenty minutes putting anywhere between 3-9pts on the bit torqueing up made zero hole. Called engineer, it was decided to lay down a jt and pump 2.5 times well bore volume. Then started laying down the workstring. Before we get started on our well bore volume WFD has to change a packing in their pump
20:30	00:00	Circulated 800bbls of fluid at 2bpm @4900psi

Report Start Date	Report End Date	24hr Activity Summary
2/1/2014	2/2/2014	Circulated bottoms up and started pulling Workstring out of hole. Rigged up snubbing unit.

Start Time	End Time	Comment
00:00	06:30	We have 570bbls left to finish bottoms up, we are pumping @ 2bpm @ 4900psi & flowback @ 2.3bpm @ 3700psi. Then we will start laying down the workstring. Weatherford's pump has cracked a Packing Nut in Half. Their pump is down and we have swapped over to the Mountain States Pump. We have 340bbls left to finish bottoms up, we are pumping @ 1.5bpm @ 4500psi & flowback @ 2.0bpm @ 3700psi. After talking to Orson we will start swiveling out of the hole until Weatherford arrives with a new packing nut. Weatherford is checking to see if they have a packing nut at their shop. Plan Forward; We will continue to swivel out of the hole until pump is fixed.
06:30	16:30	Begin laying down tbng with power swivel. 0730am- Rig down power swivel. 574 jts in the hole to be @ 17,663.04. Pulling tbng with elevators now. 0830am-528 jts left in well plus bha to be @ 16,248.58 0905am-Change out tong heads. 515 jts left in well plus BHA to be @15,848.72 1040am- 460 jts left in well to be @ 14,158.50 1235pm- 410 jts left in well to be @ 12,622.83 Currently pumping down the tbng to clear the check valves. The check began to leak. Check valves are holding. 1420pm-325 jts of tbng left in well to be @ 10,616.22. 1545 pm-285 jts of tbng left in well to be @8784.24 Heating fluid for bowl was and waiting on tbng hanger. ETA for hanger on location =4pm

Start Time	End Time	Comment
16:30	18:30	PJSM-Heat fluid to 150 DEG. Pump fluid for bowl wash through stack at 1BPM @ 3700 psi. Pull to jt# 285 to be @ 8784. Bowl wash and land tbng hanger. PU Crossover 2-3/8" PH-6 X 2 3/8" EUE jt, 2-3/8" eue Hanger w/ two way check, one jt 2-3/8 eue with TIW valve, Open 7" 10k annular bleed off pressure between upper & lower pipe rams, lower into well. Sliding through lower 2 3/8 10k pipe ram. shut top 2 3/8 10k pipe ram equalize tbg hanger w/ 2 way check valve between upper & lower 2 3/8" 10k pipe rams . Open bottom 2 3/8" Wash hanger bowl with 12 bbl 120 degree water. Land tbg Hanger. Run in lock pins Pressure test tbng hanger to 10K.
18:30	20:45	Pull to jt# 285 to be @ 8784. Hanger is landed and tested We have rigged down Knights Annular and loaded on the truck. Nippling Up Snubbing unit right now and then we will start testing as Per NFX Policy. Plan forward- Test Snubbing Unit, Pull hanger and start laying down workstring until we reach balance point @ joint 211 @ 6500ft
20:45	00:00	Finsihed testing the Snubbing Unit

Report Start Date	Report End Date	24hr Activity Summary
2/2/2014	2/3/2014	Pull Workstring out of hole

Start Time	End Time	Comment
00:00	01:30	WH @ 4100psi Snubbing Unit is tested and we are ready to equalize around and get ready to pull Hanger and start laying down workstring. We will pull 63 joints and leave 222jts – 6,844ft in the hole. Plan forward- Leave 222jts - 6,844ft in the hole until daylight.
01:30	03:30	WH @ 4100psi We have unseated Hanger and laid it down along with the 2 3/8" EUE P110 joint underneath hanger. We are ready to start laying down the workstring. We will pull 63 joints and leave 222jts – 6,844ft in the hole. Plan forward- Leave 222jts - 6,844ft in the hole until daylight.
03:30	07:00	WH @ 4100psi We have pulled 63jts. We are at the balance point depth of 222jts – 6,844ft in the hole. Secure the well and SDFN until day crew arrives. Plan forward- Wait on day crew to start snubbing Workstring OOH.
07:00	10:00	We are snubbing out. WE are @ 212jts – 6,539ft in the hole. We are snubbing out. WE are @ 175jts – 5,401 ft in the hole.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
10:00	13:00	. WE are @ 175jts – 5,401 ft in the hole. In the process of stripping out of the well with 2-3/8" work string, The lower stripping ram on the snubbing unit began to leak. Subbing supervisor informed us that the rams in the stack were as follows. From top to bottom #1 ram had 2-3/8" safety rams, #2 ram had 2-7/8" safety rams, #3 ram had 2-3/8" safety rams and #4 ram had Blind rams in it. When we as the consultants on location questioned the supervisor about the ram configuration in the stack, the snubbing supervisor advised us that he had followed NFX guidelines for ram configuration. Also the snubbing supervisor informed us that he found out they were running too much system pressure on the BOP stack and that caused the ram safety packer to wear out prematurely. Shut down all operations until NFX management was notified of the ram configuration. As advised from the office we will have a PJSM, and change the entire stack out to 2-3/8" safety rams. We then will test the door seals with well pressure and make sure the doors are not leaking before resuming operations. Mountain States does not have stripping rams available to them because OEM does not make a stripping ram packer for the Chasovoy BOP stack.
13:00	18:30	Rams are changed and wellbore tested. Currently Snubbing tbng out of well. Layed down 2 jts at present to be @5277 We are snubbing out. WE are @ 135jts – 4,173 ft in the hole. 1530pm. on jt 88 to be @2725. Shut down to change out tong dies. 1545pm-on jt 80 to be @ 2479. Working on snubbing bowls. 1650pm-39 jts left in the hole to be @ 1216 WH @ 4100psi We are out of the hole with 2 3/8" Workstring & recovered all of BHA. Well is shut in and secure. Plan forward- Change Rams out on BOP stack to 2 7/8" and test snubbing stack as Per NFX Policy. (We will run to 9390ft and Land BHA Assy and Tubing / Run 2 7/8" Mule Shoe, 2 7/8" 6.5# EUE L80 6ft Pup Jt, 10K Ceramic Burst Disc, 2 7/8" 6.5# EUE L80 6ft Pup Jt, 2 7/8" XN Nipple (2.313"ID x/ 2.205" No-go), 1 Jt of 2 7/8" 6.5# EUE L80, 2 7/8" X Nipple (2.313"ID), 2 7/8" 6.5# L80 EUE Production Tubing to surface.
18:30	18:30	WH @ 4100psi We have changed out all Rams on Snubbing Unit to 2 7/8" (3 sets) and also changed out the 2 sets on Knights BOPs as well to 2 7/8". We have also changed all the Slip Dies. We are testing BOPs right now as Per NFX Policy. Plan forward- (We will run to 9390ft of 2 7/8" Production Tubing and Land BHA Assembly) / Run 2 7/8" Mule Shoe, 2 7/8" 6.5# EUE L80 6ft Pup Jt, 10K Ceramic Burst Disc, 2 7/8" 6.5# EUE L80 6ft Pup Jt, 2 7/8" XN Nipple (2.313"ID x/ 2.205" No-go), 1 Jt of 2 7/8" 6.5# EUE L80, 2 7/8" X Nipple (2.313"ID), 2 7/8" 6.5# L80 EUE Production Tubing to surface.

Report Start Date	Report End Date	24hr Activity Summary
2/3/2014	2/4/2014	Run Prodcution String

Start Time	End Time	Comment
00:00	06:00	WH @ 4100psi Hold Safety Meeting with everyone on location before we get started running 2 7/8" Production Tubing. We have finished testing the Snubbing Stack & Knights BOPs. All test were good. We are ready to start running 2 7/8" tubing in hole. Plan forward- (We will run to 9390ft of 2 7/8" Production Tubing and Land BHA Assembly) / Run 2 7/8" Mule Shoe, 2 7/8" 6.5# EUE L80 6ft Pup Jt, 10K Ceramic Burst Disc, 2 7/8" 6.5# EUE L80 6ft Pup Jt, 2 7/8" XN Nipple (2.313"ID x/ 2.205" No-go), 1 Jt of 2 7/8" 6.5# EUE L80, 2 7/8" X Nipple (2.313"ID), 2 7/8" 6.5# L80 EUE Production Tubing to surface. WH @ 4100ps 30 joints in hole Started running 9390ft x 2 7/8" 6.5# EUE L80 Production Tubing in hole. Run 2 7/8" x .44" Mule Shoe, 2 7/8" 6.5# EUE L80 6.29ft Pup Jt, .78"x 10K Ceramic Burst Disc, 2 7/8" 6.5# EUE L80 6.30ft Pup Jt, 2 7/8" x 1.28ft XN Nipple (2.313"ID x/ 2.205" No-go), 1 Jt of 2 7/8" 6.5# EUE L80, 2 7/8" x 1.17ft X Nipple (2.313"ID), 2 7/8" 6.5# L80 EUE Production Tubing to surface. Plan forward- Continue running production tubing in the well.
06:00	12:00	WH @ 3,700ps 152 joints in hole @ 4,938 ft. Fill tubing every 1,000 ft Snub in to 9,390 ft x 2 7/8" 6.5# EUE L80 Production Tubing in hole. Run 2 7/8" x .44" Mule Shoe, 2 7/8" 6.5# EUE L80 6.29ft Pup Jt, .78"x 10K Ceramic Burst Disc, 2 7/8" 6.5# EUE L80 6.30ft Pup Jt, 2 7/8" x 1.28ft XN Nipple (2.313"ID x/ 2.205" No-go), 1 Jt of 2 7/8" 6.5# EUE L80, 2 7/8" x 1.17ft X Nipple (2.313"ID), 2 7/8" 6.5# L80 EUE Production Tubing to surface. WH @ 3,700ps 173 joints in hole @ 5,617 ft. Fill tubing every 1,000 ft. Going good 210 joints in hole @ 6,812 ft. Fill tubing every 1,000 ft. Going good 226 joints in hole @ 7,328 ft. Fill tubing every 1,000 ft. Going good 260 joints in hole @ 8,415 ft. Fill tubing every 1,000 ft. Going good 290 joints in hole @ 9,386 ft.
12:00	14:00	Heat 60 bbls of fluid up for bowl wash. Pull hotoiler over to the other side of location and hook up to flow cross. Pump 60 bbls of 160 degree fluid in BOP stack and across well head for bowl wash.
14:00	15:30	Make up tbng hanger. Strip tbng hanger in well as per NFX landing procedure. Lock pins in on wellhead. Bleed off pressure on BOP stack and perform negative test. Pressure test tbng hanger 250 low and 10,000 high. Good test. Circulate parafin out of snubbing stack and flow iron.
15:30	19:30	Change annular rubber on snubbing stack. Rig down snubbing unit. ND BOP stack and NU Production tree. Perform a low test of 250 and a High test to 10,000psi.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
19:30	00:00	We have landed Production Tree and tested it as per NFX Policy. We are rigging down the Rig at present moment. Plan Forward; Pull TWCV & Pump Off ceramic disk and pump 2 tbg volumes. Then tarp the Wellhead and put the heater on for the night until Production gets here at 7am. Disc busted at 4500psi and are pumping 80bls behind that. We will shut down once 80bbls is pumped away and Tarp up & Heat wellhead until tomorrow when production gets here. Plan Forward; Continue getting rid of equipment and cleaning location..

Report Start Date	Report End Date	24hr Activity Summary
2/4/2014	2/4/2014	Clean Location

Start Time	End Time	Comment
00:00	09:00	Clean location,

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: 14-20-H62-6269

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Oil Well

8. WELL NAME and NUMBER:
Aubrey 2-15-22-3-2WH

2. NAME OF OPERATOR:
NEWFIELD PRODUCTION COMPANY

9. API NUMBER:
43013521050000

3. ADDRESS OF OPERATOR:
1001 17th Street, Suite 2000 , Denver, CO, 80202

PHONE NUMBER:
303 382-4443 Ext

9. FIELD and POOL or WILDCAT:
NORTH MYTON BENCH

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0381 FSL 1838 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SWSE Section: 10 Township: 03.0S Range: 02.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
✓ SUBSEQUENT REPORT Date of Work Completion: 10/12/2013	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: FIRMUS Construction Materia

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

This subsequent sundry is being submitted to report oil base drill cuttings which were pre-stabilized on the wells (listed below after drilling was completed and a total of 4,114 Loose Cubic Yards (LCY) of pre-stabilized construction material (FIRMUS) from those wells was placed at the Aubrey 2-15-22-3-2WH location to form the drill pad surface. Attached is the FIRMUS Post Job Report for your review and records. Pre-stabilized Construction Sources (Well oil base drill cuttings) - 1. Ute Tribal 4-18-3-3WH (API #43013513220000) & Ute Tribal 4A-18-3-3WH (API #43013518020000): 1080 LCY; 2. Velma 2-11-3-2WH (API #43013517160000): 1,187 LCY; 3. Red Cap 2-8-3-3WH (AP I #43013518770000): 520 LCY; 4. Clayburn 4-35-3-3WH (API #43013511910000): 927 LCY; 5. Ute Tribal 4-13-3-4WH (API #43013515470000): 400 LCY.

Accepted by the Utah Division of Oil, Gas and Mining
FOR RECORD ONLY
April 23, 2014

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Matt Barber	303 382-4493	Senior Regulatory Specialist
SIGNATURE		**DATE**
N/A		4/2/2014

RECEIVED: Apr. 02, 2014

FIRMUS® POST JOB REPORT

WELL NAME: Aubrey #2-15-22-3-2WH AFE #: 27590D REPORT DATE: 2-10-14

START DATE: 9-26-13 COMPLETION DATE: 10-12-13 SCOTT QUOTE #: FC2699-UT

COUNTY: Duchesne LATITUDE: 40° 13' 50.21" North LONGITUDE: 110° 05' 34.61" West

JOB SUMMARY:

Drill Cuttings were Pre-stabilized on the following wells either during drilling or after drilling was completed:

Well Name	AFE #	Pre-stabilization Date	Volume
Ute Tribal #4(4A)-18-3-3-WH	25811D	5/10/2013	1080 LCY
Velma #2-11-3-2WH	28368D	6/5/2013	1187 LCY
Red Cap #2-8-3-3WH	27196D	6/17/2013	520 LCY
Clayburn #4-35-3-3WH	28601D	6/25/2013	927 LCY
Ute Tribal #4-13-3-4WH	27547D	6/10/2013	400 LCY

A total of 4,114 Loose Cubic Yards (LCY) of pre-stabilized construction material was placed in a 410' x 360' x 1' area to form the drill pad at the Aubrey #2-15-22-3-2WH location.

Analytical testing was performed on the cuttings from the generating locations and confirmatory sampling and testing was performed for the receiving site. Confirmatory samples are taken on every 1,000 compacted cubic yards (CCY) of Pre-stabilized cuttings. Four grab samples are taken from each 1,000 CCY and composited for testing. All confirmatory Leachate and Geotechnical results fall within acceptable levels.

Attachments

Initial Analytical Results

Confirmatory Leachate Results

Confirmatory Geotechnical Results

Other: _____

ANALYTICAL SUMMARY

	Source Locations				
	Ute Tribal #4(4A)-18-3-3WH	Velma #2-11-3-2WH	Red Cap #2-8-3-3WH	Clayburn #4-35-3-3WH	Ute Tribal 4-13-3-4WH
Cubic Yards	1,080 LCY	1,187 LCY	520 LCY	927 LCY	400 LCY
Total Solids (%)	56.4	80.6	91.6	91.8	83.9
Benzene (mg/kg)	0.545	<0.250	<0.250	<0.001	<0.250
C6-C36 TPH (mg/kg)	284,000	69,200	152,000	112,000	189,000
pH (SU)	10.5	9.7	9.7	11.3	9.4
Chloride (mg/kg)	23,300	4,930	3,510	4,980	3,680
Sulfates (mg/kg)	<250	10,900	3,600	898	5,530
Metals					
Arsenic (mg/kg)	2.87	4.28	2.96	6.4	<2.50
Cadmium (mg/kg)	2.87	<2.02	<1.80	<2.50	<1.96
True Total Barium (mg/kg)	475,000	126,000	129,000	120,000	291,000
Chromium (mg/kg)	9.86	25.30	15.40	26.30	15.00
Lead (mg/kg)	6.82	5.65	3.30	11.10	2.80
Mercury (mg/kg)	0.176	0.337	0.202	0.202	0.256
Selenium (mg/kg)	2.87	<2.50	<2.50	<2.50	<2.50
Silver (mg/kg)	2.87	<2.50	<2.50	<2.50	<2.50
Zinc (mg/kg)	26.7	44.0	55.0	56.6	688.0

CONFIRMATORY TESTING SUMMARY

	Aubrey #2-15-22-3-2WH			
	Leachate Summary			
	Sample A	Sample B	Sample C	Sample D
Benzene (mg/kg)	0.00223	0.00120	0.00107	0.00163
C6-C36 TPH (mg/L)	4.36	3.98	3.95	3.44
pH (SU)	11.7	11.6	11.7	11.7
Chloride (mg/L)	116	128	183	230
Metals				
SPLP Arsenic (mg/L)	<0.00500	<0.00500	<0.00500	<0.00500
SPLP Cadmium (mg/L)	<0.00500	<0.00500	<0.00500	<0.00500
SPLP Barium (mg/L)	0.184	0.0979	0.127	0.148
SPLP Chromium (mg/L)	0.0351	0.0267	0.0314	0.0339
SPLP Lead (mg/L)	<0.00500	<0.00500	<0.00500	<0.00500
SPLP Mercury (mg/L)	<0.000200	<0.000200	<0.000200	<0.000200
SPLP Selenium (mg/L)	<0.0100	<0.0100	<0.0100	<0.0100
SPLP Silver (mg/L)	<0.00500	<0.00500	<0.00500	<0.00500
SPLP Zinc (mg/L)	<0.00500	<0.00500	<0.00500	<0.00500

Aubrey #2-15-22-3-2WH				
Geotechnical Results				
	A	B	C	D
Compressive Strength (psi)	187.7	129.1	171.4	128.1
Hydraulic Conductivity (cm/sec)	2.35E-06	1.49E-06	2.02E-06	1.37E-06

Aubrey
#2-15-22-3-2WH

GCO Labs, LLC
3505 West Loop 281
Longview, Texas 75604
903 / 291-0137
www.gco-labs.com

Customer: J. Blake Scott
Scott Environmental Services, Inc.
P.O. Box 6215
Longview, Texas 75608
USA

Project: **FC2699-UT**
Cust. Sample: **Firmus-A**
Lab ID: 131220P001

Collected: 10/10/2013
Received: 12/20/2013
Report Date: 1/15/2014

Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	116	mg/L	LA 29B	12/31/2013	11:27	fgo
pH@25C on 7-Day Leach	11.7	SU	LA 29B	12/30/2013	13:39	fgo
Prep. 7-Day Day Leachate	1,880	g	LA29B*Modified	12/23/2013	14:00	fgo
Total Solids for Dry Wt	85.6	%	SM 2540 G	12/23/2013	9:00	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	12/29/2013	14:35	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	12/29/2013	14:50	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	12/31/2013	7:50	fgo
SPLP Arsenic	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Barium	0.184	mg/L	SW-846 6010B	1/2/2013	14:13	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Chromium	0.0351	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Selenium	< 0.0100	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Silver	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Zinc	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	12/30/2013	13:00	fgo
SPLP Mercury	< 0.000200	mg/L	SW-846 7470A	1/3/2014	14:41	fgo
SPLP Benzene	0.00223	mg/L	SW-846 8260B	12/31/2013	11:30	fgo
1005 TPH Extraction	3/116	mL/mL	TNRCC TX 1005	12/31/2013	8:58	fgo
C12 - C28 TPH, 7-Day Leach	4.36	mg/L	TNRCC TX 1005	12/20/2013	12:30	fgo
C28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	12:30	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	12:30	fgo
C6 - C36 TPH, 7-Day Leach	4.36	mg/L	TNRCC TX 1005	12/20/2013	12:30	fgo

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Longview, Texas 75604
903 / 291-0137
www.gco-labs.com

Project: **FC2699-UT** Collected; 10/10/2013

Cust. Sample: **Firmus-B** Received: 12/20/2013

Lab ID: 131220P002 Report Date: 1/15/2014

Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	128	mg/L	LA 29B	12/31/2013	12:27	fgo
pH@25C on 7-Day Leach	11.6	SU	LA 29B	12/30/2013	13:39	fgo
Prep. 7-Day Day Leachate	2,000	g	LA29B*Modified	12/23/2013	14:00	fgo
Total Solids for Dry Wt	84.2	%	SM 2540 G	12/23/2013	9:00	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	12/29/2013	14:35	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	12/29/2013	14:50	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	12/31/2013	7:50	fgo
SPLP Arsenic	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Barium	0.0979	mg/L	SW-846 6010B	1/2/2013	14:13	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Chromium	0.0267	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Selenium	< 0.0100	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Silver	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Zinc	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	12/30/2013	13:00	fgo
SPLP Mercury	< 0.000200	mg/L	SW-846 7470A	1/3/2014	14:41	fgo
SPLP Benzene	0.00120	mg/L	SW-846 8260B	12/31/2013	12:46	fgo
1005 TPH Extraction	3/116	mL/mL	TNRCC TX 1005	12/31/2013	8:58	fgo
C12 - C28 TPH, 7-Day Leach	3.98	mg/L	TNRCC TX 1005	12/20/2013	13:57	fgo
C28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	13:57	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	13:57	fgo
C6 - C36 TPH, 7-Day Leach	3.98	mg/L	TNRCC TX 1005	12/20/2013	13:57	fgo

GCO Labs, LLC
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Longview, Texas 75604
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www.gco-labs.com

Project: **FC2699-UT** Collected; 10/10/2013

Cust. Sample: **Firmus-C** Received: 12/20/2013

Lab ID: 131220P003 Report Date: 1/15/2014

Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	183	mg/L	LA 29B	12/31/2013	12:41	fgo
pH@25C on 7-Day Leach	11.7	SU	LA 29B	12/30/2013	13:39	fgo
Prep. 7-Day Day Leachate	1,990	g	LA29B*Modified	12/23/2013	14:00	fgo
Total Solids for Dry Wt	82.4	%	SM 2540 G	12/23/2013	9:00	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	12/29/2013	14:35	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	12/29/2013	14:50	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	12/31/2013	7:50	fgo
SPLP Arsenic	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Barium	0.127	mg/L	SW-846 6010B	1/2/2013	14:13	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Chromium	0.0314	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Selenium	< 0.0100	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Silver	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Zinc	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	12/30/2013	13:00	fgo
SPLP Mercury	< 0.000200	mg/L	SW-846 7470A	1/3/2014	14:41	fgo
SPLP Benzene	0.00107	mg/L	SW-846 8260B	12/31/2013	13:12	fgo
1005 TPH Extraction	3/116	mL/mL	TNRCC TX 1005	12/31/2013	8:58	fgo
C12 - C28 TPH, 7-Day Leach	3.95	mg/L	TNRCC TX 1005	12/20/2013	14:26	fgo
C28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	14:26	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	14:26	fgo
C6 - C36 TPH, 7-Day Leach	3.95	mg/L	TNRCC TX 1005	12/20/2013	14:26	fgo

GCO Labs, LLC
3505 West Loop 281
Longview, Texas 75604
903 / 291-0137
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Project: **FC2699-UT**
Cust. Sample: **Firmus-D**
Lab ID: 131220P004

Collected; 10/10/2013
Received: 12/20/2013
Report Date: 1/15/2014

Analysis	Results	Units	Method	Date	Time	Tech
Chloride, 7-Day Leach	230	mg/L	LA 29B	12/31/2013	12:54	fgo
pH@25C on 7-Day Leach	11.7	SU	LA 29B	12/30/2013	13:39	fgo
Prep. 7-Day Day Leachate	1,930	g	LA29B*Modified	12/23/2013	14:00	fgo
Total Solids for Dry Wt	83.8	%	SM 2540 G	12/23/2013	9:00	fgo
SPLP Extraction: Non-Volatile	Completed	Result	SW-846 1312	12/29/2013	14:35	fgo
SPLP ZHE Extraction	100% Solid	mL/g	SW-846 1312	12/29/2013	14:50	fgo
Metals Digestion SPLP 3010	50/100	mL/mL	SW-846 3010B	12/31/2013	7:50	fgo
SPLP Arsenic	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Barium	0.148	mg/L	SW-846 6010B	1/2/2013	14:13	fgo
SPLP Cadmium	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Chromium	0.0339	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Lead	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Selenium	< 0.0100	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Silver	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
SPLP Zinc	< 0.00500	mg/L	SW-846 6010B	1/2/2014	14:13	fgo
Metal Digestion SPLP 7470	50/50	mL/mL	SW-846 7470A	12/30/2013	13:00	fgo
SPLP Mercury	< 0.000200	mg/L	SW-846 7470A	1/3/2014	14:41	fgo
SPLP Benzene	0.00163	mg/L	SW-846 8260B	12/31/2013	13:37	fgo
1005 TPH Extraction	3/117	mL/mL	TNRCC TX 1005	12/31/2013	8:58	fgo
C12 - C28 TPH, 7-Day Leach	3.44	mg/L	TNRCC TX 1005	12/20/2013	14:55	fgo
C28 - C36 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	14:55	fgo
C6 - C12 TPH, 7-Day Leach	< 1.50	mg/L	TNRCC TX 1005	12/20/2013	14:55	fgo
C6 - C36 TPH, 7-Day Leach	3.44	mg/L	TNRCC TX 1005	12/20/2013	14:55	fgo

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Quality Control Data

Analyte	QC Parameter		Result	Units	Reference Value	Units
Chloride, 7-Day	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	98.8	%	True Value	20 ppm
	CCV2	Recovery	91.4	%	True Value	10 ppm
	CCV3	Recovery	94.6	%	True Value	10 ppm
	Dup-A	A Reading	116	ppm		
	Dup-B	B Reading	114	ppm		
	Dup-RPD1	Relative% Difference	2.17	%		
	MS	Recovery	94.5	%	Spike Amount	8 ppm
C6-C12 TPH, 7-Day	Blank	Method Blank	< 1.5	ppm		
	CCV1	Recovery	94.5	%	True Value	1000 ppm
	CCV2	Recovery	108	%	True Value	1000 ppm
	LCS	Recovery	97.6	%	Spike Amount	500 ppm
	LCSD	Recovery	109	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	11.1	%		
	MS	Recovery	100	%	Spike Amount	500 ppm
	MSD	Recovery	102	%	Spike Amount	500 ppm
	MS-RPD	Relative% Difference	1.73	%		
C12-C28 TPH, 7-Day	Blank	Method Blank	< 1.5	ppm		
	CCV1	Recovery	103	%	True Value	500 ppm
	CCV2	Recovery	123	%	True Value	1000 ppm
	LCS	Recovery	122	%	Spike Amount	500 ppm
	LCSD	Recovery	125	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	1.99	%		
	MS	Recovery	105	%	Spike Amount	500 ppm
	MSD	Recovery	91.4	%	Spike Amount	500 ppm
	MS-RPD	Relative% Difference	13.6	%		
SPLP Benzene	Blank	Method Blank	< 0.0010	ppm		
	CCV1	Recovery	101	%	True Value	0.02 ppm
	LCS	Recovery	105	%	Spike Amount	0.02 ppm
	LCSD	Recovery	105	%	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	0.571	%		
	MS	Recovery	108	%	Spike Amount	0.02 ppm
	MSD	Recovery	106	%	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	1.9	%	0.02	
pH on 7-Day	Dup-A(pH)	Reading	11.68	SU		
	Dup-B(pH)	Reading	11.68	SU		
	Dup-RPD1	Relative% Difference	<1	%		
	pH 10 Buffer(1st)	Reading	9.96	SU	True Value	10.01 SU

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	pH 10 Buffer(2nd)	Reading	9.96	SU	True Value	10.01 SU
SPLP Silver	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	99.9	%	True Value	2 ppm
	CCV2	Recovery	97.1	%	True Value	2 ppm
	ICV	Recovery	106	%	True Value	1 ppm
	LCS	Recovery	101	%	Spike Amount	0.2 ppm
	LCSD	Recovery	106	%	Spike Amount	0.2 ppm
	LCS-RPD	Relative% Difference	4.58	%		
	MS	Recovery	106	%	Spike Amount	0.2 ppm
	MSD	Recovery	103	%	Spike Amount	0.2 ppm
	MS-RPD	Relative% Difference	3.17	%		
SPLP Arsenic	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	100	%	True Value	10 ppm
	CCV2	Recovery	94.4	%	True Value	10 ppm
	ICV	Recovery	104	%	True Value	5 ppm
	LCS	Recovery	117	%	Spike Amount	1 ppm
	LCSD	Recovery	98.3	%	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	17.3	%		
	MS	Recovery	96.2	%	Spike Amount	1 ppm
	MSD	Recovery	99	%	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	2.8	%		
SPLP Barium	Blank	Method Blank	< 0.020	ppm		
	CCV1	Recovery	100	%	True Value	10 ppm
	CCV2	Recovery	104	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	101	%	Spike Amount	1 ppm
	LCSD	Recovery	106	%	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	4.52	%		
	MS	Recovery	95.2	%	Spike Amount	1 ppm
	MSD	Recovery	107	%	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	11.7	%		
SPLP Cadmium	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	99.1	%	True Value	5 ppm
	CCV2	Recovery	94.3	%	True Value	5 ppm
	ICV	Recovery	103	%	True Value	2.5 ppm
	LCS	Recovery	91.5	%	Spike Amount	0.5 ppm
	LCSD	Recovery	95.3	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	4.09	%		
	MS	Recovery	86.4	%	Spike Amount	0.5 ppm
	MSD	Recovery	84	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	2.86	%		
SPLP Chromium	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	99.5	%	True Value	10 ppm
	CCV2	Recovery	95.4	%	True Value	10 ppm
	ICV	Recovery	104	%	True Value	5 ppm
	LCS	Recovery	117	%	Spike Amount	1 ppm
	LCSD	Recovery	99.8	%	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	16	%		
	MS	Recovery	90.4	%	Spike Amount	1 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	MSD	Recovery	91.9	%	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	1.59	%		
SPLP Mercury	Blank	Method Blank	< 0.00020	ppm		
	CCV1	Recovery	104	%	True Value	0.005 ppm
	CCV2	Recovery	102	%	True Value	0.005 ppm
	LCS	Recovery	99.5	%	Spike Amount	0.01 ppm
	LCSD	Recovery	103	%	Spike Amount	0.01 ppm
	LCS-RPD	Relative% Difference	1.95	%		
	MS	Recovery	108	%	Spike Amount	0.01 ppm
	MSD	Recovery	109	%	Spike Amount	0.01 ppm
	MS-RPD	Relative% Difference	0.0108	%		
SPLP Lead	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	99.3	%	True Value	10 ppm
	CCV2	Recovery	96.3	%	True Value	10 ppm
	ICV	Recovery	103	%	True Value	5 ppm
	LCS	Recovery	92.7	%	Spike Amount	1 ppm
	LCSD	Recovery	96.6	%	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	4.11	%		
	MS	Recovery	86.2	%	Spike Amount	1 ppm
	MSD	Recovery	83.2	%	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	3.55	%		
SPLP Selenium	Blank	Method Blank	< 0.010	ppm		
	CCV1	Recovery	100	%	True Value	10 ppm
	CCV2	Recovery	94.8	%	True Value	10 ppm
	ICV	Recovery	105	%	True Value	5 ppm
	LCS	Recovery	114	%	Spike Amount	1 ppm
	LCSD	Recovery	97.3	%	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	15.7	%		
	MS	Recovery	92.3	%	Spike Amount	1 ppm
	MSD	Recovery	95.9	%	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	3.85	%		
SPLP Zinc	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	98.9	%	True Value	10 ppm
	CCV2	Recovery	92.2	%	True Value	10 ppm
	ICV	Recovery	103	%	True Value	5 ppm
	LCS	Recovery	92	%	Spike Amount	1 ppm
	LCSD	Recovery	95	%	Spike Amount	1 ppm
	LCS-RPD	Relative% Difference	3.13	%		
	MS	Recovery	86.3	%	Spike Amount	1 ppm
	MSD	Recovery	85.4	%	Spike Amount	1 ppm
	MS-RPD	Relative% Difference	1.09	%		
Total Solids	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	85.6	%		
	Dup-B%	B Reading	84.8	%		
	Dup-RPD1	Relative% Difference	0.933	%		

Approved by

Greg Oliver, Lab Manager

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Chain of Custody

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Report to: J. B. Scott
Company: Scott Environmental Services
Address: P.O. Box 6215
City: Longview State: Texas Zip: 7 5 6 0 8
Sampler Signature: Printed Name:

Project name/Location: FC 2699-UT
Billing Address (if different):
City: State: Zip:
PO Number:

Analysis Request

Lab Use Only	Field Identification	Date	Time	Matrix	#Bottles	Notes	* TCEQ 1005	* pH	* Chlorides	SPLP Metals	SPLP Benzene
131220P001	Firmus - A	12/10/13		solid	1 mold	* 7 day leachate	✓	✓	✓	✓	✓
131220P002	Firmus - B	12/10/13		solid	1 mold	on whole mold	✓	✓	✓	✓	✓
131220P003	Firmus - C	12/10/13		solid	1 mold		✓	✓	✓	✓	✓
131220P004	Firmus - D	12/10/13		solid	1 mold		✓	✓	✓	✓	✓

Date	Time	Relinquished by: Printed	Signature	Affiliation	Received by: Printed Name	Signature	Affiliation
12/20/13	1515	Detric Washington	Detric Washington	SESI	Linda Cress	Linda Cren	GCO Labs

Laboratory Approved by the Texas Railroad Commission

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#2-15-22-3-2WH

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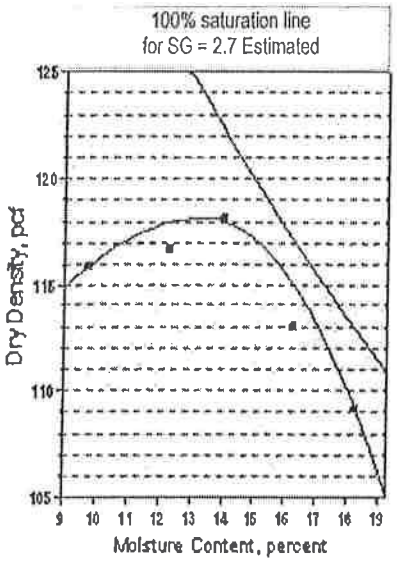
707 West Cotton St. Longview, TX 75604 (903) 758-0402

BY: _____

Acct ID: SCOTTENV File ID: C5718-131 Date Sampled: 10/10/2013
Report Date: 12/11/2013 Sampled By: Client
Project: Scott Environmental Services General File 2013, Longview, TX By Order Of: Blake Scott
Location: Material origin: Onsite, Sample location: FC2699-UT (A) Order Number:
Client: Scott Environmental Services, Longview, TX
Contractor: Scott Environmental Services, Longview, TX

REPORT: **Modified Proctor** LAB NO: S-11943
Material: POBC-A Test Method: See Below

TEST RESULTS Report No: 1-1612-000339
Page 1 of 1



% Moisture		Dry Density Lbs./Cu.Ft.	
9.7		115.8	
12.3		116.6	
13.9		118.1	
16.2		113.0	
18.3		109.0	
13.5	**Optimum**	**118.0**	**Maximum**

Color: Light Brown
Description: POBC-A

Standard Method: A
Desc of Rammer: Mechanical
Preparation Method: Moist
Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all conditions of the site.
Test Method (As Applicable): ASTM D1557, Method-A

Charge: Scott Environmental Services Attn: Blake Scott
Orig: Scott Environmental Services, Longview, TX Attn: Blake Scott

Respectfully Submitted,
ETTL Engineers & Consultants, Inc.

Hermann Walka, P.E.

ETTL Engineers & Consultants Inc.

GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A

Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

Project Information

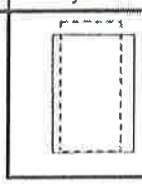
Project: SESI Job # FC 2699-UT (A)
Client/Arch./Engr.: Scott Enviromental Services Inc: Longview, Texas
Contractor: Not Given
Job No.: C5718-131

Sample Information

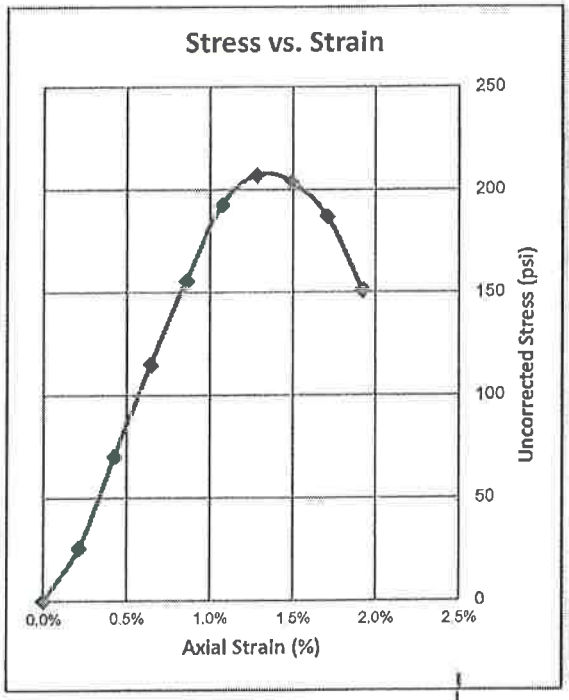
Location/Boring No: SESI Job # FC 2699-UT (A) Sample Date: 10/10/2013
Sample No.: 11943 Depth: ft.
Material Origin: On Site
Sampling Info. provided By: Client
Material Description: Light Brown POBC-A
Sampled By: SESI
Technician: Todd Sliger Test Date: 11/5/2013

Test Data

		%
		%
		%
		%
Molding Method:	**ASTM D 1557**	
Optimum Moisture Content:	13.5%	
Maximum Density:	118	pcf
Molded Moisture Content:	13.9%	
Molded Density:	118.1	pcf
Diameter Before Curing:	3.9941	in
Height Before Curing:	4.591	in
H/D Ratio Before Curing:	1.149	
Diameter After Curing:	4.043	in
Height After Curing:	4.690	in
H/D Ratio After Curing:	1.160	
Area After Curing:	12.838	in^2
H/D Correction Factor:	0.908	
Seating Load:	15	lbs.
Compression Load:	2688	lbs.
Total Load:	2703	lbs.
Confining Pressure:	0.0	psi
Maximum Stress:	210.5	psi
Corrected Maximum Stress:	**187.7**	psi
Peak Strain:	**1.3%**	
Failure Type:	Cylindrical	



Curing Method:
Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.



Respectfully Submitted,

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GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

HYDRAULIC CONDUCTIVITY DETERMINATION
FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME
(Mercury Permometer Test)

Project : SESI Job # FC 2699-UT (A) Scott Environmental Services, Longview, Texas
Date: 12/11/2013 Panel Number : 1 ASTM D 5084
Project No. : C 5718-131 Permometer Data

Boring No.:	FC 2699-UT (A)	ap =	0.031416 cm2	Set Mercury to Pipet Rp at beginning	Equilibrium	1.7	cm3
Sample:	11943	aa =	0.767120 cm2		Pipet Rp	5.1	cm3
Depth (ft):		M1 =	0.030180	C = 0.000423896	Annulus Ra	1.6	cm3
Other Location:	On Site	M2 =	1.040953	T = 0.293108296			

Material Description : Light Brown POBC-A moist cured

SAMPLE DATA

					Before Test		After Test	
Wet Wt. sample + ring or tare :			602.80	g				
Tare or ring Wt. :			0.0	g	Tare No.:	20A	Tare No.:	16
Wet Wt: of Sample :			602.80	g	Wet Wt.+tare:	628.10	Wet Wt.+tare:	757.30
Diameter :	2.81	in	7.14	cm2	Dry Wt.+tare:	568.70	Dry Wt.+tare:	655.30
Length :	2.79	in	7.08	cm	Tare Wt:	135.60	Tare Wt:	164.90
Area:	6.20	in^2	40.02	cm2	Dry Wt.:	433.1	Dry Wt.:	490.4
Volume :	17.30	in^3	283.42	cm3	Water Wt.:	59.4	Water Wt.:	102
Unit Wt.(wet):	132.72	pcf	2.13	g/cm^3	% moist.:	13.7	% moist.:	20.8
Unit Wt.(dry):	116.71	pcf	1.87	g/cm^3				

Assumed Specific Gravity: 2.60 Max Dry Density(pcf) = 118 OMC = 13.5
Void ratio (e) = 0.39 % of max Density = 98.9 +/- OMC = 0.22
Measured % saturation: 97.0%
Porosity (n)= 0.28

TEST READINGS

Z1(Mercury Height Difference @ t1): 3.6 cm Hydraulic Gradient = 6.32

Date	elapsed t (seconds)	Z (pipet @ t)	ΔZπ (cm)	temp (deg C)	α (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
11/14/2013	122	3.3	1.811708	25	0.889	2.34E-06	6.63E-03	
11/14/2013	156	3	2.111708	25	0.889	2.33E-06	6.61E-03	
11/14/2013	184	2.8	2.311708	25	0.889	2.32E-06	6.57E-03	
11/14/2013	209	2.6	2.511708	25	0.889	2.40E-06	6.81E-03	

SUMMARY

ka = 2.35E-06 cm/sec Acceptance criteria = 25 %

ki		Vm	
k1 =	2.34E-06 cm/sec	0.4	%
k2 =	2.33E-06 cm/sec	0.7	%
k3 =	2.32E-06 cm/sec	1.3	%
k4 =	2.40E-06 cm/sec	2.3	%

$Vm = \frac{|ka-ki|}{ka} \times 100$

Hydraulic conductivity	k =	2.35E-06	cm/sec	6.66E-03	ft/day
Void Ratio	e =	0.39			
Porosity	n =	0.28			
Bulk Density	γ =	2.13	g/cm3	132.7	pcf
Water Content	W =	0.26	cm3/cm3	(at 20 deg C)	
Intrinsic Permeability	kint =	2.41E-11	cm2	(at 20 deg C)	

Respectfully submitted

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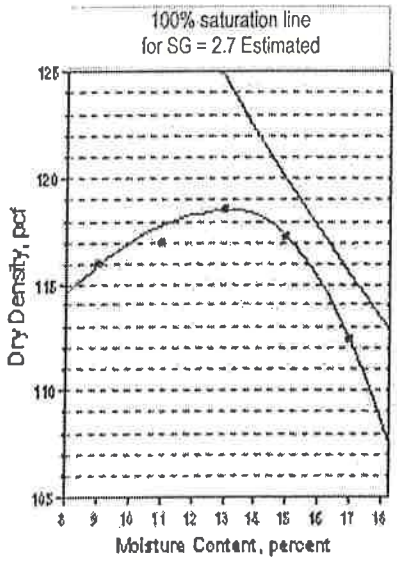
Acct ID: SCOTTENV
File ID: C5718-131
Date Sampled: 10/10/2013
Report Date: 12/11/2013
Sampled By: Client
Project: Scott Environmental Services General File 2013, Longview, TX
By Order Of: Blake Scott
Location: Material origin: Onsite, Sample location: FC2699-UT (B)
Order Number:
Client: Scott Environmental Services, Longview, TX
Contractor: Scott Environmental Services, Longview, TX

REPORT: **Modified Proctor**
LAB NO: S-11946
Material: POBC-B
Test Method: See Below

TEST RESULTS
Report No: 1-1612-000340
Page 1 of 1



% Moisture		Dry Density Lbs./Cu.Ft.	
13.0		118.5	
14.9		117.2	
16.9		112.7	
9.0		115.9	
11.1		116.9	
13.5	**Optimum**	**118.5**	**Maximum**

Color: Light Brown
Description: POBC-B

Standard Method:
Desc of Rammer: Mechanical
Preparation Method: Dry
Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all conditions of the site.
Test Method (As Applicable): ASTM D1557

Charge: Scott Environmental Services Attn: Blake Scott
Orig: Scott Environmental Services, Longview, TX Attn: Blake Scott

Respectfully Submitted,
ETTL Engineers & Consultants, Inc.

Hermann Walka, P.E.

ETTL Engineers & Consultants Inc.

GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A

Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

Project Information

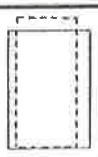
Project: SESI Job # FC 2699-UT (B)
Client/Arch./Engr.: Scott Enviromental Services Inc: Longview, Texas
Contractor: Not Given
Job No.: C5718-131

Sample Information

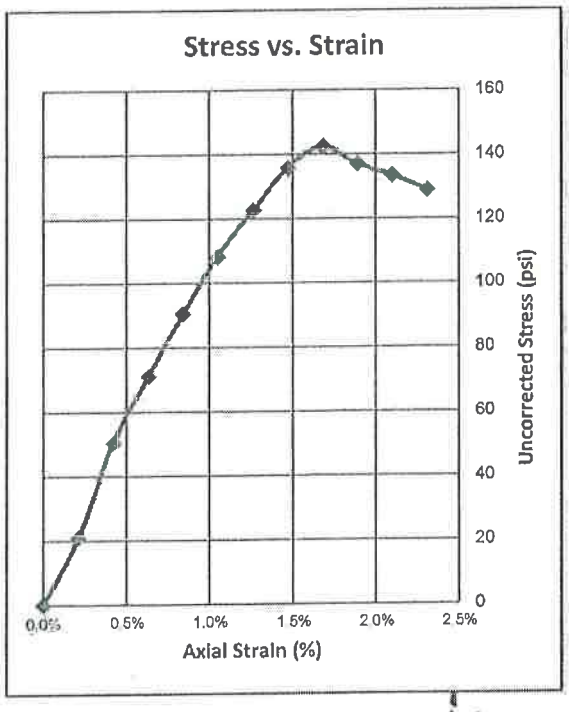
Location/Boring No: SESI Job # FC 2699-UT (B) Sample Date: 10/10/2013
Sample No.: 11946 Depth: ft.
Material Origin: On Site
Sampling Info. provided By: Client
Material Description: Light Brown POBC-B
Sampled By: SESI
Technician: Todd Sliger Test Date: 11/5/2013

Test Data

		%
		%
		%
		%
Molding Method:	**ASTM D 1557**	
Optimum Moisture Content:	13.5%	
Maximum Density:	118.5	pcf
Molded Moisture Content:	13.0%	
Molded Density:	118.5	pcf
Diameter Before Curing:	3.9941	in
Height Before Curing:	4.591	in
H/D Ratio Before Curing:	1.149	
Diameter After Curing:	4.119	in
Height After Curing:	4.764	in
H/D Ratio After Curing:	1.157	
Area After Curing:	13.325	in^2
H/D Correction Factor:	0.908	
Seating Load:	15	lbs.
Compression Load:	1927	lbs.
Total Load:	1942	lbs.
Confining Pressure:	0.0	psi
Maximum Stress:	145.8	psi
Corrected Maximum Stress:	**129.1**	psi
Peak Strain:	**1.7%**	
Failure Type:	Cylindrical	



Curing Method:
Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.



Respectfully Submitted,

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GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

HYDRAULIC CONDUCTIVITY DETERMINATION
FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME
(Mercury Permometer Test)

Project : SESI Job # FC 2699-UT (B) Scott Environmental Services, Longview, Texas
Date: 12/11/2013 Panel Number : 2 ASTM D 5084
Project No. : C 5718-131 Permometer Data

Boring No.:	FC 2699-UT (B)	ap =	0.031416	cm2	Set Mercury to Pipet Rp at beginning	Equilibrium	1.8	cm3
Sample:	11946	aa =	0.767120	cm2		Pipet Rp	5.1	cm3
Depth (ft):		M1 =	0.030180	C = 0.000423759		Annulus Ra	1.7	cm3
Other Location:	On Site	M2 =	1.040953	T = 0.30226793				

Material Description : Light Brown POBC-B

SAMPLE DATA

					Before Test		After Test	
Wet Wt. sample + ring or tare :			642.70	g	Tare No.:	14	Tare No.:	18
Tare or ring Wt. :			0.0	g	Wet Wt.+tare:	615.00	Wet Wt.+tare:	753.30
Wet Wt: of Sample :			642.70	g	Dry Wt.+tare:	554.10	Dry Wt.+tare:	646.30
Diameter :	2.85	in	7.24	cm2	Tare Wt:	123.20	Tare Wt:	128.20
Length :	2.87	in	7.28	cm	Dry Wt.:	430.9	Dry Wt.:	518.1
Area:	6.38	in^2	41.14	cm2	Water Wt.:	60.9	Water Wt.:	107
Volume :	18.27	in^3	299.39	cm3	% moist.:	14.1	% moist.:	20.7
Unit Wt.(wet):	133.95	pcf	2.15	g/cm^3				
Unit Wt.(dry):	117.37	pcf	1.88	g/cm^3				

Assumed Specific Gravity: 2.60 Max Dry Density(pcf) = 118.5 OMC = 13.5
Void ratio (e) = 0.38 % of max Density = 99.0 +/- OMC = 0.63
Measured % saturation: 97.0%
Porosity (n)= 0.28

TEST READINGS

Z1(Mercury Height Difference @ t1): 3.4 cm Hydraulic Gradient = 5.96

Date	elapsed t (seconds)	Z (pipet @ t)	ΔZπ (cm)	temp (deg C)	α (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
11/14/2013	222	3.2	1.908323	25	0.889	1.46E-06	4.14E-03	
11/14/2013	255	3	2.108323	25	0.889	1.50E-06	4.25E-03	
11/14/2013	300	2.8	2.308323	25	0.889	1.50E-06	4.26E-03	
11/14/2013	358	2.6	2.508323	25	0.889	1.49E-06	4.24E-03	

SUMMARY

ka = 1.49E-06 cm/sec Acceptance criteria = 25 %

ki		Vm	
k1 =	1.46E-06 cm/sec	2.0	%
k2 =	1.50E-06 cm/sec	0.7	%
k3 =	1.50E-06 cm/sec	0.9	%
k4 =	1.49E-06 cm/sec	0.4	%

$$Vm = \frac{|ka - ki|}{ka} \times 100$$

Hydraulic conductivity	k =	1.49E-06	cm/sec	4.22E-03	ft/day
Void Ratio	e =	0.38			
Porosity	n =	0.28			
Bulk Density	γ =	2.15	g/cm3	134.0	pcf
Water Content	W =	0.27	cm3/cm3	(at 20 deg C)	
Intrinsic Permeability	kint =	1.53E-11	cm2	(at 20 deg C)	

Respectfully submitted

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#2-15-22-3-2WH

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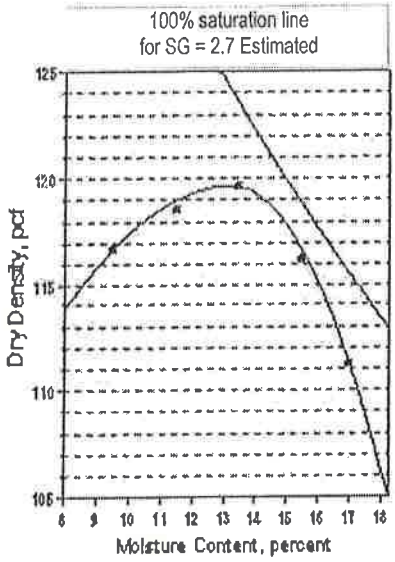
Acct ID: SCOTTENV
File ID: C5718-131
Date Sampled: 10/10/2013
Report Date: 12/17/2013
Sampled By: Client
Project: Scott Environmental Services General File 2013, Longview, TX
By Order Of: Blake Scott
Location: Material origin: Onsite, Sample location: FC2699-UT (C)
Order Number:
Client: Scott Environmental Services, Longview, TX
Contractor: Scott Environmental Services, Longview, TX

REPORT: **Modified Proctor**
LAB NO: S-11947
Material: POBC-C
Test Method: See Below

TEST RESULTS
Report No: 1-1612-000344
Page 1 of 1



% Moisture		Dry Density Lbs./Cu.Ft.	
11.5		118.5	
13.5		119.6	
15.5		116.1	
17.1		110.8	
9.4		116.5	
13.5	**Optimum**	**119.5**	**Maximum**

Color: Light Brown
Description: POBC-C

Standard Method: A
Desc of Rammer: Mechanical
Preparation Method: Moist
Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all conditions of the site.
Test Method (As Applicable): ASTM D1557, Method-A

Charge: Scott Environmental Services Attn: Blake Scott
Orig: Scott Environmental Services, Longview, TX Attn: Blake Scott

Respectfully Submitted,
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GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A

Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

Project Information

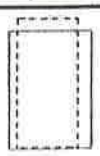
Project: SESI Job # FC 2699-UT (C)
Client/Arch./Engr.: Scott Enviromental Services Inc: Longview, Texas
Contractor: Not Given
Job No.: C5718-131

Sample Information

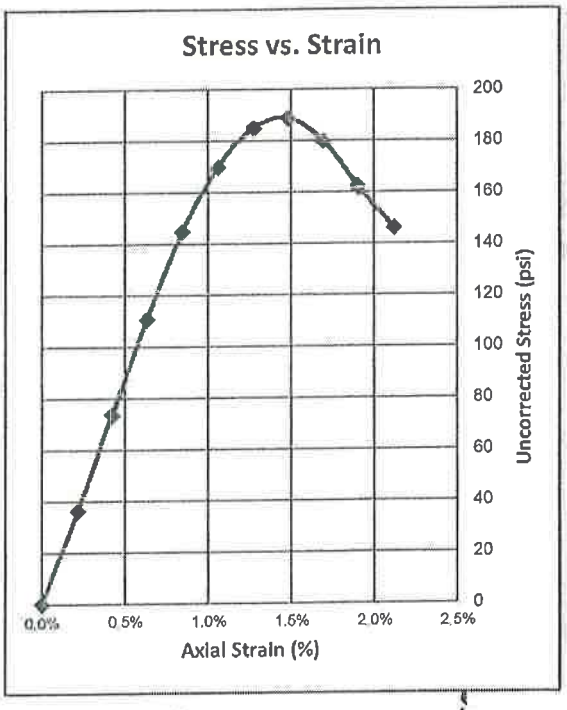
Location/Boring No: SESI Job # FC 2699-UT (C) Sample Date: 10/10/2013
Sample No.: 11947 Depth: ft.
Material Origin: On Site
Sampling Info. provided By: Client
Material Description: Light Brown POBC-C
Sampled By: SESI
Technician: Todd Sliger Test Date: 11/7/2013

Test Data

		%
		%
		%
		%
Molding Method:	ASTM D 1557	
Optimum Moisture Content:	13.5%	
Maximum Density:	119.5	pcf
Molded Moisture Content:	13.5%	
Molded Density:	119.6	pcf
Diameter Before Curing:	3.9941	in
Height Before Curing:	4.591	in
H/D Ratio Before Curing:	1.149	
Diameter After Curing:	4.071	in
Height After Curing:	4.726	in
H/D Ratio After Curing:	1.161	
Area After Curing:	13.016	in^2
H/D Correction Factor:	0.909	
Seating Load:	15	lbs.
Compression Load:	2492	lbs.
Total Load:	2507	lbs.
Confining Pressure:	0.0	psi
Maximum Stress:	192.6	psi
Corrected Maximum Stress:	**171.4**	psi
Peak Strain:	1.5%	
Failure Type:	Cylindrical	



Curing Method:
Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.



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GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

HYDRAULIC CONDUCTIVITY DETERMINATION
FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME
(Mercury Permometer Test)

Project : SESI Job # FC 2699-UT (C) Scott Environmental Services, Longview, Texas
Date: 12/16/2013 Panel Number : 1 ASTM D 5084
Project No. : C 5718-131 Permometer Data

Boring No.:	FC 2699-UT (C)	ap =	0.031416 cm2	Set Mercury to Pipet Rp at beginning	Equilibrium	1.7	cm3
Sample:	11947	aa =	0.767120 cm2		Pipet Rp	5.1	cm3
Depth (ft):		M1 =	0.030180	C = 0.000413467	Annulus Ra	1.6	cm3
Other Location:	On Site	M2 =	1.040953	T = 0.293108296			
Material Description :	Light Brown POBC-C						

SAMPLE DATA

					Before Test		After Test	
Wet Wt. sample + ring or tare :			658.90	g	Tare No.:	#3	Tare No.:	4K
Tare or ring Wt. :			0.0	g	Wet Wt.+tare:	517.50	Wet Wt.+tare:	755.10
Wet Wt: of Sample :			658.90	g	Dry Wt.+tare:	466.30	Dry Wt.+tare:	665.90
Diameter :	2.88	in	7.31	cm2	Tare Wt:	92.60	Tare Wt:	156.00
Length :	2.85	in	7.25	cm	Dry Wt.:	373.7	Dry Wt.:	509.9
Area:	6.51	in^2	41.99	cm2	Water Wt.:	51.2	Water Wt.:	89.2
Volume :	18.57	in^3	304.36	cm3	% moist.:	13.7	% moist.:	17.5
Unit Wt.(wet):	135.09	pcf	2.16	g/cm^3				
Unit Wt.(dry):	118.81	pcf	1.90	g/cm^3				

Assumed Specific Gravity: 2.60 Max Dry Density(pcf) = 119.5 OMC = 13.5
Void ratio (e) = 0.37 % of max Density = 99.4 +/- OMC = 0.20
Measured % saturation: 99.0%
Porosity (n)= 0.27

TEST READINGS

Z1(Mercury Height Difference @ t1): 3.6 cm Hydraulic Gradient = 6.17

Date	elapsed t (seconds)	Z (pipet @ t)	ΔZπ (cm)	temp (deg C)	α (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
11/18/2013	116	3.5	1.611708	26.5	0.860	1.96E-06	5.55E-03	
11/18/2013	172	3	2.111708	26.5	0.860	1.99E-06	5.65E-03	
11/18/2013	202	2.75	2.361708	26.5	0.860	2.07E-06	5.88E-03	
11/18/2013	252	2.5	2.611708	26.5	0.860	2.05E-06	5.80E-03	

SUMMARY

ka = 2.02E-06 cm/sec Acceptance criteria = 25 %

ki		Vm	
k1 =	1.96E-06 cm/sec	2.9	%
k2 =	1.99E-06 cm/sec	1.2	%
k3 =	2.07E-06 cm/sec	2.7	%
k4 =	2.05E-06 cm/sec	1.4	%

$$Vm = \frac{|ka - ki|}{ka} \times 100$$

Hydraulic conductivity	k =	2.02E-06	cm/sec	5.72E-03	ft/day
Void Ratio	e =	0.37			
Porosity	n =	0.27			
Bulk Density	γ =	2.16	g/cm3	135.1	pcf
Water Content	W =	0.26	cm3/cm3	(at 20 deg C)	
Intrinsic Permeability	kint =	2.07E-11	cm2	(at 20 deg C)	

Respectfully submitted

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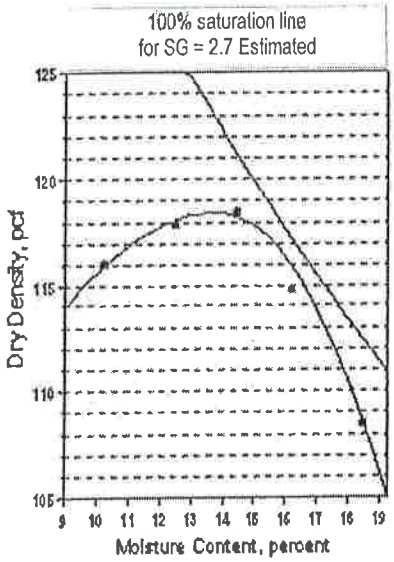
Acct ID: SCOTTENV File ID: C5718-131 Date Sampled: 10/10/2013
Report Date: 12/17/2013 Sampled By: Client
Project: Scott Environmental Services General File 2013, Longview, TX By Order Of: Blake Scott
Location: Material origin: Onsite, Sample location: FC2699-UT (D) Order Number:
Client: Scott Environmental Services, Longview, TX
Contractor: Scott Environmental Services, Longview, TX

REPORT: **Modified Proctor** LAB NO: S-11948
Material: POBC-D Test Method: See Below

TEST RESULTS Report No: 1-1612-000345
Page 1 of 1



% Moisture		Dry Density Lbs./Cu.Ft.	
10.3		116.0	
12.6		117.8	
14.4		118.4	
16.2		114.8	
18.4		108.9	
14.0	**Optimum**	**118.5**	**Maximum**

Color: Light Brown
Description: POBC-D

Standard Method: A
Desc of Rammer: Mechanical
Preparation Method: Moist
Remarks: These tests were performed solely at the request of the Client for his own use. No warranties are expressed or implied regarding the suitability of the site for construction or whether or not the reported data represents all conditions of the site.
Test Method (As Applicable): ASTM D1557, Method-A

Charge: Scott Environmental Services Attn: Blake Scott
Orig: Scott Environmental Services, Longview, TX Attn: Blake Scott

Respectfully Submitted,
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ETTL Engineers & Consultants Inc.

GEOTECHNICAL * MATERIALS * ENVIRONMENTAL * DRILLING * LANDFILLS

Compressive Strength of Molded Soil-Cement Cylinders, ASTM D 1633 Method A

Unconfined Compressive Strength of Compacted Soil-Lime Mixtures, ASTM D 5102 Procedure B

Project Information

Project: SESI Job # FC 2699-UT (D)
Client/Arch./Engr.: Scott Enviromental Services Inc: Longview, Texas
Contractor: Not Given
Job No.: C5718-131

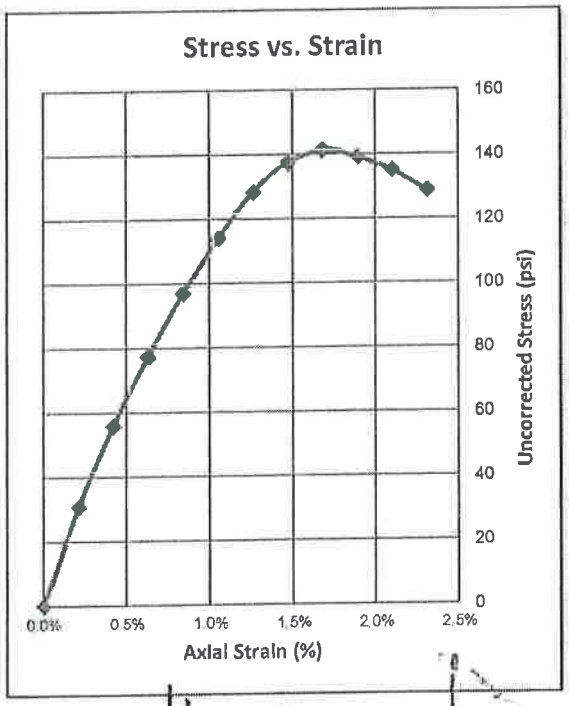
Sample Information

Location/Boring No: **SESI Job # FC 2699-UT (D)** Sample Date: 10/10/2013
Sample No.: **11948** **Depth:** ft.
Material Origin: On Site
Sampling Info. provided By: Client
Material Description: Light Brown POBC-D
Sampled By: SESI
Technician: Todd Sliger Test Date: 11/7/2013

Test Data

		%
		%
		%
		%
Molding Method:	**ASTM D 1557**	
Optimum Moisture Content:	14.0%	
Maximum Density:	118.5	pcf
Molded Moisture Content:	14.4%	
Molded Density:	118.4	pcf
Diameter Before Curing:	3.9941	in
Height Before Curing:	4.591	in
H/D Ratio Before Curing:	1.149	
Diameter After Curing:	4.111	in
Height After Curing:	4.761	in
H/D Ratio After Curing:	1.158	
Area After Curing:	13.273	in^2
H/D Correction Factor:	0.908	
Seating Load:	15	lbs.
Compression Load:	1904	lbs.
Total Load:	1919	lbs.
Confining Pressure:	0.0	psi
Maximum Stress:	144.6	psi
Corrected Maximum Stress:	**128.1**	psi
Peak Strain:	**1.7%**	
Failure Type:	Cylindrical	

Curing Method:
Sample moist cured at temperature of ~73 deg F for 7 days prior to conducting test.



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FLEXIBLE WALL PERMEAMETER - CONSTANT VOLUME
(Mercury Permometer Test)

Project : SESI Job # FC 2699-UT (D) Scott Environmental Services, Longview, Texas
Date: 12/16/2013 Panel Number : 2 ASTM D 5084
Project No. : C 5718-131 Permometer Data

Boring No.:	FC 2699-UT (D)	ap =	0.031416 cm2	Set Mercury to Pipet Rp at beginning		Equilibrium	1.8	cm3
Sample:	11948	aa =	0.767120 cm2			Pipet Rp	5.1	cm3
Depth (ft):		M1 =	0.030180	C =	0.000422283	Annulus Ra	1.7	cm3
Other Location:	On Site	M2 =	1.040953	T =	0.30226793			

Material Description : Light Brown POBC-D

SAMPLE DATA

					Before Test		After Test	
Wet Wt. sample + ring or tare :			657.10	g	Tare No.:	3c	Tare No.:	H2
Tare or ring Wt. :			0.0	g	Wet Wt.+tare:	611.40	Wet Wt.+tare:	782.20
Wet Wt: of Sample :			657.10	g	Dry Wt.+tare:	550.60	Dry Wt.+tare:	679.00
Diameter :	2.87	in	7.28	cm2	Tare Wt:	127.70	Tare Wt:	150.90
Length :	2.89	in	7.34	cm	Dry Wt.:	422.9	Dry Wt.:	528.1
Area:	6.45	in^2	41.64	cm2	Water Wt.:	60.8	Water Wt.:	103.2
Volume :	18.66	in^3	305.70	cm3	% moist.:	14.4	% moist.:	19.5
Unit Wt.(wet):	134.13	pcf	2.15	g/cm^3				
Unit Wt.(dry):	117.27	pcf	1.88	g/cm^3				

Assumed Specific Gravity: 2.60 Max Dry Density(pcf) = 118.5 OMC = 14
Void ratio (e) = 0.38 % of max Density = 99.0 +/- OMC = 0.38
Measured % saturation: 99.0%
Porosity (n)= 0.28

TEST READINGS

Z1(Mercury Height Difference @ t1): 3.4 cm Hydraulic Gradient = 5.91

Date	elapsed t (seconds)	Z (pipet @ t)	ΔZπ (cm)	temp (deg C)	α (temp corr)	k (cm/sec)	k (ft./day)	Reset = *
11/18/2013	216	3.5	1.608323	26.5	0.860	1.12E-06	3.17E-03	
11/18/2013	272	3	2.108323	26.5	0.860	1.35E-06	3.84E-03	
11/18/2013	316	2.75	2.358323	26.5	0.860	1.43E-06	4.06E-03	
11/18/2013	358	2.5	2.608323	26.5	0.860	1.58E-06	4.46E-03	

SUMMARY

ka = 1.37E-06 cm/sec Acceptance criteria = 25 %

ki			Vm	
k1 =	1.12E-06	cm/sec	18.3	%
k2 =	1.35E-06	cm/sec	1.2	%
k3 =	1.43E-06	cm/sec	4.6	%
k4 =	1.58E-06	cm/sec	14.9	%

$Vm = \frac{|ka-ki|}{ka} \times 100$

Hydraulic conductivity	k =	1.37E-06	cm/sec	3.88E-03	ft/day
Void Ratio	e =	0.38			
Porosity	n =	0.28			
Bulk Density	γ =	2.15	g/cm3	134.1	pcf
Water Content	W =	0.27	cm3/cm3	(at 20 deg C)	
Intrinsic Permeability	kint =	1.40E-11	cm2	(at 20 deg C)	

Respectfully submitted

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Customer:

J. Blake Scott
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USA

Project: **S2569-UT**
Cust. Sample: **WET OBC**
Lab ID: 130509T002

Collected; 4/18/2013
Received: 5/9/2013
Report Date: 5/20/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	5/10/2013	8:00	fgo
EC at Saturation	199	mho/cm	LA 29B	5/14/2013	10:12	fgo
Electrical Conductance at 25 C	65.5	mho/cm	LA 29B	5/14/2013	10:12	fgo
Hydrophobicity	Positive	Result	LA 29B	5/10/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.5	SU	LA 29B	5/13/2013	10:43	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	5/13/2013	12:04	fgo
Saturation Water Percentage (dried s	33	%	LA 29B	5/13/2013	10:40	fgo
Sodium Adsorption Ratio	2.1	meq/meq	LA 29B	5/17/2013	16:34	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	5/13/2013	10:28	fgo
Special Total Ba Metals Prep	500/0.1309	mL/g	LA 29B	5/13/2013	12:04	fgo
Extraction (3-Day SESI)	50/5.22	mL/g	LA29B*Modified	5/10/2013	8:20	fgo
Chloride (LA29 3D EXIC)	23,300	mg/kg	LA29B-Mod SESI	5/15/2013	14:49	fgo
Free Alkalinity (Phenyl	5,770	mg/kg	SM 2320B	5/14/2013	13:00	fgo
Total Solids for Dry Wt	56.4	%	SM 2540 G	5/13/2013	13:50	fgo
Solid/Organic Metals Digestion	100/0.872	mL/g	SW-846 3050B	5/15/2013	9:15	fgo
Arsenic	2.87	mg/kg	SW-846 6010B	5/20/2013	16:34	fgo
Cadmium	2.87	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Calcium (Water Soluble)	838	meq/L	SW-846 6010B	5/17/2013	16:34	fgo
Chromium	9.86	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Lead	6.82	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	5/17/2013	16:34	fgo
Selenium	2.87	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Silver	2.87	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Sodium (Water Soluble)	43.3	meq/L	SW-846 6010B	5/17/2013	16:34	fgo
True Total Barium	475,000	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Zinc	26.7	mg/kg	SW-846 6010B	5/17/2013	16:34	fgo
Mercury	0.176	mg/kg	SW-846 7471A	5/17/2013	15:31	fgo
Solid Metal Digestion Hg	100/0.35	mL/g	SW-846 7471A	5/15/2013	9:40	fgo
Benzene	0.545	mg/kg	SW-846 8260B	5/16/2013	10:06	fgo
VOC 5035 Extraction	10/10.3	mg/kg	SW-846 8260B	5/15/2013	17:00	fgo
Sulfate	< 250	mg/kg	Tex-620-J	5/15/2013	16:36	fgo
Sulfate Extraction/Leaching	50/5.01	mL/g	Tex-620-J	5/14/2013	15:40	fgo
1005 TPH Extraction Solid	10/10.4	mL/g	TNRCC TX 1005	5/15/2013	17:00	fgo
C12 to C28 TPH	225,000	mg/kg	TNRCC TX 1005	5/16/2013	10:26	fgo
C28 to C36 TPH	30,300	mg/kg	TNRCC TX 1005	5/16/2013	10:26	fgo
C6 to C12 TPH	28,800	mg/kg	TNRCC TX 1005	5/16/2013	10:26	fgo
C6 to C36 TPH	284,000	mg/kg	TNRCC TX 1005	5/16/2013	10:26	fgo

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Quality Control Data

Analyte	QC Parameter		Result	Units	Reference Value	Units
Chloride	Blank	Method Blank	< 0.10	ppm		
	CCV1	Recovery	106	%	True Value	20 ppm
	CCV2	Recovery	106	%	True Value	10 ppm
	CCV3	Recovery	108	%	True Value	10 ppm
	Dup-A	A Reading	23,300	ppm		
	Dup-B	B Reading	23,500	ppm		
	Dup-RPD1	Relative% Difference	0.88	%		
	LCS	Recovery	96.9	%	Spike Amount	9000 ppm
	LCSD	Recovery	104	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	7.27	%		
	MS	Recovery	129	%	Spike Amount	8 ppm
C6-C12 TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	107	%	True Value	1000 ppm
	CCV2	Recovery	90.3	%	True Value	1000 ppm
	Dup-A	A Reading	28,800	ppm		
	Dup-B	B Reading	31,900	ppm		
	Dup-RPD1	Relative% Difference	10.5	%		
	LCS	Recovery	87.3	%	Spike Amount	500 ppm
	LCSD	Recovery	86.2	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	1.25	%		
C12-C28 TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	109	%	True Value	1000 ppm
	CCV2	Recovery	98.6	%	True Value	1000 ppm
	Dup-A	A Reading	225,000	ppm		
	Dup-B	B Reading	253,000	ppm		
	Dup-RPD1	Relative% Difference	11.6	%		
	LCS	Recovery	85.6	%	Spike Amount	500 ppm
	LCSD	Recovery	109	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	24	%		
Benzene	Blank	Method Blank	< 0.0010	ppm		
	CCV1	Recovery	104	%	True Value	0.02 ppm
	LCS	Recovery	103	%	Spike Amount	0.02 ppm
	LCSD	Recovery	102	%	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	1.42	%		
	MS	Recovery	104	%	Spike Amount	0.02 ppm
	MSD	Recovery	94	%	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	9.91	%		
Alkalinity	Dup-A	A Reading	5,770	ppm		
	Dup-B	B Reading	6,010	ppm		
	Dup-RPD1	Relative% Difference	3.94	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Electrical Conductivity	Dup-A(EC)	Reading	65.5	mho/c		
	Dup-B(EC)	Reading	65.8	mho/c		
	Dup-RPD1	Relative% Difference	0.457	%		
	Standard1(EC)	Reading	13.31	mho/c	True Value	14.13 mho/c
	Standard2(EC)	Reading	13.3	mho/c	True Value	14.13 mho/c
SWP	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	32.9	%		
	Dup-B%	B Reading	33.2	%		
	Dup-RPD1	Relative% Difference	0.864	%		
pH at 25C	Dup-A(pH)	Reading	10.5	SU		
	Dup-B(pH)	Reading	10.51	SU		
	Dup-RPD1	Relative% Difference	0.0952	%		
	pH 10 Buffer(1st)	Reading	10.05	SU	True Value	10.01 SU
	pH 10 Buffer(2nd)	Reading	10.01	SU	True Value	10.01 SU
Sulfate	Blank	Method Blank	< 0.10	ppm		
	CCV1	Recovery	107	%	True Value	20 ppm
	CCV2	Recovery	111	%	True Value	20 ppm
	Dup-A	A Reading	< 250	ppm		
	Dup-B	B Reading	< 250	ppm		
	Dup-RPD1	Relative% Difference	1.93	%		
	LCS	Recovery	111	%	Spike Amount	3000 ppm
	LCSD	Recovery	109	%	Spike Amount	3000 ppm
	LCS-RPD	Relative% Difference	1.93	%		
	MS	Recovery	125	%	Spike Amount	10 ppm
Barium, True Total	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	101	%	True Value	10 ppm
	CCV2	Recovery	99.9	%	True Value	10 ppm
	Dup-A	A Reading	475,000	ppm		
	Dup-B	B Reading	451,000	ppm		
	Dup-RPD1	Relative% Difference	5.07	%		
	ICV	Recovery	95.3	%	True Value	5 ppm
Mercury	Blank	Method Blank	< 0.00020	ppm		
	CCV1	Recovery	101	%	True Value	0.005 ppm
	CCV2	Recovery	99.3	%	True Value	0.005 ppm
	LCS	Recovery	89.7	%	Spike Amount	0.005 ppm
	LCSD	Recovery	94.5	%	Spike Amount	0.005 ppm
	LCS-RPD	Relative% Difference	1.61	%		
	MS	Recovery	81.3	%	Spike Amount	0.005 ppm
	MSD	Recovery	79.7	%	Spike Amount	0.005 ppm
	MS-RPD	Relative% Difference	0.0192	%		
Arsenic	Blank	Method Blank	< 2.5	ppm		
	CCV2	Recovery	91.2	%	True Value	10 ppm
	CCV3	Recovery	95.3	%	True Value	10 ppm
	ICV	Recovery	98.1	%	True Value	5 ppm
	LCS	Recovery	99.3	%	Spike Amount	0.1 ppm
	LCSD	Recovery	103	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	3.71	%		
	MS	Recovery	92	%	Spike Amount	0.5 ppm
	MSD	Recovery	117	%	Spike Amount	0.5 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	MS-RPD	Relative% Difference	23.7	%		
Ca, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	99.8	%	True Value	100 ppm
	CCV2	Recovery	89.9	%	True Value	100 ppm
	Dup-A	A Reading	34,700	ppm		
	Dup-B	B Reading	35,800	ppm		
	Dup-RPD1	Relative% Difference	4.43	%		
	ICV	Recovery	97.7	%	True Value	50 ppm
Cadmium	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	87.4 L	%	True Value	5 ppm
	CCV3	Recovery	93.1	%	True Value	5 ppm
	ICV	Recovery	97.7	%	True Value	2.5 ppm
	LCS	Recovery	101	%	Spike Amount	0.05 ppm
	LCSD	Recovery	102	%	Spike Amount	0.05 ppm
	LCS-RPD	Relative% Difference	0.723	%		
	MS	Recovery	90.5	%	Spike Amount	0.25 ppm
	MSD	Recovery	109	%	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	18.2	%		
Chromium	Blank	Method Blank	< 2.5	ppm		
	CCV2	Recovery	92.5	%	True Value	10 ppm
	CCV3	Recovery	94.9	%	True Value	10 ppm
	ICV	Recovery	98.1	%	True Value	5 ppm
	LCS	Recovery	102	%	Spike Amount	0.1 ppm
	LCSD	Recovery	105	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	2.34	%		
	MS	Recovery	90.1	%	Spike Amount	0.5 ppm
	MSD	Recovery	112	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	21.8	%		
Lead	Blank	Method Blank	< 2.5	ppm		
	CCV2	Recovery	90.1	%	True Value	10 ppm
	CCV3	Recovery	94	%	True Value	10 ppm
	ICV	Recovery	97.8	%	True Value	5 ppm
	LCS	Recovery	103	%	Spike Amount	0.1 ppm
	LCSD	Recovery	103	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	0.0505	%		
	MS	Recovery	97	%	Spike Amount	0.5 ppm
	MSD	Recovery	98.3	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	1.28	%		
Mg, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	100	%	True Value	100 ppm
	CCV2	Recovery	94.1	%	True Value	100 ppm
	Dup-A	A Reading	< 0.500	ppm		
	Dup-B	B Reading	< 0.500	ppm		
	Dup-RPD1	Relative% Difference	< 1.00	%		
	ICV	Recovery	102	%	True Value	50 ppm
Na, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	101	%	True Value	100 ppm
	CCV2	Recovery	100	%	True Value	100 ppm
	Dup-A	A Reading	1,050	ppm		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	Dup-B	B Reading	1,060	ppm		
	Dup-RPD1	Relative% Difference	1.2	%		
	ICV	Recovery	101	%	True Value	50 ppm
Selenium	Blank	Method Blank	< 2.5	ppm		
	CCV2	Recovery	91.7	%	True Value	10 ppm
	CCV3	Recovery	95.7	%	True Value	10 ppm
	ICV	Recovery	100	%	True Value	5 ppm
	LCS	Recovery	106	%	Spike Amount	0.1 ppm
	LCSD	Recovery	101	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	4.94	%		
	MS	Recovery	82.9	%	Spike Amount	0.5 ppm
	MSD	Recovery	105	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	23.5	%		
Silver	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	96.1	%	True Value	2 ppm
	CCV3	Recovery	96.3	%	True Value	2 ppm
	ICV	Recovery	100	%	True Value	1 ppm
	LCS	Recovery	102	%	Spike Amount	0.02 ppm
	LCSD	Recovery	111	%	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	7.71	%		
	MS	Recovery	89.9	%	Spike Amount	0.1 ppm
	MSD	Recovery	110	%	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	20.4	%		
Zinc	Blank	Method Blank	< 2.5	ppm		
	CCV2	Recovery	85.4	%	True Value	10 ppm
	CCV3	Recovery	93	%	True Value	10 ppm
	ICV	Recovery	97.7	%	True Value	5 ppm
	LCS	Recovery	103	%	Spike Amount	0.1 ppm
	LCSD	Recovery	110	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	6.04	%		
	MS	Recovery	100	%	Spike Amount	0.5 ppm
	MSD	Recovery	129	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	25.1	%		
Total Solids	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	56.4	%		
	Dup-B%	B Reading	57.4	%		
	Dup-RPD1	Relative% Difference	1.71	%		

Approved by

Greg Oliver, Lab Manager

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Chain of Custody

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(903)291-0137
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Report to: J. B. Scott
Company: Scott Environmental Services
Address: P.O. Box 6215
City: Longview State: Texas Zip: 75608

Project name/Location: S2569-UT
Billing Address (if different):
City: State: Zip:

Sampler Signature: [signature] Printed Name: LLOYD MCWHORTER, SESI PO Number: —

Analysis Request: ROUTINE SALINITY #1 *; TCEQ 1005; BENZENE; LA29B METALS

Lab Use Only	Field Identification	Date	Time	Matrix	#Bottles	Notes	ROUTINE SALINITY #1 *	TCEQ 1005	BENZENE	LA29B METALS
130509T002	WET OBC	4/18/13	—	SLUDGE	4	(UNTREATED)	✓	✓	✓	✓

* INCL. 3-DAY CHLORIDES

Date	Time	Relinquished by: Printed	Signature	Affiliation	Received by: Printed Name	Signature	Affiliation
5/9/13	17:24	LLOYD MCWHORTER	[signature]	SESI	Linda Cross	[signature]	GCO Labs

Laboratory Approved by the Texas Railroad Commission

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Velma
#2-1-3-2WH

Customer:

J. Blake Scott
Scott Environmental Services, Inc.
P.O. Box 6215
Longview, Texas 75608
USA

Project: **S2612-UT**
Cust. Sample: **PROBC**
Lab ID: 130612O001

Collected; 5/24/2013
Received: 6/12/2013
Report Date: 6/25/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	6/13/2013	8:00	fgo
EC at Saturation	52.0	mho/cm	LA 29B	6/20/2013	15:11	fgo
Electrical Conductance at 25 C	22.2	mho/cm	LA 29B	6/20/2013	15:11	fgo
Hydrophobicity	Positive	Result	LA 29B	6/13/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	9.7	SU	LA 29B	6/19/2013	11:05	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	6/20/2013	11:00	fgo
Saturation Water Percentage (dried s	43	%	LA 29B	6/20/2013	14:19	fgo
Sodium Adsorption Ratio	4.8	meq/meq	LA 29B	6/21/2013	11:00	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	6/18/2013	15:00	fgo
Special Total Ba Metals Prep	500/0.1295	mL/g	LA 29B	6/20/2013	11:00	fgo
Extraction (3-Day SESI)	50/5.38	mL/g	LA29B*Modified	6/12/2013	15:57	fgo
Chloride (LA29 3D EXIC)	4,930	mg/kg	LA29B-Mod SESI	6/19/2013	11:39	fgo
Free Alkalinity (Phenyl	12,800	mg/kg	SM 2320B	6/21/2013	13:00	fgo
Total Solids for Dry Wt	80.6	%	SM 2540 G	6/13/2013	15:21	fgo
Solid/Organic Metals Digestion	100/1.24	mL/g	SW-846 3050B	6/13/2013	9:15	fgo
Arsenic	4.28	mg/kg	SW-846 6010B	6/21/2013	9:45	fgo
Cadmium	< 2.02	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Calcium (Water Soluble)	137	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Chromium	25.3	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Lead	5.65	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Sodium (Water Soluble)	40.0	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
True Total Barium	126,000	mg/kg	SW-846 6010B	6/21/2013	11:00	fgo
Zinc	44.0	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Mercury	0.337	mg/kg	SW-846 7471A	6/21/2013	16:30	fgo
Solid Metal Digestion Hg	100/0.50	mL/g	SW-846 7471A	6/14/2013	9:31	fgo
Benzene	< 0.250	mg/kg	SW-846 8260B	6/14/2013	12:53	fgo
VOC 5035 Extraction	10/10.5	mg/kg	SW-846 8260B	6/13/2013	11:45	fgo
Sulfate	10,900	mg/kg	Tex-620-J	6/18/2013	11:30	fgo
Sulfate Extraction/Leaching	50/5.36	mL/g	Tex-620-J	6/14/2013	16:00	fgo
1005 TPH Extraction Solid	10/10.2	mL/g	TNRCC TX 1005	6/13/2013	11:29	fgo
C12 to C28 TPH	45,800	mg/kg	TNRCC TX 1005	6/18/2013	9:59	fgo
C28 to C36 TPH	18,900	mg/kg	TNRCC TX 1005	6/18/2013	9:59	fgo
C6 to C12 TPH	4,540	mg/kg	TNRCC TX 1005	6/18/2013	9:59	fgo
C6 to C36 TPH	69,200	mg/kg	TNRCC TX 1005	6/18/2013	9:59	fgo

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Project: **S2612-UT**
Cust. Sample: **WET OBC**
Lab ID: 130612O002

Collected; 5/24/2013
Received: 6/12/2013
Report Date: 6/25/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	6/13/2013	8:00	fgo
EC at Saturation	109	mho/cm	LA 29B	6/20/2013	15:11	fgo
Electrical Conductance at 25 C	36.4	mho/cm	LA 29B	6/20/2013	15:11	fgo
Hydrophobicity	Positive	Result	LA 29B	6/13/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.5	SU	LA 29B	6/19/2013	11:05	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	6/20/2013	11:00	fgo
Saturation Water Percentage (dried s	33	%	LA 29B	6/20/2013	14:19	fgo
Sodium Adsorption Ratio	6.1	meq/meq	LA 29B	6/21/2013	11:00	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	6/18/2013	15:00	fgo
Special Total Ba Metals Prep	500/0.1117	mL/g	LA 29B	6/20/2013	11:00	fgo
Extraction (3-Day SESI)	50/5.07	mL/g	LA29B*Modified	6/12/2013	15:57	fgo
Chloride (LA29 3D EXIC)	11,900	mg/kg	LA29B-Mod SESI	6/19/2013	12:18	fgo
Free Alkalinity (Phenyl	6,710	mg/kg	SM 2320B	6/21/2013	13:00	fgo
Total Solids for Dry Wt	61.2	%	SM 2540 G	6/13/2013	15:21	fgo
Solid/Organic Metals Digestion	100/0.942	mL/g	SW-846 3050B	6/13/2013	9:15	fgo
Arsenic	2.65	mg/kg	SW-846 6010B	6/21/2013	9:45	fgo
Cadmium	2.65	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Calcium (Water Soluble)	127	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Chromium	7.86	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Lead	2.65	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Selenium	2.65	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Silver	2.65	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Sodium (Water Soluble)	49.0	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
True Total Barium	346,000	mg/kg	SW-846 6010B	6/21/2013	11:00	fgo
Zinc	29.1	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Mercury	0.294	mg/kg	SW-846 7471A	6/21/2013	16:30	fgo
Solid Metal Digestion Hg	100/0.38	mL/g	SW-846 7471A	6/14/2013	9:31	fgo
Benzene	1.05	mg/kg	SW-846 8260B	6/14/2013	14:14	fgo
VOC 5035 Extraction	10/10.2	mg/kg	SW-846 8260B	6/13/2013	11:45	fgo
Sulfate	< 155	mg/kg	Tex-620-J	6/18/2013	12:22	fgo
Sulfate Extraction/Leaching	50/5.26	mL/g	Tex-620-J	6/14/2013	16:00	fgo
1005 TPH Extraction Solid	10/10.2	mL/g	TNRCC TX 1005	6/13/2013	11:29	fgo
C12 to C28 TPH	93,200	mg/kg	TNRCC TX 1005	6/18/2013	11:10	fgo
C28 to C36 TPH	24,000	mg/kg	TNRCC TX 1005	6/18/2013	11:10	fgo
C6 to C12 TPH	14,100	mg/kg	TNRCC TX 1005	6/18/2013	11:10	fgo
C6 to C36 TPH	131,000	mg/kg	TNRCC TX 1005	6/18/2013	11:10	fgo

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Quality Control Data

Analyte	QC Parameter		Result	Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	94.8	%	True Value	20 ppm
	CCV2	Recovery	103	%	True Value	10 ppm
	CCV3	Recovery	103	%	True Value	10 ppm
	Dup-A	A Reading	4,930	ppm		
	Dup-B	B Reading	5,260	ppm		
	Dup-RPD1	Relative% Difference	6.5	%		
	LCS	Recovery	101	%	Spike Amount	9000 ppm
	LCSD	Recovery	99.5	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	1.61	%		
	MS	Recovery	109	%	Spike Amount	8 ppm
C6-C12, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	107	%	True Value	1000 ppm
	CCV2	Recovery	109	%	True Value	1000 ppm
	CCV3	Recovery	114	%	True Value	1000 ppm
	Dup-A	A Reading	4,540	ppm		
	Dup-B	B Reading	2,770	ppm		
	Dup-RPD1	Relative% Difference	48.5 H	%		
	LCS	Recovery	101	%	Spike Amount	500 ppm
	LCSD	Recovery	97.4	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	3.83	%		
C12-C28, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	106	%	True Value	1000 ppm
	CCV2	Recovery	110	%	True Value	1000 ppm
	CCV3	Recovery	119	%	True Value	1000 ppm
	Dup-A	A Reading	45,800	ppm		
	Dup-B	B Reading	40,000	ppm		
	Dup-RPD1	Relative% Difference	13.3	%		
	LCS	Recovery	116	%	Spike Amount	500 ppm
	LCSD	Recovery	107	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	7.7	%		
Benzene	Blank	Method Blank	0	ppm		
	CCV1	Recovery	92.6	%	True Value	0.02 ppm
	LCS	Recovery	99.8	%	Spike Amount	0.02 ppm
	LCSD	Recovery	97.8	%	Spike Amount	0.02 ppm
	MS	Recovery	87.6	%	Spike Amount	0.02 ppm
	MSD	Recovery	96	%	Spike Amount	0.02 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Alkalinity	Dup-A	A Reading	12,800	ppm		
	Dup-B	B Reading	11,700	ppm		
	Dup-RPD1	Relative% Difference	9.35	%		
	LCS	Recovery	111	%	Spike Amount	9000 ppm
	LCSD	Recovery	81.4	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	30.5	%		
Electrical Conductivity	Dup-A(EC)	Reading	22.16	mho/c		
	Dup-B(EC)	Reading	22.49	mho/c		
	Dup-RPD1	Relative% Difference	1.48	%		
	Standard1(EC)	Reading	14.71	mho/c	True Value	14.13 mho/c
	Standard2(EC)	Reading	13.22	mho/c	True Value	12.9 mho/c
SWP	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	42.6	%		
	Dup-B%	B Reading	44.9	%		
	Dup-RPD1	Relative% Difference	5.15	%		
pH25	Dup-A(pH)	Reading	9.72	SU		
	Dup-B(pH)	Reading	9.73	SU		
	Dup-RPD1	Relative% Difference	0.103	%		
	pH 10 Buffer(1st)	Reading	10.01	SU	True Value	10.01 SU
	pH 10 Buffer(2nd)	Reading	9.98	SU	True Value	10.01 SU
Sulfate	Blank	Method Blank	< 0.10	ppm		
	CCV1	Recovery	100	%	True Value	20 ppm
	CCV2	Recovery	94.8	%	True Value	20 ppm
	Dup-A	A Reading	10,900	ppm		
	Dup-B	B Reading	11,300	ppm		
	Dup-RPD1	Relative% Difference	3.6	%		
	LCS	Recovery	85.6	%	Spike Amount	4000 ppm
	LCSD	Recovery	84.4	%	Spike Amount	4000 ppm
	LCS-RPD	Relative% Difference	1.43	%		
	MS	Recovery	111	%	Spike Amount	8 ppm
Barium, True Total	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	99.8	%	True Value	10 ppm
	CCV3	Recovery	102	%	True Value	10 ppm
	Dup-A	A Reading	82,800	ppm		
	Dup-B	B Reading	70,400	ppm		
	Dup-RPD1	Relative% Difference	16.2	%		
	ICV	Recovery	94.9	%	True Value	5 ppm
Mercury	Blank	Method Blank	< 0.00020	ppm		
	CCV1	Recovery	101	%	True Value	0.005 ppm
	CCV2	Recovery	98.2	%	True Value	0.005 ppm
	CCV3	Recovery	100	%	True Value	0.005 ppm
	LCS	Recovery	82.3	%	Spike Amount	0.005 ppm
	LCSD	Recovery	92.4	%	Spike Amount	0.005 ppm
	LCS-RPD	Relative% Difference	0.945	%		
	MS	Recovery	99.6	%	Spike Amount	0.005 ppm
	MSD	Recovery	86.1	%	Spike Amount	0.005 ppm
	MS-RPD	Relative% Difference	0.145	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Arsenic	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.6	%	True Value	10 ppm
	CCV3	Recovery	94.7	%	True Value	10 ppm
	ICV	Recovery	99.8	%	True Value	5 ppm
	LCS	Recovery	88	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.07	%		
	MS	Recovery	84.2	%	Spike Amount	0.5 ppm
	MSD	Recovery	84.1	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	0.201	%		
Ca, water soluble	Blank	Method Blank	0.13	ppm		
	CCV1	Recovery	104	%	True Value	100 ppm
	CCV2	Recovery	101	%	True Value	100 ppm
	Dup-A	A Reading	4,160	ppm		
	Dup-B	B Reading	4,010	ppm		
	Dup-RPD1	Relative% Difference	3.68	%		
	ICV	Recovery	98.7	%	True Value	50 ppm
Cadmium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	99.2	%	True Value	5 ppm
	CCV3	Recovery	96.1	%	True Value	5 ppm
	CCV3	Recovery	98.2	%	True Value	5 ppm
	ICV	Recovery	101	%	True Value	2.5 ppm
	LCS	Recovery	113	%	Spike Amount	0.2 ppm
	LCSD	Recovery	113	%	Spike Amount	0.2 ppm
	LCS-RPD	Relative% Difference	0.345	%		
	MS	Recovery	81.4	%	Spike Amount	0.25 ppm
	MSD	Recovery	80.6	%	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	0.974	%		
Chromium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.8	%	True Value	10 ppm
	CCV3	Recovery	96	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	ICV	Recovery	100	%	True Value	5 ppm
	LCS	Recovery	93.3	%	Spike Amount	0.5 ppm
	LCSD	Recovery	92	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.34	%		
	MS	Recovery	79.3	%	Spike Amount	0.5 ppm
	MSD	Recovery	76.7	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	3.37	%		
Lead	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.8	%	True Value	10 ppm
	CCV3	Recovery	99.9	%	True Value	10 ppm
	CCV3	Recovery	96.1	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	91.9	%	Spike Amount	0.5 ppm
	LCSD	Recovery	90.9	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.02	%		
	MS	Recovery	65.8	%	Spike Amount	0.5 ppm
	MSD	Recovery	68.9	%	Spike Amount	0.5 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	MS-RPD	Relative% Difference	4.56	%		
Mg, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	101	%	True Value	100 ppm
	CCV2	Recovery	99	%	True Value	100 ppm
	Dup-A	A Reading	< 0.500	ppm		
	Dup-B	B Reading	< 0.500	ppm		
	Dup-RPD1	Relative% Difference	< 1.00	%		
	ICV	Recovery	104	%	True Value	50 ppm
Na, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	102	%	True Value	100 ppm
	CCV2	Recovery	99.4	%	True Value	100 ppm
	Dup-A	A Reading	979	ppm		
	Dup-B	B Reading	949	ppm		
	Dup-RPD1	Relative% Difference	3.12	%		
	ICV	Recovery	100	%	True Value	50 ppm
Selenium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.3	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	CCV3	Recovery	95.3	%	True Value	10 ppm
	ICV	Recovery	102	%	True Value	5 ppm
	LCS	Recovery	85.6	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.623	%		
	MS	Recovery	75.9	%	Spike Amount	0.5 ppm
	MSD	Recovery	90.8	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	17.9	%		
Silver	Blank	Method Blank	0.005	ppm		
	CCV1	Recovery	98.2	%	True Value	2 ppm
	CCV3	Recovery	95.5	%	True Value	2 ppm
	ICV	Recovery	104	%	True Value	1 ppm
	LCS	Recovery	83.5	%	Spike Amount	0.1 ppm
	LCSD	Recovery	83.1	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	0.541	%		
	MS	Recovery	80.1	%	Spike Amount	0.1 ppm
	MSD	Recovery	80.1	%	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	0.0337	%		
Zinc	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	99	%	True Value	10 ppm
	CCV3	Recovery	96.5	%	True Value	10 ppm
	CCV3	Recovery	95.1	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	90.1	%	Spike Amount	0.5 ppm
	LCSD	Recovery	89.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.924	%		
	MS	Recovery	77.2	%	Spike Amount	0.5 ppm
	MSD	Recovery	84.3	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	8.82	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Total Solids	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	80.6	%		
	Dup-B%	B Reading	80.3	%		
	Dup-RPD1	Relative% Difference	0.336	%		

Approved by: Greg Oliver

Greg Oliver, Lab Manager

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GCO LABS

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Chain of Custody

greg.oliver@gco-labs.com
(903)291-0137
(903)452-1929

Report to: J. B. Scott
Company: Scott Environmental Services
Address: P.O. Box 6215
City: Longview State: Texas Zip: 75608

Project name/Location: S262-UT
Billing Address (if different): —
City: State: Zip:
PO Number: —

Sampler Signature: [signature] Printed Name: LLOYD MCCHESNEY, SESI

Lab Use Only | Field Identification | Date | Time | Matrix | #Bottles | Notes | Analysis Request

1306012001 PROBC | 5/24/13 | — | SOLID | 4 | (CHILLED) | ✓ | ROUTINE SALINITY #1 *
1306012002 WETOBC | 5/24/13 | — | SLURRY | 4 | | ✓ | TCEQ 1005
| | | | | | | ✓ | BENZENE
| | | | | | | ✓ | LA29B METALS

* INCL. 3-DAY CHLORIDES

Relinquished by:
Signature: [signature] Affiliation: SESI
Printed Name: Tim Scott
Date: 6/12/13 Time: 1:30

Received by:
Signature: [signature] Affiliation: GCO Labs
Printed Name: Greg Oliver
Date: — Time: —

Laboratory Approved by the Texas Railroad Commission

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Red Cap
#2-8-3-3WH

Customer: J. Blake Scott
Scott Environmental Services, Inc.
P.O. Box 6215
Longview, Texas 75608
USA

Project: **S2631-UT**
Cust. Sample: **PROBC**
Lab ID: 130612O007

Collected; 6/4/2013
Received: 6/12/2013
Report Date: 6/25/2013

Analysis	Results	Units	Method	Date	Time	Tech
Chloride (LA29 3D EXIC)	3,510	mg/kg	LA29B-Mod SESI	6/19/2013	14:24	fgo
C28 to C36 TPH	20,000	mg/kg	TNRCC TX 1005	6/18/2013	13:57	fgo
C6 to C12 TPH	14,100	mg/kg	TNRCC TX 1005	6/18/2013	13:57	fgo
C12 to C28 TPH	118,000	mg/kg	TNRCC TX 1005	6/18/2013	13:57	fgo
C6 to C36 TPH	152,000	mg/kg	TNRCC TX 1005	6/18/2013	13:57	fgo
Benzene	< 0.250	mg/kg	SW-846 8260B	6/19/2013	16:09	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	6/18/2013	15:00	fgo
Solid/Organic Metals Digestion	100/1.39	mL/g	SW-846 3050B	6/13/2013	9:15	fgo
Solid Metal Digestion Hg	100/0.56	mL/g	SW-846 7471A	6/14/2013	9:31	fgo
Free Alkalinity (Phenyl	6,840	mg/kg	SM 2320B	6/21/2013	13:00	fgo
Electrical Conductance at 25 C	16.8	mho/cm	LA 29B	6/20/2013	15:11	fgo
EC at Saturation	59.5	mho/cm	LA 29B	6/20/2013	15:11	fgo
Extraction (3-Day SESI)	50/5.28	mL/g	LA29B*Modified	6/12/2013	15:57	fgo
Hydrophobicity	Positive	Result	LA 29B	6/13/2013	8:00	fgo
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	6/13/2013	8:00	fgo
Sodium Adsorption Ratio	2.7	meq/meq	LA 29B	6/21/2013	11:00	fgo
Saturation Water Percentage (dried s	28	%	LA 29B	6/20/2013	14:19	fgo
Special Total Ba Metals Prep	500/0.1234	mL/g	LA 29B	6/20/2013	11:00	fgo
pH 1:1 aque(LA29B) @25C	9.7	SU	LA 29B	6/19/2013	11:05	fgo
Sulfate	3,600	mg/kg	Tex-620-J	6/18/2013	13:45	fgo
Sulfate Extraction/Leaching	50/5.30	mL/g	Tex-620-J	6/14/2013	16:00	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	6/20/2013	11:00	fgo
1005 TPH Extraction Solid	10/10.2	mL/g	TNRCC TX 1005	6/13/2013	11:29	fgo
VOC 5035 Extraction	10/10.0	mg/kg	SW-846 8260B	6/13/2013	11:45	fgo
True Total Barium	129,000	mg/kg	SW-846 6010B	6/21/2013	11:00	fgo
Mercury	0.202	mg/kg	SW-846 7471A	6/21/2013	16:30	fgo
Arsenic	2.96	mg/kg	SW-846 6010B	6/21/2013	9:45	fgo
Calcium (Water Soluble)	165	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Cadmium	< 1.80	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Chromium	15.4	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Lead	3.30	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Sodium (Water Soluble)	25.0	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Zinc	55.0	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Total Solids for Dry Wt	91.6	%	SM 2540 G	6/13/2013	15:21	fgo

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Project: **S2631-UT** Collected; 6/4/2013

Cust. Sample: **WET OBC** Received: 6/12/2013

Lab ID: 130612O008 Report Date: 6/25/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	6/13/2013	8:00	fgo
EC at Saturation	82.0	mho/cm	LA 29B	6/20/2013	15:11	fgo
Electrical Conductance at 25 C	18.7	mho/cm	LA 29B	6/20/2013	15:11	fgo
Hydrophobicity	Positive	Result	LA 29B	6/13/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	10.3	SU	LA 29B	6/19/2013	11:05	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	6/20/2013	11:00	fgo
Saturation Water Percentage (dried s	23	%	LA 29B	6/20/2013	14:19	fgo
Sodium Adsorption Ratio	1.8	meq/meq	LA 29B	6/21/2013	11:00	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	6/18/2013	15:00	fgo
Special Total Ba Metals Prep	500/0.1138	mL/g	LA 29B	6/20/2013	11:00	fgo
Extraction (3-Day SESI)	50/5.10	mL/g	LA29B*Modified	6/12/2013	15:57	fgo
Chloride (LA29 3D EXIC)	4,350	mg/kg	LA29B-Mod SESI	6/19/2013	14:44	fgo
Free Alkalinity (Phenyl	3,370	mg/kg	SM 2320B	6/21/2013	13:00	fgo
Total Solids for Dry Wt	89.7	%	SM 2540 G	6/13/2013	15:21	fgo
Solid/Organic Metals Digestion	100/1.35	mL/g	SW-846 3050B	6/13/2013	9:15	fgo
Arsenic	< 2.50	mg/kg	SW-846 6010B	6/21/2013	9:45	fgo
Cadmium	< 1.85	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Calcium (Water Soluble)	179	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Chromium	4.40	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Lead	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Sodium (Water Soluble)	17.0	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
True Total Barium	162,000	mg/kg	SW-846 6010B	6/21/2013	11:00	fgo
Zinc	16.8	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Mercury	0.0546	mg/kg	SW-846 7471A	6/21/2013	16:30	fgo
Solid Metal Digestion Hg	100/0.57	mL/g	SW-846 7471A	6/14/2013	9:31	fgo
Benzene	< 0.250	mg/kg	SW-846 8260B	6/19/2013	17:29	fgo
VOC 5035 Extraction	10/10.5	mg/kg	SW-846 8260B	6/13/2013	11:45	fgo
Sulfate	< 106	mg/kg	Tex-620-J	6/18/2013	13:57	fgo
Sulfate Extraction/Leaching	50/5.27	mL/g	Tex-620-J	6/14/2013	16:00	fgo
1005 TPH Extraction Solid	10/10.3	mL/g	TNRCC TX 1005	6/13/2013	11:29	fgo
C12 to C28 TPH	124,000	mg/kg	TNRCC TX 1005	6/18/2013	14:26	fgo
C28 to C36 TPH	19,200	mg/kg	TNRCC TX 1005	6/18/2013	14:26	fgo
C6 to C12 TPH	14,600	mg/kg	TNRCC TX 1005	6/18/2013	14:26	fgo
C6 to C36 TPH	158,000	mg/kg	TNRCC TX 1005	6/18/2013	14:26	fgo

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Quality Control Data

Analyte	QC Parameter		Result	Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	94.8	%	True Value	20 ppm
	CCV2	Recovery	103	%	True Value	10 ppm
	CCV3	Recovery	103	%	True Value	10 ppm
	Dup-A	A Reading	4,930	ppm		
	Dup-B	B Reading	5,260	ppm		
	Dup-RPD1	Relative% Difference	6.5	%		
	LCS	Recovery	101	%	Spike Amount	9000 ppm
	LCSD	Recovery	99.5	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	1.61	%		
	MS	Recovery	109	%	Spike Amount	8 ppm
C6-C12, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	107	%	True Value	1000 ppm
	CCV2	Recovery	109	%	True Value	1000 ppm
	CCV3	Recovery	114	%	True Value	1000 ppm
	Dup-A	A Reading	4,540	ppm		
	Dup-B	B Reading	2,770	ppm		
	Dup-RPD1	Relative% Difference	48.5 H	%		
	LCS	Recovery	101	%	Spike Amount	500 ppm
	LCSD	Recovery	97.4	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	3.83	%		
C12-C28, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	106	%	True Value	1000 ppm
	CCV2	Recovery	110	%	True Value	1000 ppm
	CCV3	Recovery	119	%	True Value	1000 ppm
	Dup-A	A Reading	45,800	ppm		
	Dup-B	B Reading	40,000	ppm		
	Dup-RPD1	Relative% Difference	13.3	%		
	LCS	Recovery	116	%	Spike Amount	500 ppm
	LCSD	Recovery	107	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	7.7	%		
Benzene	Blank	Method Blank	< 0.0010	ppm		
	CCV1	Recovery	93.2	%	True Value	0.02 ppm
	LCS	Recovery	91	%	Spike Amount	0.02 ppm
	LCSD	Recovery	90.7	%	Spike Amount	0.02 ppm
	MS	Recovery	108	%	Spike Amount	0.02 ppm
	MSD	Recovery	94.4	%	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	13.1	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Alkalinity	Dup-A	A Reading	12,800	ppm		
	Dup-B	B Reading	11,700	ppm		
	Dup-RPD1	Relative% Difference	9.35	%		
	LCS	Recovery	111	%	Spike Amount	9000 ppm
	LCSD	Recovery	81.4	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	30.5	%		
Electrical Conductivity	Dup-A(EC)	Reading	22.16	mho/c		
	Dup-B(EC)	Reading	22.49	mho/c		
	Dup-RPD1	Relative% Difference	1.48	%		
	Standard1(EC)	Reading	14.71	mho/c	True Value	14.13 mho/c
	Standard2(EC)	Reading	13.22	mho/c	True Value	12.9 mho/c
SWP	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	42.6	%		
	Dup-B%	B Reading	44.9	%		
	Dup-RPD1	Relative% Difference	5.15	%		
pH25	Dup-A(pH)	Reading	9.72	SU		
	Dup-B(pH)	Reading	9.73	SU		
	Dup-RPD1	Relative% Difference	0.103	%		
	pH 10 Buffer(1st)	Reading	10.01	SU	True Value	10.01 SU
	pH 10 Buffer(2nd)	Reading	9.98	SU	True Value	10.01 SU
Sulfate	Blank	Method Blank	< 0.10	ppm		
	CCV1	Recovery	100	%	True Value	20 ppm
	CCV2	Recovery	94.8	%	True Value	20 ppm
	Dup-A	A Reading	10,900	ppm		
	Dup-B	B Reading	11,300	ppm		
	Dup-RPD1	Relative% Difference	3.6	%		
	LCS	Recovery	85.6	%	Spike Amount	4000 ppm
	LCSD	Recovery	84.4	%	Spike Amount	4000 ppm
	LCS-RPD	Relative% Difference	1.43	%		
	MS	Recovery	111	%	Spike Amount	8 ppm
Barium, True Total	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	99.8	%	True Value	10 ppm
	CCV3	Recovery	102	%	True Value	10 ppm
	Dup-A	A Reading	82,800	ppm		
	Dup-B	B Reading	70,400	ppm		
	Dup-RPD1	Relative% Difference	16.2	%		
	ICV	Recovery	94.9	%	True Value	5 ppm
Mercury	Blank	Method Blank	< 0.00020	ppm		
	CCV1	Recovery	101	%	True Value	0.005 ppm
	CCV2	Recovery	98.2	%	True Value	0.005 ppm
	CCV3	Recovery	100	%	True Value	0.005 ppm
	LCS	Recovery	82.3	%	Spike Amount	0.005 ppm
	LCSD	Recovery	92.4	%	Spike Amount	0.005 ppm
	LCS-RPD	Relative% Difference	0.945	%		
	MS	Recovery	99.6	%	Spike Amount	0.005 ppm
	MSD	Recovery	86.1	%	Spike Amount	0.005 ppm
	MS-RPD	Relative% Difference	0.145	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Arsenic	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.6	%	True Value	10 ppm
	CCV3	Recovery	94.7	%	True Value	10 ppm
	ICV	Recovery	99.8	%	True Value	5 ppm
	LCS	Recovery	88	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.07	%		
	MS	Recovery	84.2	%	Spike Amount	0.5 ppm
	MSD	Recovery	84.1	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	0.201	%		
Ca, water soluble	Blank	Method Blank	0.13	ppm		
	CCV1	Recovery	104	%	True Value	100 ppm
	CCV2	Recovery	101	%	True Value	100 ppm
	Dup-A	A Reading	4,160	ppm		
	Dup-B	B Reading	4,010	ppm		
	Dup-RPD1	Relative% Difference	3.68	%		
	ICV	Recovery	98.7	%	True Value	50 ppm
Cadmium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	99.2	%	True Value	5 ppm
	CCV3	Recovery	96.1	%	True Value	5 ppm
	CCV3	Recovery	98.2	%	True Value	5 ppm
	ICV	Recovery	101	%	True Value	2.5 ppm
	LCS	Recovery	113	%	Spike Amount	0.2 ppm
	LCSD	Recovery	113	%	Spike Amount	0.2 ppm
	LCS-RPD	Relative% Difference	0.345	%		
	MS	Recovery	81.4	%	Spike Amount	0.25 ppm
	MSD	Recovery	80.6	%	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	0.974	%		
Chromium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.8	%	True Value	10 ppm
	CCV3	Recovery	96	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	ICV	Recovery	100	%	True Value	5 ppm
	LCS	Recovery	93.3	%	Spike Amount	0.5 ppm
	LCSD	Recovery	92	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.34	%		
	MS	Recovery	79.3	%	Spike Amount	0.5 ppm
	MSD	Recovery	76.7	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	3.37	%		
Lead	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.8	%	True Value	10 ppm
	CCV3	Recovery	99.9	%	True Value	10 ppm
	CCV3	Recovery	96.1	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	91.9	%	Spike Amount	0.5 ppm
	LCSD	Recovery	90.9	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.02	%		
	MS	Recovery	65.8	%	Spike Amount	0.5 ppm
	MSD	Recovery	68.9	%	Spike Amount	0.5 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	MS-RPD	Relative% Difference	4.56	%		
Mg, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	101	%	True Value	100 ppm
	CCV2	Recovery	99	%	True Value	100 ppm
	Dup-A	A Reading	< 0.500	ppm		
	Dup-B	B Reading	< 0.500	ppm		
	Dup-RPD1	Relative% Difference	< 1.00	%		
	ICV	Recovery	104	%	True Value	50 ppm
Na, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	102	%	True Value	100 ppm
	CCV2	Recovery	99.4	%	True Value	100 ppm
	Dup-A	A Reading	979	ppm		
	Dup-B	B Reading	949	ppm		
	Dup-RPD1	Relative% Difference	3.12	%		
	ICV	Recovery	100	%	True Value	50 ppm
Selenium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.3	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	CCV3	Recovery	95.3	%	True Value	10 ppm
	ICV	Recovery	102	%	True Value	5 ppm
	LCS	Recovery	85.6	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.623	%		
	MS	Recovery	75.9	%	Spike Amount	0.5 ppm
	MSD	Recovery	90.8	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	17.9	%		
Silver	Blank	Method Blank	0.005	ppm		
	CCV1	Recovery	98.2	%	True Value	2 ppm
	CCV3	Recovery	95.5	%	True Value	2 ppm
	ICV	Recovery	104	%	True Value	1 ppm
	LCS	Recovery	83.5	%	Spike Amount	0.1 ppm
	LCSD	Recovery	83.1	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	0.541	%		
	MS	Recovery	80.1	%	Spike Amount	0.1 ppm
	MSD	Recovery	80.1	%	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	0.0337	%		
Zinc	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	99	%	True Value	10 ppm
	CCV3	Recovery	96.5	%	True Value	10 ppm
	CCV3	Recovery	95.1	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	90.1	%	Spike Amount	0.5 ppm
	LCSD	Recovery	89.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.924	%		
	MS	Recovery	77.2	%	Spike Amount	0.5 ppm
	MSD	Recovery	84.3	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	8.82	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Total Solids	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	80.6	%		
	Dup-B%	B Reading	80.3	%		
	Dup-RPD1	Relative% Difference	0.336	%		

Approved by: Greg Oliver

Greg Oliver, Lab Manager

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Chain of Custody

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Report to: J. B. Scott
Company: Scott Environmental Services
Address: P.O. Box 6215
City: Longview State: Texas Zip: 75608

Project name/location: S2631-UT
Billing Address (if different):
City: State: Zip:
PO Number: —

Field Identification	Date	Time	Matrix	#Bottles	Notes	Analysis Request
130420007 PR QBC	6/4/13	—	SOLID	4	(QUENCH 11/13)	ROUTINE SALINITY #1 *
						TCEQ 1005
						BENZENE
						LA29B METALS
130420008 WET QBC	6/4/13	—	SLUDGE	4		

Printed Name: LLOYD MCMASTER, SESI
Sampler Signature:
Field Use Only

Date: 6/6/13 Time: 1130 Relinquished by: Printed: JIM SCOTT Signature:
Affiliation: JBS
Received by: Printed/Name: GREG OLIVER Signature:
Affiliation: GCO Labs

* INCL. 3-DAY CHLORIDES

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Customer:

J. Blake Scott
Scott Environmental Services, Inc.
P.O. Box 6215
Longview, Texas 75608
USA

Project: **S2648-UT**
Cust. Sample: **PROBC (FA/LKD)**
Lab ID: 130712O001

Collected; 7/10/2013
Received: 7/12/2013
Report Date: 7/23/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	7/12/2013	14:00	fgo
EC at Saturation	64.0	mho/cm	LA 29B	7/23/2013	12:35	fgo
Electrical Conductance at 25 C	18.0	mho/cm	LA 29B	7/17/2013	13:30	fgo
Hydrophobicity	Positive	Result	LA 29B	7/12/2013	17:00	fgo
pH 1:1 aque(LA29B) @25C	11.3	SU	LA 29B	7/16/2013	13:50	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	7/17/2013	9:15	fgo
Saturation Water Percentage (dried s	28	%	LA 29B	7/16/2013	15:15	fgo
Sodium Adsorption Ratio	1.7	meq/meq	LA 29B	7/18/2013	9:34	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	7/16/2013	12:04	fgo
Special Total Ba Metals Prep	500/0.1301	mL/g	LA 29B	7/17/2013	9:15	fgo
Extraction (3-Day SESI)	50/5.23	mL/g	LA29B*Modified	7/12/2013	14:22	fgo
Chloride (LA29 3D EXIC)	4,980	mg/kg	LA29B-Mod SESI	7/16/2013	10:53	fgo
Free Alkalinity (Phenyl	11,500	mg/kg	SM 2320B	7/17/2013	13:30	fgo
Total Solids for Dry Wt	91.8	%	SM 2540 G	7/16/2013	15:15	fgo
Solid/Organic Metals Digestion	100/1.41	mL/g	SW-846 3050B	7/15/2013	9:00	fgo
Arsenic	6.40	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Calcium (Water Soluble)	186	meq/L	SW-846 6010B	7/18/2013	9:34	fgo
Chromium	26.3	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Lead	11.1	mg/kg	SW-846 6010B	7/17/2013	9:34	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	7/18/2013	9:34	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Sodium (Water Soluble)	16.1	meq/L	SW-846 6010B	7/18/2013	9:34	fgo
True Total Barium	120,000	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Zinc	56.6	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Mercury	0.202	mg/kg	SW-846 7471A	7/18/2013	12:15	fgo
Solid Metal Digestion Hg	100/0.59	mL/g	SW-846 7471A	7/15/2013	9:05	fgo
Benzene	< 0.00100	mg/kg	SW-846 8260B	7/17/2013	14:29	fgo
VOC 5035 Extraction	10/10.0	mg/kg	SW-846 8260B	7/16/2013	7:30	fgo
Sulfate	898	mg/kg	Tex-620-J	7/16/2013	14:18	fgo
Sulfate Extraction/Leaching	50/5.27	mL/g	Tex-620-J	7/15/2013	15:09	fgo
1005 TPH Extraction Solid	10/10.4	mL/g	TNRCC TX 1005	7/16/2013	13:30	fgo
C12 to C28 TPH	84,900	mg/kg	TNRCC TX 1005	7/17/2013	9:36	fgo
C28 to C36 TPH	21,200	mg/kg	TNRCC TX 1005	7/17/2013	9:36	fgo
C6 to C12 TPH	5,530	mg/kg	TNRCC TX 1005	7/17/2013	9:36	fgo
C6 to C36 TPH	112,000	mg/kg	TNRCC TX 1005	7/17/2013	9:36	fgo

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Project: **S2648-UT** Collected; 7/11/2013

Cust. Sample: **PROBC (FA)(C-Ash)** Received: 7/12/2013

Lab ID: 130712O002 Report Date: 7/23/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	7/12/2013	14:00	fgo
EC at Saturation	59.7	mho/cm	LA 29B	7/23/2013	12:35	fgo
Electrical Conductance at 25 C	18.7	mho/cm	LA 29B	7/17/2013	13:30	fgo
Hydrophobicity	Positive	Result	LA 29B	7/12/2013	17:00	fgo
pH 1:1 aque(LA29B) @25C	10.3	SU	LA 29B	7/16/2013	13:50	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	7/17/2013	9:15	fgo
Saturation Water Percentage (dried s	31	%	LA 29B	7/16/2013	15:15	fgo
Sodium Adsorption Ratio	2.8	meq/meq	LA 29B	7/18/2013	9:34	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	7/16/2013	12:04	fgo
Special Total Ba Metals Prep	500/0.1439	mL/g	LA 29B	7/17/2013	9:15	fgo
Extraction (3-Day SESI)	50/5.00	mL/g	LA29B*Modified	7/12/2013	14:22	fgo
Chloride (LA29 3D EXIC)	5,850	mg/kg	LA29B-Mod SESI	7/16/2013	11:32	fgo
Free Alkalinity (Phenyl	10,400	mg/kg	SM 2320B	7/17/2013	13:30	fgo
Total Solids for Dry Wt	90.6	%	SM 2540 G	7/16/2013	15:15	fgo
Solid/Organic Metals Digestion	100/1.36	mL/g	SW-846 3050B	7/15/2013	9:00	fgo
Arsenic	3.96	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Cadmium	< 2.50	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Calcium (Water Soluble)	205	meq/L	SW-846 6010B	7/18/2013	9:34	fgo
Chromium	16.3	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Lead	10.1	mg/kg	SW-846 6010B	7/17/2013	9:34	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	7/18/2013	9:34	fgo
Selenium	3.19	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Sodium (Water Soluble)	28.0	meq/L	SW-846 6010B	7/18/2013	9:34	fgo
True Total Barium	128,000	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Zinc	72.5	mg/kg	SW-846 6010B	7/18/2013	9:34	fgo
Mercury	0.140	mg/kg	SW-846 7471A	7/18/2013	12:15	fgo
Solid Metal Digestion Hg	100/0.57	mL/g	SW-846 7471A	7/15/2013	9:05	fgo
Benzene	< 0.00100	mg/kg	SW-846 8260B	7/17/2013	15:49	fgo
VOC 5035 Extraction	10/10.2	mg/kg	SW-846 8260B	7/16/2013	7:30	fgo
Sulfate	4,640	mg/kg	Tex-620-J	7/16/2013	14:57	fgo
Sulfate Extraction/Leaching	50/5.02	mL/g	Tex-620-J	7/15/2013	15:09	fgo
1005 TPH Extraction Solid	10/10.4	mL/g	TNRCC TX 1005	7/16/2013	13:30	fgo
C12 to C28 TPH	103,000	mg/kg	TNRCC TX 1005	7/17/2013	10:35	fgo
C28 to C36 TPH	21,400	mg/kg	TNRCC TX 1005	7/17/2013	10:35	fgo
C6 to C12 TPH	7,000	mg/kg	TNRCC TX 1005	7/17/2013	10:35	fgo
C6 to C36 TPH	132,000	mg/kg	TNRCC TX 1005	7/17/2013	10:35	fgo

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Quality Control Data

Analyte	QC Parameter		Result	Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	95.7	%	True Value	20 ppm
	CCV2	Recovery	101	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	Dup-A	A Reading	4,980	ppm		
	Dup-B	B Reading	5,190	ppm		
	Dup-RPD1	Relative% Difference	4.22	%		
	LCS	Recovery	110	%	Spike Amount	9000 ppm
	LCSD	Recovery	107	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	3.4	%		
	MS	Recovery	101	%	Spike Amount	8 ppm
C6-C12, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	103	%	True Value	1000 ppm
	CCV2	Recovery	103	%	True Value	1000 ppm
	Dup-A	A Reading	5,530	ppm		
	Dup-B	B Reading	6,300	ppm		
	Dup-RPD1	Relative% Difference	13	%		
	LCS	Recovery	89.1	%	Spike Amount	500 ppm
	LCSD	Recovery	90.2	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	1.3	%		
C12-C28, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	104	%	True Value	1000 ppm
	CCV2	Recovery	109	%	True Value	1000 ppm
	Dup-A	A Reading	84,900	ppm		
	Dup-B	B Reading	97,300	ppm		
	Dup-RPD1	Relative% Difference	13.5	%		
	LCS	Recovery	105	%	Spike Amount	500 ppm
	LCSD	Recovery	107	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	2.34	%		
Benzene	Blank	Method Blank	< 0.0010	ppm		
	CCV1	Recovery	90.1	%	True Value	0.02 ppm
	LCS	Recovery	90	%	Spike Amount	0.02 ppm
	LCSD	Recovery	94.2	%	Spike Amount	0.02 ppm
	LCS-RPD	Relative% Difference	4.56	%		
	MS	Recovery	94.5	%	Spike Amount	0.02 ppm
	MSD	Recovery	93.5	%	Spike Amount	0.02 ppm
	MS-RPD	Relative% Difference	1.06	%		
Alkalinity	Dup-A	A Reading	11,500	ppm		
	Dup-B	B Reading	11,200	ppm		
	Dup-RPD1	Relative% Difference	2.69	%		
	LCS	Recovery	102	%	Spike Amount	6000 ppm

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Analyte	QC Parameter		Result	Units	Reference Value		Units
	LCSD	Recovery	93.4	%	Spike Amount	6000	ppm
	LCS-RPD	Relative% Difference	8.81	%			
Electrical Conductivity	Dup-A(EC)	Reading	17.99	mho/c			
	Dup-B(EC)	Reading	17.98	mho/c			
	Dup-RPD1	Relative% Difference	0.0556	%			
	Standard1(EC)	Reading	14.66	mho/c	True Value	14.13	mho/c
	Standard2(EC)	Reading	14.75	mho/c	True Value	14.13	mho/c
SWP	Blank%	Method Blank	< 0.10	%			
	Dup-A%	A Reading	28.1	%			
	Dup-B%	B Reading	30.7	%			
	Dup-RPD1	Relative% Difference	8.94	%			
pH at 25C	Dup-A(pH)	Reading	11.34	SU			
	Dup-B(pH)	Reading	11.33	SU			
	Dup-RPD1	Relative% Difference	0.0882	%			
	pH 10 Buffer(1st)	Reading	10.02	SU	True Value	10.01	SU
	pH 10 Buffer(2nd)	Reading	9.96	SU	True Value	10.01	SU
Sulfate	Blank	Method Blank	< 0.10	ppm			
	CCV1	Recovery	107	%	True Value	20	ppm
	CCV2	Recovery	111	%	True Value	20	ppm
	Dup-A	A Reading	898	ppm			
	Dup-B	B Reading	928	ppm			
	Dup-RPD1	Relative% Difference	3.26	%			
	LCS	Recovery	95.6	%	Spike Amount	4000	ppm
	LCSD	Recovery	97.8	%	Spike Amount	4000	ppm
	LCS-RPD	Relative% Difference	2.29	%			
	MS	Recovery	88.7	%	Spike Amount	10	ppm
Barium, True Total	Blank	Method Blank	< 0.0050	ppm			
	CCV1	Recovery	96.9	%	True Value	10	ppm
	CCV2	Recovery	90	%	True Value	10	ppm
	Dup-A	A Reading	120,000	ppm			
	Dup-B	B Reading	119,000	ppm			
	Dup-RPD1	Relative% Difference	0.788	%			
	ICV	Recovery	92.7	%	True Value	5	ppm
Mercury	Blank	Method Blank	< 0.00020	ppm			
	CCV1	Recovery	99.4	%	True Value	0.005	ppm
	CCV2	Recovery	99.2	%	True Value	0.005	ppm
	LCS	Recovery	89.9	%	Spike Amount	0.005	ppm
	LCSD	Recovery	89.7	%	Spike Amount	0.005	ppm
	LCS-RPD	Relative% Difference	0.138	%			
	MS	Recovery	97	%	Spike Amount	0.005	ppm
	MSD	Recovery	74.2	%	Spike Amount	0.005	ppm
	MS-RPD	Relative% Difference	26.6	%			
Arsenic	Blank	Method Blank	< 2.5	ppm			
	CCV2	Recovery	93.2	%	True Value	10	ppm
	CCV3	Recovery	93.7	%	True Value	10	ppm
	ICV	Recovery	96.4	%	True Value	5	ppm
	LCS	Recovery	84.8	%	Spike Amount	0.5	ppm
	LCSD	Recovery	85.4	%	Spike Amount	0.5	ppm
	LCS-RPD	Relative% Difference	0.785	%			

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	MS	Recovery	84.4	%	Spike Amount	0.5 ppm
	MSD	Recovery	82	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	2.84	%		
Ca, water soluble	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	102	%	True Value	100 ppm
	CCV2	Recovery	95.8	%	True Value	100 ppm
	Dup-A	A Reading	3,740	ppm		
	Dup-B	B Reading	3,330	ppm		
	Dup-RPD1	Relative% Difference	11.6	%		
	ICV	Recovery	105	%	True Value	50 ppm
Cadmium	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	93	%	True Value	5 ppm
	CCV3	Recovery	93.1	%	True Value	5 ppm
	ICV	Recovery	96.4	%	True Value	2.5 ppm
	LCS	Recovery	85.5	%	Spike Amount	0.25 ppm
	LCSD	Recovery	85.4	%	Spike Amount	0.25 ppm
	LCS-RPD	Relative% Difference	0.169	%		
	MS	Recovery	86	%	Spike Amount	0.25 ppm
	MSD	Recovery	83.4	%	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	2.98	%		
Chromium	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	92.7	%	True Value	10 ppm
	CCV3	Recovery	93	%	True Value	10 ppm
	ICV	Recovery	96	%	True Value	5 ppm
	LCS	Recovery	86.3	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.5	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.236	%		
	MS	Recovery	78.4	%	Spike Amount	0.5 ppm
	MSD	Recovery	73.1	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	7.07	%		
Lead	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	93.1	%	True Value	10 ppm
	CCV3	Recovery	93.4	%	True Value	10 ppm
	ICV	Recovery	97.7	%	True Value	5 ppm
	LCS	Recovery	86.7	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.6	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.0949	%		
	MS	Recovery	77	%	Spike Amount	0.5 ppm
	MSD	Recovery	72.2	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	6.53	%		
Mg, water soluble	Blank	Method Blank	< 0.0050	ppm		
	CCV1	Recovery	97.5	%	True Value	100 ppm
	CCV2	Recovery	93.4	%	True Value	100 ppm
	Dup-A	A Reading	< 0.500	ppm		
	Dup-B	B Reading	< 0.500	ppm		
	Dup-RPD1	Relative% Difference	< 0.100	%		
	ICV	Recovery	102	%	True Value	50 ppm
Na, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	97.5	%	True Value	100 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	CCV2	Recovery	93.1	%	True Value	100 ppm
	Dup-A	A Reading	371	ppm		
	Dup-B	B Reading	374	ppm		
	Dup-RPD1	Relative% Difference	0.978	%		
	ICV	Recovery	101	%	True Value	50 ppm
Selenium	Blank	Method Blank	0.075	ppm		
	CCV2	Recovery	92.7	%	True Value	10 ppm
	CCV3	Recovery	93.7	%	True Value	10 ppm
	ICV	Recovery	100	%	True Value	5 ppm
	LCS	Recovery	88.5	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.5	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.34	%		
	MS	Recovery	105	%	Spike Amount	0.5 ppm
	MSD	Recovery	95.9	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	9.03	%		
Silver	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	90.2	%	True Value	2 ppm
	CCV3	Recovery	92.4	%	True Value	2 ppm
	ICV	Recovery	112	%	True Value	1 ppm
	LCS	Recovery	88.2	%	Spike Amount	0.1 ppm
	LCSD	Recovery	90	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	2.06	%		
	MS	Recovery	96.5	%	Spike Amount	0.1 ppm
	MSD	Recovery	98.9	%	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	2.5	%		
Zinc	Blank	Method Blank	< 2.5	ppm		
	CCV2	Recovery	93.2	%	True Value	10 ppm
	CCV3	Recovery	93.2	%	True Value	10 ppm
	ICV	Recovery	95.8	%	True Value	5 ppm
	LCS	Recovery	86.4	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.3	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.0748	%		
	MS	Recovery	81.1	%	Spike Amount	0.5 ppm
Total Solids	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	91.8	%		
	Dup-B%	B Reading	91.6	%		
	Dup-RPD1	Relative% Difference	0.207	%		

Approved by

Greg Oliver, Lab Manager

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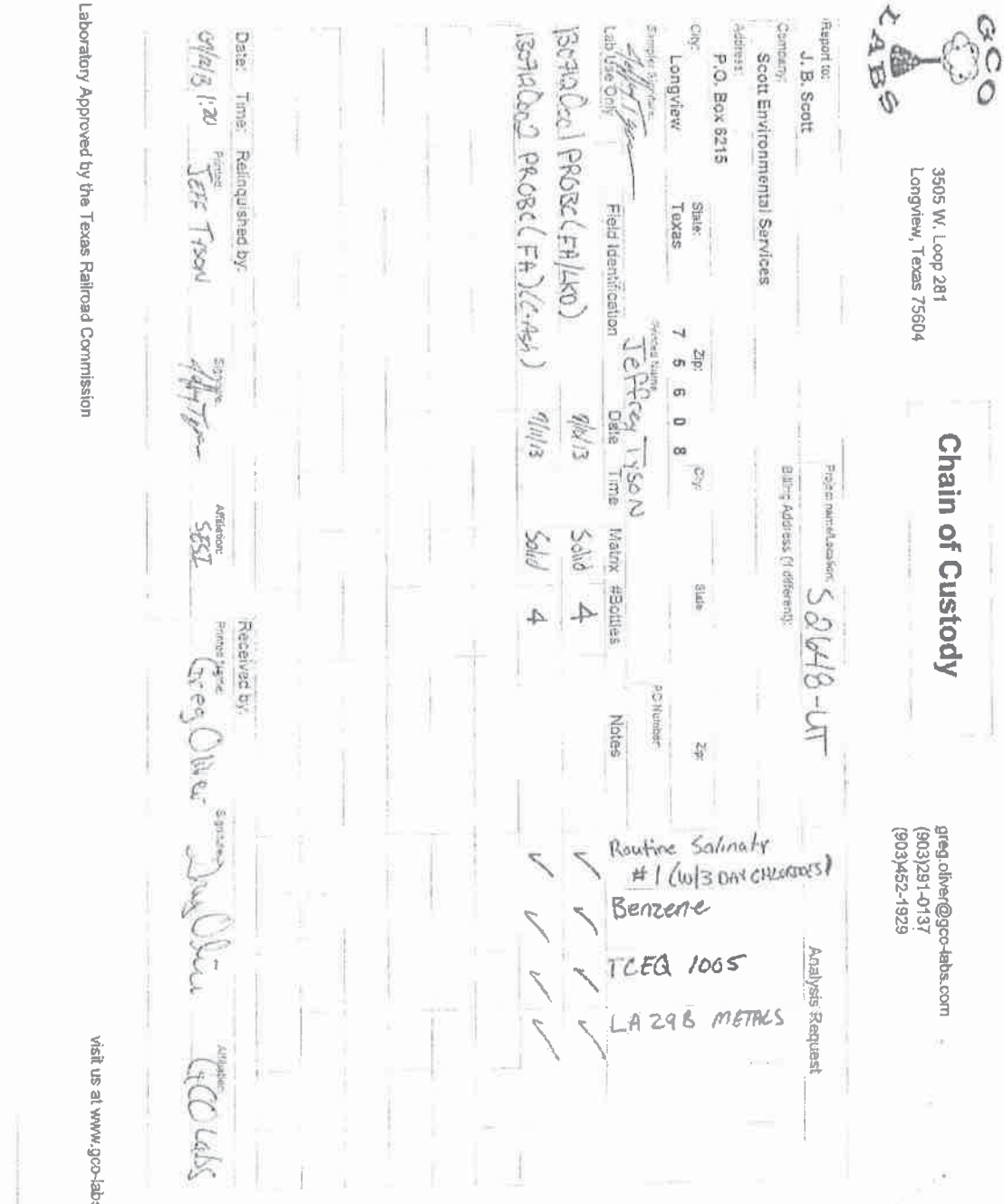

GCO LABS

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Chain of Custody

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Report to: J. B. Scott
Company: Scott Environmental Services
Address: P.O. Box 6215
City: Longview State: Texas Zip: 75608

Project Name/Location: S2648-UT
Billing Address (if different):
City: State: Zip:
P.O. Number:

Sampler Signature: Jeffrey Tyson

Lab Use Only | Field Identification | Date | Time | Matrix | #Bottles | Notes

1307100001	PROBE (FA/LKO)	9/6/13		Solid	4	
1307100002	PROBE (FA) (COMP)	9/6/13		Solid	4	

Analysis Request

Routine Salinity #1 (w/3 DAY CHLORIDES)
Benzene
TCEQ 1005
LA 29B METALS

Date: 9/6/13 Time: 1:20 Relinquished by: Printed: Jeff Tyson Signature: Affiliation: SESI

Received by: Printed Name: Greg Oliver Signature: Affiliation: GCO Labs

Laboratory Approved by the Texas Railroad Commission

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Ute Tribal #4-13-3-4WH

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Customer:

J. Blake Scott
Scott Environmental Services, Inc.
P.O. Box 6215
Longview, Texas 75608
USA

Project: **S2626-UT**
Cust. Sample: **PROBC**
Lab ID: 130612O005

Collected; 6/4/2013
Received: 6/12/2013
Report Date: 6/25/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	6/13/2013	8:00	fgo
EC at Saturation	46.0	mho/cm	LA 29B	6/20/2013	15:11	fgo
Electrical Conductance at 25 C	14.8	mho/cm	LA 29B	6/20/2013	15:11	fgo
Hydrophobicity	Positive	Result	LA 29B	6/13/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	9.4	SU	LA 29B	6/19/2013	11:05	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	6/20/2013	11:00	fgo
Saturation Water Percentage (dried s	32	%	LA 29B	6/20/2013	14:19	fgo
Sodium Adsorption Ratio	4.9	meq/meq	LA 29B	6/21/2013	11:00	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	6/18/2013	15:00	fgo
Special Total Ba Metals Prep	500/0.1373	mL/g	LA 29B	6/20/2013	11:00	fgo
Extraction (3-Day SESI)	50/5.04	mL/g	LA29B*Modified	6/12/2013	15:57	fgo
Chloride (LA29 3D EXIC)	3,680	mg/kg	LA29B-Mod SESI	6/19/2013	13:07	fgo
Free Alkalinity (Phenyl	2,260	mg/kg	SM 2320B	6/21/2013	13:00	fgo
Total Solids for Dry Wt	83.9	%	SM 2540 G	6/13/2013	15:21	fgo
Solid/Organic Metals Digestion	100/1.28	mL/g	SW-846 3050B	6/13/2013	9:15	fgo
Arsenic	< 2.50	mg/kg	SW-846 6010B	6/21/2013	9:45	fgo
Cadmium	< 1.96	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Calcium (Water Soluble)	129	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Chromium	15.0	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Lead	2.80	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Magnesium (Water Soluble)	< 1.00	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Sodium (Water Soluble)	39.4	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
True Total Barium	291,000	mg/kg	SW-846 6010B	6/21/2013	11:00	fgo
Zinc	688	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Mercury	0.256	mg/kg	SW-846 7471A	6/21/2013	16:30	fgo
Solid Metal Digestion Hg	100/0.52	mL/g	SW-846 7471A	6/14/2013	9:31	fgo
Benzene	< 0.250	mg/kg	SW-846 8260B	6/14/2013	15:35	fgo
VOC 5035 Extraction	10/10.5	mg/kg	SW-846 8260B	6/13/2013	11:45	fgo
Sulfate	5,530	mg/kg	Tex-620-J	6/18/2013	13:06	fgo
Sulfate Extraction/Leaching	50/5.13	mL/g	Tex-620-J	6/14/2013	16:00	fgo
1005 TPH Extraction Solid	10/10.3	mL/g	TNRCC TX 1005	6/13/2013	11:29	fgo
C12 to C28 TPH	127,000	mg/kg	TNRCC TX 1005	6/18/2013	12:57	fgo
C28 to C36 TPH	47,700	mg/kg	TNRCC TX 1005	6/18/2013	12:57	fgo
C6 to C12 TPH	14,000	mg/kg	TNRCC TX 1005	6/18/2013	12:57	fgo
C6 to C36 TPH	189,000	mg/kg	TNRCC TX 1005	6/18/2013	12:57	fgo

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Project: **S2626-UT**
Cust. Sample: **WET OBC**
Lab ID: 130612O006

Collected; 6/4/2013
Received: 6/12/2013
Report Date: 6/25/2013

Analysis	Results	Units	Method	Date	Time	Tech
Dry Sample (pH,EC and CEC)	Completed	Result	LA 29B	6/13/2013	8:00	fgo
EC at Saturation	56.1	mho/cm	LA 29B	6/20/2013	15:11	fgo
Electrical Conductance at 25 C	18.6	mho/cm	LA 29B	6/20/2013	15:11	fgo
Hydrophobicity	Positive	Result	LA 29B	6/13/2013	8:00	fgo
pH 1:1 aque(LA29B) @25C	8.5	SU	LA 29B	6/19/2013	11:05	fgo
Sample Prep La - 29B	Completed	mL/g	LA 29B	6/20/2013	11:00	fgo
Saturation Water Percentage (dried s	33	%	LA 29B	6/20/2013	14:19	fgo
Sodium Adsorption Ratio	5.2	meq/meq	LA 29B	6/21/2013	11:00	fgo
Soluble Cation Extraction	80/80.0	mL/g	LA 29B	6/18/2013	15:00	fgo
Special Total Ba Metals Prep	500/0.1190	mL/g	LA 29B	6/20/2013	11:00	fgo
Extraction (3-Day SESI)	50/5.21	mL/g	LA29B*Modified	6/12/2013	15:57	fgo
Chloride (LA29 3D EXIC)	3,960	mg/kg	LA29B-Mod SESI	6/19/2013	14:11	fgo
Free Alkalinity (Phenyl	863	mg/kg	SM 2320B	6/21/2013	13:00	fgo
Total Solids for Dry Wt	81.5	%	SM 2540 G	6/13/2013	15:21	fgo
Solid/Organic Metals Digestion	100/1.24	mL/g	SW-846 3050B	6/13/2013	9:15	fgo
Arsenic	< 2.50	mg/kg	SW-846 6010B	6/21/2013	9:45	fgo
Cadmium	< 2.02	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Calcium (Water Soluble)	149	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Chromium	8.54	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Lead	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Magnesium (Water Soluble)	2.12	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
Selenium	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Silver	< 2.50	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Sodium (Water Soluble)	45.0	meq/L	SW-846 6010B	6/21/2013	11:00	fgo
True Total Barium	272,000	mg/kg	SW-846 6010B	6/21/2013	11:00	fgo
Zinc	1,100	mg/kg	SW-846 6010B	6/21/2013	13:45	fgo
Mercury	0.531	mg/kg	SW-846 7471A	6/21/2013	16:30	fgo
Solid Metal Digestion Hg	100/0.51	mL/g	SW-846 7471A	6/14/2013	9:31	fgo
Benzene	< 0.250	mg/kg	SW-846 8260B	6/14/2013	16:04	fgo
VOC 5035 Extraction	10/10.1	mg/kg	SW-846 8260B	6/13/2013	11:45	fgo
Sulfate	238	mg/kg	Tex-620-J	6/18/2013	13:29	fgo
Sulfate Extraction/Leaching	50/5.16	mL/g	Tex-620-J	6/14/2013	16:00	fgo
1005 TPH Extraction Solid	10/10.3	mL/g	TNRCC TX 1005	6/13/2013	11:29	fgo
C12 to C28 TPH	306,000	mg/kg	TNRCC TX 1005	6/18/2013	13:27	fgo
C28 to C36 TPH	25,600	mg/kg	TNRCC TX 1005	6/18/2013	13:27	fgo
C6 to C12 TPH	42,100	mg/kg	TNRCC TX 1005	6/18/2013	13:27	fgo
C6 to C36 TPH	373,000	mg/kg	TNRCC TX 1005	6/18/2013	13:27	fgo

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Quality Control Data

Analyte	QC Parameter		Result	Units	Reference Value	Units
Chloride	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	94.8	%	True Value	20 ppm
	CCV2	Recovery	103	%	True Value	10 ppm
	CCV3	Recovery	103	%	True Value	10 ppm
	Dup-A	A Reading	4,930	ppm		
	Dup-B	B Reading	5,260	ppm		
	Dup-RPD1	Relative% Difference	6.5	%		
	LCS	Recovery	101	%	Spike Amount	9000 ppm
	LCSD	Recovery	99.5	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	1.61	%		
	MS	Recovery	109	%	Spike Amount	8 ppm
C6-C12, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	107	%	True Value	1000 ppm
	CCV2	Recovery	109	%	True Value	1000 ppm
	CCV3	Recovery	114	%	True Value	1000 ppm
	Dup-A	A Reading	4,540	ppm		
	Dup-B	B Reading	2,770	ppm		
	Dup-RPD1	Relative% Difference	48.5 H	%		
	LCS	Recovery	101	%	Spike Amount	500 ppm
	LCSD	Recovery	97.4	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	3.83	%		
C12-C28, TPH	Blank	Method Blank	< 50	ppm		
	CCV1	Recovery	106	%	True Value	1000 ppm
	CCV2	Recovery	110	%	True Value	1000 ppm
	CCV3	Recovery	119	%	True Value	1000 ppm
	Dup-A	A Reading	45,800	ppm		
	Dup-B	B Reading	40,000	ppm		
	Dup-RPD1	Relative% Difference	13.3	%		
	LCS	Recovery	116	%	Spike Amount	500 ppm
	LCSD	Recovery	107	%	Spike Amount	500 ppm
	LCS-RPD	Relative% Difference	7.7	%		
Benzene	Blank	Method Blank	0	ppm		
	CCV1	Recovery	92.6	%	True Value	0.02 ppm
	LCS	Recovery	99.8	%	Spike Amount	0.02 ppm
	LCSD	Recovery	97.8	%	Spike Amount	0.02 ppm
	MS	Recovery	87.6	%	Spike Amount	0.02 ppm
	MSD	Recovery	96	%	Spike Amount	0.02 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Alkalinity	Dup-A	A Reading	12,800	ppm		
	Dup-B	B Reading	11,700	ppm		
	Dup-RPD1	Relative% Difference	9.35	%		
	LCS	Recovery	111	%	Spike Amount	9000 ppm
	LCSD	Recovery	81.4	%	Spike Amount	9000 ppm
	LCS-RPD	Relative% Difference	30.5	%		
Electrical Conductivity	Dup-A(EC)	Reading	22.16	mho/c		
	Dup-B(EC)	Reading	22.49	mho/c		
	Dup-RPD1	Relative% Difference	1.48	%		
	Standard1(EC)	Reading	14.71	mho/c	True Value	14.13 mho/c
	Standard2(EC)	Reading	13.22	mho/c	True Value	12.9 mho/c
SWP	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	42.6	%		
	Dup-B%	B Reading	44.9	%		
	Dup-RPD1	Relative% Difference	5.15	%		
pH25	Dup-A(pH)	Reading	9.72	SU		
	Dup-B(pH)	Reading	9.73	SU		
	Dup-RPD1	Relative% Difference	0.103	%		
	pH 10 Buffer(1st)	Reading	10.01	SU	True Value	10.01 SU
	pH 10 Buffer(2nd)	Reading	9.98	SU	True Value	10.01 SU
Sulfate	Blank	Method Blank	< 0.10	ppm		
	CCV1	Recovery	100	%	True Value	20 ppm
	CCV2	Recovery	94.8	%	True Value	20 ppm
	Dup-A	A Reading	10,900	ppm		
	Dup-B	B Reading	11,300	ppm		
	Dup-RPD1	Relative% Difference	3.6	%		
	LCS	Recovery	85.6	%	Spike Amount	4000 ppm
	LCSD	Recovery	84.4	%	Spike Amount	4000 ppm
	LCS-RPD	Relative% Difference	1.43	%		
	MS	Recovery	111	%	Spike Amount	8 ppm
Barium, True Total	Blank	Method Blank	< 0.0050	ppm		
	CCV2	Recovery	99.8	%	True Value	10 ppm
	CCV3	Recovery	102	%	True Value	10 ppm
	Dup-A	A Reading	82,800	ppm		
	Dup-B	B Reading	70,400	ppm		
	Dup-RPD1	Relative% Difference	16.2	%		
	ICV	Recovery	94.9	%	True Value	5 ppm
Mercury	Blank	Method Blank	< 0.00020	ppm		
	CCV1	Recovery	101	%	True Value	0.005 ppm
	CCV2	Recovery	98.2	%	True Value	0.005 ppm
	CCV3	Recovery	100	%	True Value	0.005 ppm
	LCS	Recovery	82.3	%	Spike Amount	0.005 ppm
	LCSD	Recovery	92.4	%	Spike Amount	0.005 ppm
	LCS-RPD	Relative% Difference	0.945	%		
	MS	Recovery	99.6	%	Spike Amount	0.005 ppm
	MSD	Recovery	86.1	%	Spike Amount	0.005 ppm
	MS-RPD	Relative% Difference	0.145	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Arsenic	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.6	%	True Value	10 ppm
	CCV3	Recovery	94.7	%	True Value	10 ppm
	ICV	Recovery	99.8	%	True Value	5 ppm
	LCS	Recovery	88	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	2.07	%		
	MS	Recovery	84.2	%	Spike Amount	0.5 ppm
	MSD	Recovery	84.1	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	0.201	%		
Ca, water soluble	Blank	Method Blank	0.13	ppm		
	CCV1	Recovery	104	%	True Value	100 ppm
	CCV2	Recovery	101	%	True Value	100 ppm
	Dup-A	A Reading	4,160	ppm		
	Dup-B	B Reading	4,010	ppm		
	Dup-RPD1	Relative% Difference	3.68	%		
	ICV	Recovery	98.7	%	True Value	50 ppm
Cadmium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	99.2	%	True Value	5 ppm
	CCV3	Recovery	96.1	%	True Value	5 ppm
	CCV3	Recovery	98.2	%	True Value	5 ppm
	ICV	Recovery	101	%	True Value	2.5 ppm
	LCS	Recovery	113	%	Spike Amount	0.2 ppm
	LCSD	Recovery	113	%	Spike Amount	0.2 ppm
	LCS-RPD	Relative% Difference	0.345	%		
	MS	Recovery	81.4	%	Spike Amount	0.25 ppm
	MSD	Recovery	80.6	%	Spike Amount	0.25 ppm
	MS-RPD	Relative% Difference	0.974	%		
Chromium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.8	%	True Value	10 ppm
	CCV3	Recovery	96	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	ICV	Recovery	100	%	True Value	5 ppm
	LCS	Recovery	93.3	%	Spike Amount	0.5 ppm
	LCSD	Recovery	92	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.34	%		
	MS	Recovery	79.3	%	Spike Amount	0.5 ppm
	MSD	Recovery	76.7	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	3.37	%		
Lead	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.8	%	True Value	10 ppm
	CCV3	Recovery	99.9	%	True Value	10 ppm
	CCV3	Recovery	96.1	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	91.9	%	Spike Amount	0.5 ppm
	LCSD	Recovery	90.9	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	1.02	%		
	MS	Recovery	65.8	%	Spike Amount	0.5 ppm
	MSD	Recovery	68.9	%	Spike Amount	0.5 ppm

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Analyte	QC Parameter		Result	Units	Reference Value	Units
	MS-RPD	Relative% Difference	4.56	%		
Mg, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	101	%	True Value	100 ppm
	CCV2	Recovery	99	%	True Value	100 ppm
	Dup-A	A Reading	< 0.500	ppm		
	Dup-B	B Reading	< 0.500	ppm		
	Dup-RPD1	Relative% Difference	< 1.00	%		
	ICV	Recovery	104	%	True Value	50 ppm
Na, water soluble	Blank	Method Blank	< 1.0	ppm		
	CCV1	Recovery	102	%	True Value	100 ppm
	CCV2	Recovery	99.4	%	True Value	100 ppm
	Dup-A	A Reading	979	ppm		
	Dup-B	B Reading	949	ppm		
	Dup-RPD1	Relative% Difference	3.12	%		
	ICV	Recovery	100	%	True Value	50 ppm
Selenium	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	98.3	%	True Value	10 ppm
	CCV3	Recovery	101	%	True Value	10 ppm
	CCV3	Recovery	95.3	%	True Value	10 ppm
	ICV	Recovery	102	%	True Value	5 ppm
	LCS	Recovery	85.6	%	Spike Amount	0.5 ppm
	LCSD	Recovery	86.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.623	%		
	MS	Recovery	75.9	%	Spike Amount	0.5 ppm
	MSD	Recovery	90.8	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	17.9	%		
Silver	Blank	Method Blank	0.005	ppm		
	CCV1	Recovery	98.2	%	True Value	2 ppm
	CCV3	Recovery	95.5	%	True Value	2 ppm
	ICV	Recovery	104	%	True Value	1 ppm
	LCS	Recovery	83.5	%	Spike Amount	0.1 ppm
	LCSD	Recovery	83.1	%	Spike Amount	0.1 ppm
	LCS-RPD	Relative% Difference	0.541	%		
	MS	Recovery	80.1	%	Spike Amount	0.1 ppm
	MSD	Recovery	80.1	%	Spike Amount	0.1 ppm
	MS-RPD	Relative% Difference	0.0337	%		
Zinc	Blank	Method Blank	< 2.5	ppm		
	CCV1	Recovery	99	%	True Value	10 ppm
	CCV3	Recovery	96.5	%	True Value	10 ppm
	CCV3	Recovery	95.1	%	True Value	10 ppm
	ICV	Recovery	101	%	True Value	5 ppm
	LCS	Recovery	90.1	%	Spike Amount	0.5 ppm
	LCSD	Recovery	89.2	%	Spike Amount	0.5 ppm
	LCS-RPD	Relative% Difference	0.924	%		
	MS	Recovery	77.2	%	Spike Amount	0.5 ppm
	MSD	Recovery	84.3	%	Spike Amount	0.5 ppm
	MS-RPD	Relative% Difference	8.82	%		

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Analyte	QC Parameter		Result	Units	Reference Value	Units
Total Solids	Blank%	Method Blank	< 0.10	%		
	Dup-A%	A Reading	80.6	%		
	Dup-B%	B Reading	80.3	%		
	Dup-RPD1	Relative% Difference	0.336	%		

Approved by: Greg Oliver

Greg Oliver, Lab Manager

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Chain of Custody

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Longview, Texas 75604

greg.oliver@gco-labs.com
(903)291-0137
(903)452-1929

Report to: J. B. Scott
Company: Scott Environmental Services
Address: P.O. Box 6215
City: Longview State: Texas Zip: 75608
Sampler Signature: [signature] Printed Name: LLOYD MCMORRAN, SESI
Lab Use Only
Field Identification
Date Time Matrix #Bottles
1 BOX 120005 PROBE 6/4/13 — SOLID 4
2 BOB 120006 WET OBC 6/4/13 — SLUDGE 4
3
4
5
6
7
8
9
10

Project name/Location: S2626-UT
Billing Address (if different):
PO Number: —
Notes

Analysis Request

ROUTINE SALINITY #1 *	✓
TCEQ 1005	✓
BENZENE	✓
LA29B METALS	✓
	✓
	✓
	✓
	✓
	✓

Date: 6/6/13 Time: 1:30 Relinquished by: Printed Name: Lynn Leal Signature: [signature] Affiliation: SESI

Received by: Printed Name: Greg Oliver Signature: [signature] Affiliation: GCO Labs

* INCL. 3-DAY CHLORIDES

Laboratory Approved by the Texas Railroad Commission

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER:
14-20-H62-6269

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL
Oil Well

8. WELL NAME and NUMBER:
Aubrey 2-15-22-3-2WH

2. NAME OF OPERATOR:
NEWFIELD PRODUCTION COMPANY

9. API NUMBER:
43013521050000

3. ADDRESS OF OPERATOR:
Rt 3 Box 3630 , Myton, UT, 84052

PHONE NUMBER:
435 646-4825 Ext

9. FIELD and POOL or WILDCAT:
NORTH MYTON BENCH

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0381 FSL 1838 FEL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SWSE Section: 10 Township: 03.0S Range: 02.0W Meridian: U

COUNTY:
DUCHESNE

STATE:
UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT Approximate date work will start:	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
✓ SUBSEQUENT REPORT Date of Work Completion: 12/26/2013	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ SPUD REPORT Date of Spud:	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DRILLING REPORT Report Date:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Daily Drilling Reports

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

As per our conversation with Dustin Doucet, attached find the Daily Drilling Reports for the above mentioned well.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
January 22, 2016

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Mandie Crozier	435 646-4825	Regulatory Tech
SIGNATURE		**DATE**
N/A		1/21/2016

RECEIVED: Jan. 21, 2016

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Job Category	Job Start Date	Job End Date

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
10/18/2013	10/19/2013	Set 60' of 20" conductor pipe.

Start Time	End Time	Comment
00:00	00:00	Pete Martin Rig #16 spudded 26" hole on 10/18/2013 and drilled to 60' GL. Set 20", 52.78# (0.250" wall), SA53B conductor pipe at 60' GL and cemented to surface with Redi Mix. Kylan Cook notified UDOGM and BLM by e-mail @ 20:00 PM on 10/16/2013 to spud conductor hole on 10/18/2013. Ready for surface rig.

Report Start Date	Report End Date	24hr Activity Summary
10/19/2013	10/20/2013	MIRU Pro Petro Rig #10.

Start Time	End Time	Comment
00:00	00:00	MIRU Pro Petro Rig #10.

Report Start Date	Report End Date	24hr Activity Summary
10/20/2013	10/21/2013	Finish rigging up. Pick up BHA and trip in hole to 60' GL. Spud 17.50" surface hole. Drill from 60' GL to 480' GL while taking Single Shot surveys. Circulate. Change rubber in rotating head.

Start Time	End Time	Comment
00:00	11:00	Finish rigging up Pro Petro Rig #10.
11:00	12:30	Start picking up BHA. Trip in hole to 60' GL.
12:30	17:00	Spud 17.50" hole @ 12:30 PM on 10/20/2013. Drill from 60' GL to 280' GL.
17:00	18:30	Circulate for survey. Take Single Shot survey @ 220' GL = 0.25 Degree. Also changed shaker screens.
18:30	23:00	Drill from 280' GL to 480' GL.
23:00	23:30	Circulate to change rubber in rotating head.
23:30	00:00	Change rubber size in rotating head.

Report Start Date	Report End Date	24hr Activity Summary
10/21/2013	10/22/2013	Drill from 480' GL to 720' GL. Repair kelly hose bracket. Drill from 720' GL to 1140' GL. Replace swabs in mud pump. Drill from 1140' GL to 1350' GL.

Start Time	End Time	Comment
00:00	01:30	Drill from 480' GL to 540' GL.
01:30	02:00	Circulate for survey. Take Single Shot survey @ 480' GL = 0.75 Degrees.
02:00	05:00	Drill from 540' GL to 720' GL.
05:00	06:30	Repair bracket that holds kelly hose in place.
06:30	08:30	Drill from 720' GL to 810' GL.
08:30	09:00	Circulate for survey. Take Single Shot survey @ 750' GL = 0.75 Degrees.
09:00	15:00	Drill from 810' GL to 1080' GL.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
15:00	15:30	Circulate for survey. Take Single Shot survey @ 1020' GL = 1.00 Degree.
15:30	16:30	Drill from 1080' GL to 1140' GL.
16:30	17:30	Replace swabs in mud pump.
17:30	23:00	Drill from 1140' GL to 1350' GL.
23:00	00:00	Circulate for survey. Take Single Shot survey @ 1290' GL = 1.00 Degree.

Report Start Date	Report End Date	24hr Activity Summary
10/22/2013	10/23/2013	Drill from 1350' GL to 1530' GL. Replace swab in pump. Drill from 1530' GL to TD @ 1645' GL. Circulate. Make wiper trip. Circulate. Start tripping out of hole to run surface casing.

Start Time	End Time	Comment
00:00	07:30	Drill from 1350' GL to 1530' GL.
07:30	08:00	Replace swab in mud pump.
08:00	12:30	Drill from 1530' GL to 1645' GL. TD 17.50" hole @ 12:30 PM on 10/22/2013.
12:30	14:30	Circulate for wiper trip.
14:30	15:00	Take Single Shot survey @ 1590' GL = 0.75 Degrees.
15:00	17:00	Trip out to drill collars. Had to wash and ream first 300' off bottom.
17:00	18:30	Trip back to bottom. Tag fill 70' off bottom. Wash last 70' back to bottom.
18:30	21:30	Circulate to trip out of hole and run surface casing.
21:30	00:00	Start tripping out of hole to run surface casing. Had to wash and ream first 300' off bottom.

Report Start Date	Report End Date	24hr Activity Summary
10/23/2013	10/24/2013	Finish trip out of hole. Run surface casing. Cement surface casing. Wait on cement, clean pits, and rig down. Release rig @ 23:00 PM on 10/23/2013.

Start Time	End Time	Comment
00:00	01:30	Finish tripping out of hole to run surface casing.
01:30	02:30	Rig up to run surface casing.
02:30	09:30	Run 40 joints (1623.14') of 13 3/8", 54.5#, J-55, BT&C casing with Top-Co guide shoe and float collar. 14 centralizers spaced 10' from the shoe, on top of joints #2 and #3 then every 3rd collar to surface. Landed @ 1623.14' GL, Float Collar @ 1577.76' GL. Had to wash 10' of last joint of casing down.
09:30	10:30	Circulate with casing on bottom.
10:30	12:00	Weld top cap from casing to conductor pipe.
12:00	13:00	Circulate casing with rig pump. Rig up Pro Petro Cementers.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
13:00	15:00	Cement Job: Pumped 10 bbls fresh water & 20 bbls gelled water flush ahead of cement. Lead: Mixed and pumped 550 sacks (280 bbls) of Type V Cement with 16% Gel, 10 #/sk Gilsonite, 2#/sk Gr3, 3% Salt, and 1/4 #/sk Flocele. Mixed cement @ 12.0 ppg with yield of 2.86 cf/sk. Tail: Mixed and pumped 675 sacks (138 bbls) of Premium Class G Cement with 2% CaCl2, and 1/4 #/sk Flocele. Mixed cement @ 15.8 ppg with yield of 1.15 cf/sk. Displaced cement with 244 bbls fresh water. Bumped plug with 1010# @ 14:56 PM on 10/23/2013. Floats held. 60 bbls cement to surface. Shut in well after pumping stopped. Kylan Cook notified UDOGM and BLM of the surface casing & cement job via e-mail on 10/21/2013 @ 19:10 PM.
15:00	23:00	Wait on cement, clean pits, and rig down. Release rig @ 23:00 PM on 10/23/2013.

Report Start Date	Report End Date	24hr Activity Summary
11/1/2013	11/2/2013	Finish preparation of location for drilling rig.

Start Time	End Time	Comment
00:00	00:00	10/26/2013 - Run Gyro. 10/27/2013 - Drill Mouse Hole. 10/30/2013 - Final blade location. 10/31/2013 - Weld on Wellhead. 10/31/2013 - Cement cellar floor up to the top of base plate on wellhead. GYRO SURVEY DEPTHS ARE GROUND LEVEL. Location is ready for drilling rig.

Report Start Date	Report End Date	24hr Activity Summary
11/6/2013	11/7/2013	Prepare and move camps & misc. to location. LRI=58 days

Start Time	End Time	Comment
13:00	00:00	Release rig on previous well @ 13:00 11/6/13, Begain move in on current location. Rig down move all camps & misc., Pre stage rig componets for move to new location. With JD Field Services all equipment as follows= 2 Bed trucks, 1 forklift, 2 haul trucks, 1 pole truck, 2 cranes. 10% moved in, 0% rigged up.

Report Start Date	Report End Date	24hr Activity Summary
11/7/2013	11/8/2013	Rig down on old location, Prepare & move rig. LRI=59 days

Start Time	End Time	Comment
00:00	06:00	Continue rigging down prep for rig move.
06:00	14:00	Move rig on location. Set rig components in place.
14:00	16:00	While removing derrick from sub base the crane that was lifting the a -leg section felt his load shifting. Crane began listing towards crown section. Crane descended rapidly to prevent crane tip over. A-leg section was appox 1' from ground when crane released his load and crane up-righted itself. Called STOP Work to investigate incident and assess damage to derrick. Placed derrick on pipe racks for inspection. Derrick had minor damage to hydraulic cylinder bracket. With no sign of buckling or structual damage to derrick. Pioneer to have welds on pad eyes that pin derrick to sub magnafluxed for any cracks. Held refocus meeting w/Pioneer, JD Field Services, Engage Managment, and Newfield Saftey before proceeding.
16:00	18:00	Continue with rig move set in 45%, rigged down 100%, rigged up 35%.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
18:00	00:00	Rigging up & washing rig.

Report Start Date	Report End Date	24hr Activity Summary
11/8/2013	11/9/2013	Move rig in rig up same. 90% moved in, 60% rigged up, 90% moved off old location. LRI=60 days

Start Time	End Time	Comment
00:00	06:00	Continue rigging up and cleaning on rig.
06:00	18:00	Set rig components in place set mats and subs. Finish setting back yard, fuel, and water tank. Set shaker skid and choke manifold/trip tank house, Drawworks, center steel, Change out lifting cylinders. Continue rigging up.
18:00	00:00	Cranes & trucks shut down at dark rig crew pulling wires & hooking up lines, 3rd party cleaning rig. Bleed new Mass raising cylinders.

Report Start Date	Report End Date	24hr Activity Summary
11/9/2013	11/10/2013	Move in set misc, Spot derrick prepare to install on rig floor, Bleed mass raiseing cylinders. 100% moved in, 70% rigged up, 100% moved off old location. LRI=61 days

Start Time	End Time	Comment
00:00	06:00	Bleed mass raiseing cylinders, while hooking up lines & wires, while cleaning rig.
06:00	15:00	Held prejob safety meeting with Poineer, JD Field Services, Curts Crane, NFX. Set misc. equip rig up same, Spot derrick prepare to install on rig floor, Bleed mass raiseing cylinders. Released 1 bed truck, 1 pole truck @ 13:00, Keep 1 bed truck, 1 forklift & 2 cranes until derrick is on rig floor.
15:00	16:30	Bleeding mass raiseing cylinders preparing derrick to set on rig floor.
16:30	18:00	Turn JD Field Services & Curts crane crew loss, Due to bleeding mass raiseing cylinders.
18:00	00:00	Continue rigging up back yard, Hooking up all lines & wires, Continue bleeding cylinders & dressing derrick.

Report Start Date	Report End Date	24hr Activity Summary
11/10/2013	11/11/2013	Bleed cylinders, Install derrick on substructure, Work on cylinder sockets to pin to derrick, Raise derrick, Work on unpinning cylinder from derrick, Prepare to raise sub & scope derrick @ daylight. LRI=62 days

Start Time	End Time	Comment
00:00	06:00	Continue to bleed air from raising cylinders - all air bled @ 04:00 AM. Scope cylinders every hour to keep fluid warm. Service shale shakers. Prep pits to fill w/KCL water. Rig up water lines and circulate around rig.
06:00	08:30	Set derrick on subs with cranes and pin to subs.
08:30	15:00	Grind and modify on new raising cylinders because they were not seating deep enough into pin sockets.
15:00	18:30	Raise derrick, Work to get cylinder unpined from derrick to pin to substructure, While rigging up rig back yard preparing tanks for KCL water. Recieving all directional tools & mud materials.
18:30	00:00	Pin raising cylinders to substructure prepare to raise same, Prepare rig floor to scope derrick, While recieving KCL water & Mud materials fill mud tanks with fresh water.

Report Start Date	Report End Date	24hr Activity Summary
11/11/2013	11/12/2013	Prepare & scope derrick, Install wind walls & Componets to rig floor with crane, Function test mud pumps, drawworks, mud pumps, N/U BOP while changeing out liners. LRI=63 days

Start Time	End Time	Comment
00:00	06:00	Prep derrick for scoping. Install drill line on drum and dead man anchor. PU TDU and inspect dead man anchor plates and bolts. Change out wear sub on TDU. Fill pits w/KCL water. Bridle up on top drive. Pin MRC's onto derrick.

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
06:00	22:00	Raise floor. Un-pin MRC's. Install Stand pipe manifold and off-side wind walls w/crane. Released crane. Scoped derrick up into postion and pinned derrick. Continue installing wind walls on sub with extenda boom fork lift and rigging up floor & all misc. Pump through mud pumps, Function test topdrive & drawworks organize location. Prepare to nipple up BOP.
22:00	00:00	HPJSM with Poineer, Eager beaver & NFX, Install BOP stack on well head, Install ckoke line torque same. While changing liners in mud pumps to 6". Rig on full dayrate @ 22:00 11/12/13.

Report Start Date	Report End Date	24hr Activity Summary
11/12/2013	11/13/2013	FinishTest BOPE. Install Wear bushing, PU direction. LRI=64 days

Start Time	End Time	Comment
00:00	04:00	Finish hooking up Koomey lines. Install cellar. NU flow line Install 5 1/2" liners in pumps. Replace 5" rams in lower preventers.
04:00	13:30	Held PJSM w/BOP testers and install test plug.Make up floor valve and crossover. Test choke manifold, choke line, inside manual, and HCR valve w/250 psi low and 5000 psi high. Attempt to test kelly hose and mud line - kelly hose failed. Test pipe rams(2) and blind rams w/250 psi low and 5000 psi high. Test inside manual, outside manual and kill line w/250 psi low and 5000 psi high. Test annular w/250 psi low and 3500 psi high.
13:30	14:30	Pulled test plug and close blind rams. Tested casing (charted test)w/BOP testers for 30 minutes w/1500 psi per state requirements. Rig BOP testors down off of casing.
14:30	17:30	Replace kelly hose.
17:30	18:00	Rig Service
18:00	23:00	Function test BOPE. Attempt to test Mud line. Would not hold. Replace vibrator hose on pump. Re-tested mud line w/250 psi low, and 5000 psi high. Hydraulic IBOP and upper kelly valve w/250 psi low and 5000 psi high. RD testors.
23:00	00:00	Centered stack and tighten down turnbuckles. Install cellar covers and align choke up for hard shut in,

Report Start Date	Report End Date	24hr Activity Summary
11/13/2013	11/14/2013	Install Wear Bushing. Pick up BHA and trip in hole to 1576'. Drill cement and float equipment to 1650'. Drill new hole from 1650' to 1660'. Fit test EMW 12.0 PPG, 300 PSI for 15 min. Drill from 1660' to 2007'. Fix leak on suction hose for pump #2. LRI=65 days

Start Time	End Time	Comment
00:00	00:30	Finish installing cellar covers
00:30	01:00	Rig Service
01:00	02:30	Make wear bushing running to to DP. Install wear ring on puller. Install wear ring in head and run top pins in(per Cameron reccomendation). Could not release from bushing puller. Pulled wear bushing and and found marks from pins at top of wear busing. Ran wear bushing back in hole and set in head. Ran lower lock down pins in on bushing and locked bushing in. Release from wear bushing and pulled bushing puller. LD joint of DP and bushing puller. .
02:30	04:30	PJSM. Pick up Hunting 8" 7:8 Lobe 4.0 Stage 1.83° Slick PDM. .17 rev/gal. Flow range 450-900 gpm max diff 1350 psi. PU muleshoe sub and 1 NMDC. Found 5 1/2" IF connection on NMDC. Could not cross over to 6 5/8 Reg.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
04:30	07:30	Lay down NMDC with wrong connection. Trouble shoot problem
07:30	09:30	PU back up set of monels w/smaller ID. Make up to motor. Had to shave rubber centralizers on MWD to to fit into new monels. Instal MWD into monel - set screw going in to far into monel. Pulled MWD out and repositioned. Build stand of DP to stab rotating head rubber on for MWD test.
09:30	11:00	Install rotating head rubber into rotating head for MWD test.
11:00	13:00	Circulate through MWD @ 85SPM w/pump 1 then with pump 2. Recycle pumps MWD OK. Pulled stand of DP and rotating head rubber and stand in derrick. Pull monels and motor make up Smith MSi 616 PDC bit.
13:00	16:30	PU 29 jts HWDP and jars off rack and TIH. TIH w/5" DP. Tagged Cement @ 1576'
16:30	17:30	Drill Cement FC/FS @ 1604' & 1650'
17:30	18:00	Rig Service
18:00	18:30	Drill new hole from 1650' to 1660'
18:30	19:30	Closed in Annular, Ran FIT test @ 12.0 ppg MW @ 8.5 ppg pressured up to 300 psi for 15 min.
19:30	23:30	Drill from 1660' to 2007'
23:30	00:00	Leak in suction line to pump #2. Replace gasket in union.

Report Start Date	Report End Date	24hr Activity Summary
11/14/2013	11/15/2013	Drill from 2007' to 4836' (2829') 117 fph, Rig Service, mud up @ 4500'. LRI=66 days.

Start Time	End Time	Comment
00:00	05:30	Drill/Slide from 2007' to 2555' (548') Apr 99.63 fph, WOB 25-35K Diff 600 psi RPM 70, 800 gpm. Slide 2460' to 2485' 25' TF 320 M
05:30	06:00	Service Rig
06:00	17:00	Drill/Slide from 2555' to 3881' (1326') 120 fph, WOB 25-35K Diff 650-900 psi RPM 65, 800 gpm. Slide 2460' to 2485' 25' TF 320 M
17:00	17:30	Rig Service.
17:30	00:00	Drill/Slide from 3881' to 4836' (955') 146 fph, WOB 25-35K Diff 650-900 psi RPM 70, 800 gpm, 136 mtr rpm. Reaming every std (90'). Taking surveys every 3rd std. Mud up @ 4500' to 50 vis 9.7 ppg mud wt.

Report Start Date	Report End Date	24hr Activity Summary
11/15/2013	11/16/2013	Drill from 4836' to 6271' (1435') 59.7 fph, Rig Service, Rig Service, Circulate & Condition mud @ 6035' due to being aired up while working on mud pumps. LRI=67 days.

Start Time	End Time	Comment
00:00	05:00	Drill/Slide from 4836' to 5302' (466') 93.2 fph, WOB 25-35K Diff 650-900 psi RPM 70, 800 gpm, 136 mtr rpm. Reaming every std (90'). Taking surveys every 3rd std.
05:00	05:30	Rig Service
05:30	15:30	Drill/Slide from 4836' to 6035' (1199') 120 fph, WOB 25-35K Diff 600-700 psi RPM 70, 750 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every 3rd std.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
15:30	17:00	Begain working on mud pumps @ 6035' due to pressure loss, Cleaned suction screens pump through both pumps and aired out still no psi due to mud fluffed up.
17:00	17:30	Rig Service.
17:30	19:00	Continue circulateing & conditioning mud @ 6035', Due to fluffed up mud, While changeing seat in # 2 mud pump.
19:00	00:00	Drill/Slide from 6035' to 6271' (236') 47.2 fph, WOB 25-35K Diff 600-700 psi RPM 70, 750 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every 3rd std. Continue working on changing seat in #2 mud pump cleaning watermelon & suction screen. Drill with 1 mud pump from 6035' to 6059' (24'). Slide from 6249' to 6271' (22') 1 hr 25 min. @ 120R TF.

Report Start Date	Report End Date	24hr Activity Summary
11/16/2013	11/17/2013	Drill from 6271' to 7079' (808') 35 fph, Rig Service. LRI=68 days.

Start Time	End Time	Comment
00:00	05:30	Drill/Slide from 6271' to 6627' (356') 64.8 fph, WOB 25-35K Diff 600-700 psi RPM 70, 750 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every std 90'.
05:30	06:00	Rig Service
06:00	17:30	Drill/Slide from 6627' to 6943' (316') 27 fph, WOB 25-35K Diff 600-700 psi RPM 70, 750 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every std 90'. Slide from 6724' to 6753' (29') 2 hr 15 min. @ 90 R TF. 6825' to 6853 (28') 1 HR 45 min @ 120 R TF
17:30	18:00	Rig Service.
18:00	00:00	Drill/Slide from 6943' to 7079' (136') 22.6 fph, WOB 25-35K Diff 600-700 psi RPM 70, 750 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every std 90'. Slide from 7006' to 7051' (45') @ 120R TF 2 hr 46 min.

Report Start Date	Report End Date	24hr Activity Summary
11/17/2013	11/18/2013	Drill from 7079' to 7125' (46') 23 fph, Chuncked mtr. TOH wash & Ream thru tight areas, LD/PU BHA, Trip in hole, Wash & Ream from 1773 to 1998'. LRI=69 days.

Start Time	End Time	Comment
00:00	02:00	Drill/Slide from 7079' to 7125' (46') 23 fph, WOB 25-35K Diff 600-700 psi RPM 70, 750 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every std 90'. Motor press spiked, increased 400 psi indicating motor chunking rubber. recheck motor
02:00	03:30	Circulate & Cond hole for Trip, Ck for flow, (Mix Slug whilst Circ.) pump slug
03:30	04:30	Trip out of hole from 7125' to 5725' (Trona Formation) unable to work thru tight area, Prep to Backream
04:30	05:00	Service Rig
05:00	05:30	Wash / Back Ream thru Trona 5725' to 5680', Pump Slug
05:30	07:30	Trip out of Hole from 5680' to 4025' pulled Tight@ 4025', unable to work thru area.
07:30	08:00	Back ream from 4025' to 3958' @ 100 Spm 70 Rpm
08:00	10:00	Trip out of hole to 2765' pulled thru tight area's up to 2390' unable to work thru

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
10:00	13:30	Back Ream from 2390' to 1650' @ 70 Rpm, 100 SPM Flow Check f/15 min.
13:30	15:00	Trip out of hole to BHA
15:00	16:30	Lay down all BHA, Pull MWD tool.
16:30	17:00	Rig Service.
17:00	19:30	Pick up all new directional tools as follows= 1.83 Mud mtr, muleshole sub, 2- NMDC, X/O, Scribe same, 24 jts HWDP, Jars, 5 jts HWDP, Test MWD @ 139' test good, Make up & torque 12.25 MSI616 PDC bit.
19:30	20:00	Trip in hole from surface to 108' to 1012'.
20:00	21:00	Trip out of hole from 1012' to 108' to pick up shock sub (That was left out of string by mistake) Pick up & make up shock sub, Trip in hole from 108' to 1012'.
21:00	22:00	Continue tripping in hole from 1012' to 1655', Monitor well on trip tank.
22:00	22:30	Rig Service.
22:30	00:00	Trip in hole from 1655' to 1773', Wash & Ream from 1773' to 1998' , 50 rpm, 85 stokes.

Report Start Date	Report End Date	24hr Activity Summary
11/18/2013	11/19/2013	Trip in Hole Wash/Ream tight hole f/1980' to 3121' , Drill from 7125' to 7828' (703') 30 fph, Rig Service. LRI=70 days.

Start Time	End Time	Comment
00:00	03:00	Wash & Ream from 1998' to 2830' / attempt to run in hole from 2830' to 2910' tagged up @ 2910' continue to Wash & Ream from 2910' to 3121' @ 50 RPM 120 SPM 1000 psi
03:00	06:00	Trip in hole from 3121' to 7000'
06:00	07:00	Wash & Ream to Btm from 7000' to 7125' (65' fill)
07:00	11:30	Drill/Slide from 7125' to 7289' (164') 36.4 fph, WOB 25-35K Diff 00-700 psi RPM 70, 710 gpm, 127 mtr rpm. Reaming every std (90'). Taking surveys every std 90'. Slide from 7195' to 7230' (40') @ 90R TF 2 hr 5 min.
11:30	12:00	Rig Service
12:00	00:00	Drill/Slide from 7289' to 7828' (539') 30.4 fph, WOB 25-35K Diff 00-700 psi RPM 70, 710 gpm, 120 mtr rpm. Reaming every std (90'). Taking surveys every std 90'. Slide from 7195' to 7230' (40') @ 90R TF 2 hr 5 min. / 7310' to 7345' (35') @ 90R TF 2 Hr 20 min. 7763' to 7796' (33') @ 130R TF 1 hr 40 mins.

Report Start Date	Report End Date	24hr Activity Summary
11/19/2013	11/20/2013	Drill from 7828' to 8590' (762) 58.6 fph, Rig Service, Circ & Cond Hole for Trip/Logs. LRI=71 days.

Start Time	End Time	Comment
00:00	00:30	Drill/Slide from 7828' to 7858' (30') 60 fph, WOB 25-35K Diff 500-700 psi RPM 70, 710 gpm, 120 mtr rpm. Reaming every std (90'). Taking surveys every std 90'.
00:30	01:00	Rig Service

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
01:00	13:30	Drill/Slide from 7858' to 8590' (732') 58.6 fph, WOB 25-35K Diff 500-700 psi RPM 70, 710 gpm, 120 mtr rpm. Reaming every std (90'). Taking surveys every std 90'. Slide from 8047' to 8094' (47') @ 130RTF 3 hr15 min.
13:30	16:00	Circulate & Conditon @ 8590', Hole for Trip & Logs, RPM 70, 710 gpm, PP 3900 psi 120 mtr rpm. Working Std. Whilst Rotating, pumped 2 - 40 bbl high vis sweeps PU 245, SO 230, Rot 240.
16:00	00:00	Flow check @ 8590' well static, Trip out hole from 8590' to surface, monitor well on trip tank well took proper hole fill on way out. Hit tight spot @ 7010' work through same no abnormal drag through the rest of 12.25 vertical section of hole, did not have to wash & ream. Flow check @ 13 3/8 shoe 1650' no flow well static.

Report Start Date	Report End Date	24hr Activity Summary
11/20/2013	11/21/2013	LD Dir Tools, Cut Slip Drl Line, Rig Service, Ru Log Well RD, RU Casers, Run 9 5/8" casing(126 total joints run) LRI=72 days.

Start Time	End Time	Comment
00:00	00:30	Pull Head Rubber
00:30	02:00	LD Dir Tools, Motor & Bit
02:00	03:00	Cut & Slip 97' Drlg. Line
03:00	03:30	Rig Service
03:30	04:00	Safety Mtg. W/ Halliburton Loggers
04:00	05:00	Rig Up Logging Tools (Quad Combo)
05:00	11:00	Ran logs to Btm. Loggers Btm. 8600' Drillers Depth per Strap 8597'
11:00	12:00	Rig Down Loggers
12:00	12:30	Pull Wear Bushing
12:30	13:00	Safety Mtg. W/ Kimzey Casing crew, NFX & Pioneer
13:00	14:00	Rig Up Casing Tools
14:00	18:30	Run 9 5/8" 40# N-80, BTC Casing (43 total joints run). Filling casing every 30 joints.
18:30	19:00	Install bell nipple.
19:00	21:30	Run 9 5/8" 40# N-80, BTC Casing (93 total joints run). Filling casing every 30 joints.

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
21:30	22:00	While running 9 5/8" casing a joint was being brought up to the floor on the cat walk. The cat walk operator accidentally engaged the skate on the trough without noticing and pushed the joint enough to allow it to teater toter and the box end of the casing fell to the floor. A kimzey employee saw the casing begin to move off the trough and called a stop and moved out of the hazard area. By the time the stop was called enough of the casing was off of the trough and fell about 10 feet and about 6-8 feet in from the v-door. The trough was stopped and the casing was stationary between the floor and the trough of the cat walk. The driller came down and latched onto the casing with the elevators. He then slowly picked up the casing and had a new catwalk operator bring the trough in with the casing making sure it did not slide off the trough. A safety stand down was held with NFX, Pioneer, and Kimzey for 30 minutes.
22:00	00:00	Run 9 5/8" 40# N-80, BTC Casing (126 total joints run). Filling casing every 30 joints.

Report Start Date	Report End Date	24hr Activity Summary
11/21/2013	11/22/2013	Finished Running 9 5/8" casing, Landed @ 8573' KB , Circ & Cond. Hole f/Cmt, RU & Cement 9 5/8" casing. Clean pits. Pick up curve assembly. LRI=73 days.

Start Time	End Time	Comment
00:00	04:00	Run 9 5/8" 40# N-80, BTC Casing From 5417' to 8063' Fill Csg. Whilst Rig Service, (Filling casing every 30 joints.) Switching liners in pumps from 6" to 5.5".
04:00	04:30	Rig Service
04:30	05:00	Run 9 5/8" 40# N-80, BTC Casing From 8043' to 8533' Fill Csg. (Filling casing every 30 joints.) Switching Liners in pumps.
05:00	05:30	Remove Flow Nipple
05:30	07:00	Tag Fill @ 8549' Wash down 36' fill w/Tag Joint to 8585', Circ, LD Tag JT. PU Landing JT. & Land out Whilst Circ. hole. Circulate Casing @ 6 bbl/min 240 gpm @ 240 psi Ran 200 Jts. 9 5/8" 40# N-80 BTC W/ Hanger/Landing Jt. Landed Casing @ 8573' KB
07:00	10:00	Circulate and Condition hole @ 6 bbl/min 240 gpm @ 240 psi While RU Cementers.
10:00	10:30	HPJSM with HES, Pioneer, and NFX on cementing casing. Hook up HES hardlines to cement head.

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
10:30	15:30	Pump Cement job as follows: Replaced Leaking Swing re-test. 1.) Pressure test cement lines to 5,000 psi 2.) Pump 40 bbls of tuned spacer III at 11.5 ppg 6bpm 3.) Pump 87.27 bbls (250 sks) of 1st lead cement at 6bpm 1.) Mixed at 12.5lb/gal, 1.96 ft3/sk, 10.56gal/sk 4.) Pump 392.71 bbls (1,130 sacks) of 2nd lead at 6 bpm 1.) Mixed at 12.5 lb/gal, 1.95 Ft3t/sk, 10.56 gal/sk 5.) Pump 135.55 bbls (589 sks) of Tail -6bpm 1.) Mixed at 14 ppg, 1.29 Ft3/sk, 5.7 gal/sk 6.) Shutdown, wash up pumps 7.) Drop plug 8.) Displace with 643.5 bbls of OBM at 7 bpm 1.) Cement back 547 bbls into displacement(96.5bbls cement back) 2.) Slow pump rate to 3.5 bpm at 635bbls into displacement 3.)Bump plug 3 bbls early (643.5bbls) 9.) Held 500 psi over final circulating pressure of 73 psi for 5mins. Bled back 2.8 bbls. Floats held 10.) Full returns throughout job. Finish changing liners in pumps.
15:30	16:30	Wash through rig stack and clean up all of HES cementers lines. Begin cleaning pits.
16:30	17:00	Rig Service. Clean pits.
17:00	19:00	Rig down cement head, back out of landing joint.Flush through all surface equipment.Rig down HES cementers. HPJSM with Cameron. Install pack off. Pressure test pack off to 10,000psi and hold for 15minutes. Continue to clean pits.
19:00	19:30	Install wear bushing with cameron. Continue cleaning pits.
19:30	23:00	Lay out Curve assembly BHA. Prep floor for tripping. Continue to clean pits.(Trouble shooting blower motor on draw works)
23:00	23:30	Rig Service. Finish fixing blower motor on draw works. Found loose connection in electrical lines.
23:30	00:00	HPJSM with Leam, Weatherford, Pioneer, and NFX on picking up BHA. Begin picking up curve assembly. Continue cleaning pits.

Report Start Date	Report End Date	24hr Activity Summary
11/22/2013	11/23/2013	PU Curve Assembly, Trip in hole, to 8407', Load hole, perform 30 min. Casing Test - Good test, Tag up Cmt drill FC/FS & 10' new hole to 8600', Perform FIt Test to 16 ppg - Good Test, Drill 8 3/4" curve from 8600' to 9015' LRI=74 days

Start Time	End Time	Comment
00:00	01:00	Pick up curve assembly. Scribe motor. Fill pits
01:00	02:00	Test MWD tools. Had to cycle pumps multiple times. Had trouble getting azimuth reading. Found error was due to depth and casing surronding tool.
02:00	03:30	TIH from BHA to 281'
03:30	04:00	Install rotating head rubber

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
04:00	08:00	TIH from 281' to 8407'. Filling every 30 stands.
08:00	08:30	Change out Head Rubber
08:30	09:00	Circulate and condition mud for Casing Test
09:00	09:30	Rig Service
09:30	10:00	Test Casing f/ 30 min @ 1900 PSi Test Good
10:00	11:30	Tagged Cmt @ 8500' (Ratty) Drill Float Collar @ 8526' & FS @ 8571'
11:30	12:30	Drill from 8590' to 8600' WOB 10-12, RPM 20 Spm 120 420 GPM, Back Ream Thru FS/FC Circ Btms up
12:30	13:00	FIT Test MW 14.1 Test to 16 ppg @ 850 psi Good Test
13:00	00:00	Drill/Slide 8 3/4" Curve from 8600' to 9,015' (415') 37.7 fph, KOP at 8,931'. Slides: 8,931'-9,015' (84')

Report Start Date	Report End Date	24hr Activity Summary
11/23/2013	11/24/2013	Drill 8 3/4" curve from 9,015' to 9,526' (511') 22.2fph. LRI= 75 days

Start Time	End Time	Comment
00:00	03:00	Drill 8 3/4" curve from 9,015' to 9,074' (59') 19.6 fph. Slides: 9,015' - 9,046' (31') TF10 R 9,046' - 9,074' (28') TF 5 R
03:00	03:30	Rig Service
03:30	16:30	Drill 8 3/4" curve from 9,074' to 9,357' (283') 21.7 fph. Slides: 9074' to 9107' (33') TF10 R 9107' to 9139' (32') TF 5 R 9142' to 9148' (6') TF 5 R 9148' to 9168' (20') TF HS 9171' to 9201' (20') TF HS 9206' to 9233' (17') TF HS 9238' to 9262' (24') TF HS 9268' to 9296' (28') TF HS 9305' to 9357' (52') TF HS
16:30	17:00	Rig Service
17:00	00:00	Drill 8 3/4" curve from 9,357' to 9,526' (169') 24.14 fph. Slides: 9,363' to 9,391' (28') TF 5 L 9,399' to 9,423' (24') TF HS 9,431' to 9,452' (21') TF HS 9,460' to 9,486' (26') TF 5 R 9,496' to 9,518' (22') TF 5 R

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
11/24/2013	11/25/2013	Drill 8 3/4" curve f/ 9,526' to 9,831' (305') 24.5 fph. Circulate 2x BU. TOOH for lateral assembly. LRI=76 days

Start Time	End Time	Comment
00:00	01:00	Drill 8 3/4" curve from 9,526' to 9,547' (21') 21 fph Slides: 9,526'-9,547' (21')
01:00	01:30	Rig Service
01:30	06:00	Drill 8 3/4" curve from 9,547' to 9,642' (95') 19.3 fph Slides: 9,552' to 9,583' (31') 9,591' to 9,614' (23') 9,633' to 9,642' (9')
06:00	07:30	After making a connection the motor stalled out to 5,145 psi. After the stall out pump pressure was at 1,700psi with 40 spm. Circulate and check pressures. All pressures normal after circulating.
07:30	12:30	Drill 8 3/4" curve from 9,642' to 9,736' (94') 18.8 fph Slides: 9,642' to 9,665' (23') TF HS 9,681' to 9,697' (16') TF HS
12:30	13:00	Rig Service
13:00	15:00	Drill 8 3/4" curve from 9,736' to 9,831' (95') 48.5 fph Slides: 9,736' to 9,748' (12') TF HS
15:00	17:00	Circulate 2 bottoms up. Prep floor for trip.15 minute flow check. No flow.
17:00	23:30	TOOH for lateral assembly from TD to BHA. Curve slick. Hole took proper fill. Flow check at 9 5/8" shoe (8573'). No Flow
23:30	00:00	Remove rotating rubber.

Report Start Date	Report End Date	24hr Activity Summary
11/25/2013	11/26/2013	LD Weatherford MWD tools, PU Schlumberger tools & Test, Tools Failed multiple tests, Ordered spare tools from Casper, WY. Tools on location at 6:15pm. Pick up tools. Test. Test failed. Reseat tool. Make up tools. Test again. Test successful. Pick up rest of BHA. LRI=77 days

Start Time	End Time	Comment
00:00	01:00	LD MWD,Motor, & Bit, RD Tools
01:00	01:30	Rig Service
01:30	04:30	PSMJ, PU Dir tools, Schlumberger tools
04:30	07:00	Test Schlumberger tools MWD Failed, Retest Failed.
07:00	10:00	While waitng on MWD Tools, PU Make up stands Drill Pipe in mouse hole.

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
10:00	18:30	Waiting on spare tools from Casper Wyoming (Schlumberger Pathfinder). Tools arrived on location at 6:15pm.
18:30	20:00	Pick up spare directional tools, make up same, and scribe.
20:00	21:00	Test directional tools with 80spm. Recycle pumps. Test failed, tool having connection problems.
21:00	22:30	Break out NMDC(tool carrier). When breaking out tool carrier noticed data link was too far up in. Tool did not seat right. Reseat tool and make up carrier to upper IPZIG.
22:30	23:00	Test directional tools. Test sucessful. Good communication with tools. Scribe motor.
23:00	00:00	Make up bit and near bit sensor.

Report Start Date	Report End Date	24hr Activity Summary
11/26/2013	11/27/2013	PU Dir Tools, TIH f/ 109' to 8764', Test MWD ok, TIH to 9861', Tagged up top of Curve, Set Highside, Wash (Slide to BTM. on highside) f/ 9861' to 9831'. Drill/slide f/ 9831' to 10128' (297') 31.2fph. LRI=78

Start Time	End Time	Comment
00:00	01:00	Make up NMDC and Crossover.
01:00	09:00	TIH from BHA to 3,506', Pick up Agitator, TIH from 3,506' to 8,764', Test MWD OK!. Trip in hole to top of curve @ 8931' highside motor, unable to slide down. (Hanging up)
09:00	14:00	Highside Motor, Wash down thru Curve w/ Motor Highsided, Pump @ 120 SPM 425 gpm
14:00	16:30	Drill/Slide 8 3/4" Lateral from 9,831' to 9,901' (20') 20 fph Slides: 9,831' to 9,850' (20') TF 170 LHS
16:30	17:00	Rig Service.
17:00	00:00	Drill/slide 8 3/4" Lateral from 9,901' to 10,128' (227') 32.4fph Slides: 10,101'-10,121' (20') TF 100 L

Report Start Date	Report End Date	24hr Activity Summary
11/27/2013	11/28/2013	Drill 8 3/4" lateral from 10,128' to10,528' (400') 28.5 fph. Criculate. Build trip slug, check flow, well static, pump slug, POOH from TD to BHA. Drain mud motor. Break bit and lower pzig. Lay down mud motor. LRI=79

Start Time	End Time	Comment
00:00	05:30	Drill 8 3/4" lateral from 10,128' to 10,342' (214') 38.9 fph Slides: 10,291' to 10,311' TF/ 90 Left
05:30	06:00	Rig Service
06:00	14:30	Drill 8 3/4" lateral from 10,342' to 10,528' (186') 32.3 fph mud wt. 14.1 Slides: 10,473' to 10,473', TF/20L 10,496' to 10,528' TF/20L.
14:30	16:00	Cric. build trip slug. check flow, well static, pump slug, perpare to POOH.

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Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
16:00	22:30	POOH from TD to BHA for motor failure. Found rubber come across shakers, Observed pressure spikes while sliding, pressure increased 400 psi off bottom. Had to slow down TOOH from 325 ft/min to 200 ft/min last 3000 feet.
22:30	23:00	Remove Rotating head rubber
23:00	00:00	Lay down NMDC. Drain mud motor. Break bit and lower PZIG. Break off and lay down mud motor.

Report Start Date	Report End Date	24hr Activity Summary
11/28/2013	11/29/2013	Test tools and motor. Install lower PZig and bit. TIH to 8,573'. Slip and cut. TIH F/ 8573' to 10,308'. Washing F/ 10,308' to 10,528', Drill 8 3/4" Lateral from 10,528' to 10,652' (124') 31.0 fph, Reprogram MWD tool, recycle pumps, Drill 8 3/4" Lateral from 10,652' to 11,003' (351') 43.9 fph, LRI=80

Start Time	End Time	Comment
00:00	01:30	Pick up new motor. Test tools and motor with 80spm. Install lower PZig and bit. Pick up NMDC and make up.
01:30	05:30	TIH from BHA to 7,089'. Pick up new agitator after running 37 stands of drill pipe. Filling every 40 stands.
05:30	06:30	Rig Service
06:30	07:30	TIH from 7,089' to 8,573'. Filling every 40 stands.
07:30	09:00	Slip and cut 100 feet of drill line.
09:00	10:00	TIH from 8,573' to 10,308'
10:00	11:00	Washing F/ 10,308' to 10,528' 60-60 on pumps 40 rpm (max bottoms up gas 6057 units)
11:00	15:00	Drill 8 3/4" lateral from 10,528' to 10,652' (124') 31.0 fph Slides: 10,528' -10,538' TF/ 20L
15:00	16:00	Reprogram MWD tool, recycle pumps, test pump 1 at a time @ 120 spm, test W/ both pumps @ 70 spm. (Test Good)
16:00	00:00	Drill 8 3/4" lateral from 10,652' to 11,003' (351') 43.9 fph Slides: 10,745'-10,776 (31') TF 10L

Report Start Date	Report End Date	24hr Activity Summary
11/29/2013	11/30/2013	Drill 8 3/4" Lateral from 11,003' to 12,204' (1,201') 52 fph LRI=81 days

Start Time	End Time	Comment
00:00	05:30	Drill 8 3/4" lateral from 11,003' to 11,271' (268') 48.7 fph. Slides: 11,116' - 11,147' (31') TF 5L 11,208' - 11,251' (43') TF 10R
05:30	06:00	Rig Service.
06:00	16:00	Drill 8 3/4" lateral from 11,271' to 11,775' (504') 50.4 fph. Slides: 11,398' - 11,448' TF 100R

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
16:00	16:30	Rig Service.
16:30	00:00	Drill 8 3/4" lateral from 11,775' to 12,204' (429') 57.2 fph. Slides: 11,776' - 11,861' (85') TF 30R 12,200' - 12,204' (4') TF 30R

Report Start Date	Report End Date	24hr Activity Summary
11/30/2013	12/1/2013	Drill 8 3/4" lateral from 12,205' to 12,469' (264') 52.8 fph, Rig Service, Drill 8 3/4" lateral from 12,438' to 13,006' (568') 54.1 fph, Rig Service, Drill 8 3/4" lateral from 13,006' to 13,348' (342') 40.2 fph LRI=82 days

Start Time	End Time	Comment
00:00	04:00	Drill 8 3/4" lateral from 12,204' to 12,438' (234') 58.5 fph Slides: 12,204'-12,249' TF (45')
04:00	04:30	Rig service.
04:30	15:00	Drill 8 3/4" lateral from 12,438' to 13,006' (568') 54.1 fph Slides: F/12,534' to 12,623' (89') TF 80R
15:00	15:30	Rig Service.
15:30	00:00	Drill 8 3/4" lateral from 13,006' to 13,348' (342') 40.2 fph Slides: 13,197' - 13,271' (74') TF HS

Report Start Date	Report End Date	24hr Activity Summary
12/1/2013	12/2/2013	Drill 8 3/4" lateral from 13,348' to 14,660' (1,312') 57 fph. 2 half hour rig services. LRI=83 days

Start Time	End Time	Comment
00:00	05:30	Drill 8 3/4" lateral from 13,348' to 13,736' (388') 70.5 fph Slides: 13,728' - 13,734' (6') TF 40L
05:30	06:00	Rig Service.
06:00	16:00	Drill 8 3/4" lateral from 13,736' to 14,240' (504') 50.4 fph Slides: 13,734' - 13,790' (56') TF 30L
16:00	16:30	Rig Service
16:30	00:00	Drill 8 3/4" lateral from 14,240' to 14,660' (420') 56 fph Slides: 14,440 - 14,456' (16') TF 150 L

Report Start Date	Report End Date	24hr Activity Summary
12/2/2013	12/3/2013	Drill 8 3/4" lateral from 14,660' to 15,010' (350') 26 fph. Circulate 4 BU. TOOH from TD. Ream tight spots. Circulate 2 BU. TOOH from TD to 11,453' LRI= 84 days

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
00:00	02:00	Drill 8 3/4" lateral from 14,660' to 14,713' (53') 26.5 fph Slides: 14,660' - 14,699' (39') TF 135L
02:00	02:30	Rig Service. Swap MWD transducer to stand pipe on rig floor due to noise from pumps. Bad transducer swap back to manifold on stand pipe below.
02:30	13:00	Drill 8 3/4" lateral from 14,713' to 14,995 (282') 26.9 fph Slides: 14,808' - 14,899' (91') TF 110L, 14,966' to 14,995 (29) TF 120L
13:00	13:30	Rig Service.
13:30	14:30	Drill 8 3/4" lateral from 14,995' to 15,010 (15') 15 fph
14:30	18:00	Clean up cycle, circulate clean hole prepare for TOOH for BHA, Circ. 100 rpm 140 spm circ 4 times bottoms up working pipe up & down, build slug.
18:00	20:00	TOOH from TD to 14,390' . Hole taking proper fill. Pulled off bottom with 30 klbs of drag. Work Tight spots. Tight spots were at: 14,900' 14,804' 14,678' Ream at 45rpm with 13-18 kft-lbs of torque from 14,655'-14,614' 14,595' 14,457' 14,390' Able to work through all tight spots with no more than 40klbs OSW.
20:00	22:00	Circulate 2x bottoms up due to excess drag and overpull. Circulate at 140spm and 100 rpm. At end of circulation flow check and pump slug.
22:00	00:00	TOOH from 14,390' to 11,453'. Work tight spots. Tights spots at: 14,502' 14,390' 14,272' 14,077' 12,222' 12,142' 12,031' 11,884' 11,873' Able to pull through all tight spots with no more than 40 klbs OSW.

Report Start Date	Report End Date	24hr Activity Summary
12/3/2013	12/4/2013	TOOH F/ 11,453' to 150', Change out BHA, TIH F/ BHA to 5,414'. Pick agitator, Cont. TIH F/ 5414' to 8500', Slip & cut, Rig Service, Cont. TIH F/8500' to 11,919', Wash & Ream from 11,919' to 12,171' LRI=85 days

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
00:00	06:00	TOOH From 11,453' to 8573'. Flow check. TOOH from 8,573' to BHA. Work tight spots with no more than 40 klbs OSW Tight spots: 11,884' 11,873'
06:00	10:00	Lay down NMDC. Drain mud motor. Break bit and lower PZIG. Break off and lay down mud motor. Pick up new motor & bit. Test tools and motor with 80spm. Pick up NMDC and make up.
10:00	13:00	TIH F/ BHA to 5,414'. Pick agitator after running 56 stands of drill pipe. Filling every 40 stands.
13:00	14:30	ContinueTIH F/ 5414' to 8500'. Filling every 40 stands.
14:30	15:30	Slip & Cut 105' drill line.
15:30	16:00	Rig Service.
16:00	17:00	ContinueTIH F/ 8500' to 8692'. Function test mwd tool out of casing recycle pumps 2 times.
17:00	21:00	ContinueTIH F/ 8692' to 11919'. Filling every 30 stands. Run in to tight spot @ 11919' pick up to 11,864' & washing & reaming through tight spots Back to 11,919'.
21:00	21:30	Chopper blower failed to drawworks attempt to restart with no success, Restart power to dog house gained all power back to drawworks.
21:30	22:00	Rig Service.
22:00	00:00	Wash & Ream from 11,919' to 12,171' 387 gpm, 50 rpm, 110 stks, (Re-test MWD no succsess troubleshoot, corrected the correction facter after correction MWD tested good @ 12.071').

Report Start Date	Report End Date	24hr Activity Summary
12/4/2013	12/5/2013	Wash & Ream from 12,171' to 15,010', Drill slide from 15,010' to 15,086' (76'), Rig service, Drill slide from 15,086' to 15,224' (138'). LRI=86 days

Start Time	End Time	Comment
00:00	10:00	Continue washing & reaming as needed from 12.171' to 15,010'. Troubleshoot Totco system. Install new rotating head rubber.
10:00	15:30	Drill 8 3/4" lateral from 15,010' to 15,086' (76') 14 fph Slides: 15,010' - 15,044' (34') TF 50L 15062' - 15080' (18') TF 50L
15:30	16:00	Rig Service.
16:00	00:00	Drill 8 3/4" lateral from 15,086' to 15,224' (138') 17.25 fph Slides: 15,086' - 15,105' (19') TF 50L. 15,125' to 15,155' (30') TF 80L. 15,182' to 15,212' (30') TF high side.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
12/5/2013	12/6/2013	Drill 8 3/4" lateral from 15,224' to 15,485' (261') 47.5 fph, Rig Service, Drill 8 3/4" lateral from 15,485' to 15,560' (75') 75 fph, Trouble shooting NOV Totco System W/ NOV tech, while trouble circ. & Reciprocating pipe @ 70rpm w/132spm, Drill 8 3/4" lateral from 15,560' to 15,580' (20') 6.6 fph. LRI=87 days

Start Time	End Time	Comment
00:00	05:30	Drill 8 3/4" lateral from 15,224' to 15,485' (261') 47.5 fph Slides: F/ 15,311' to 15,324' TF HS
05:30	06:00	Rig Service.
06:00	07:00	Drill 8 3/4" lateral from 15,485' to 15,560' (75') 75 fph Slides:
07:00	21:00	Trouble shooting NOV Totco System W/ NOV tech, while trouble circ. & Reciprocating pipe @ 70rpm w/132spm. Totco tech check all communication F/ totco system to amphion system, to find not receiveing communication F/ rig amphion system to totco system, totco tech is trouble shooting system W/ NOV tech over the phone, to find out it is rig SBC4 MSI card in top dog house needed reimaged to communiticate W/ totco system.(Pioneer-Amphion system had a trouble communicating the MSI channels to MDT Totco. The systems were working by themselves but not transmitting any data. This happened during an unscheduled loss of power of the doghouse causing SBC4 MSI card to get corrupted. This caused to not communicate the MSI channels to MDT Totco system. The MDT Totco tech had to contact the engineer in Rig Solutions which is in charge of Amphion systems and MDT Totco. After some conversations with the engineer the card was reimage with the MSI configurations. MDT Totco will leave a backup card if this ever happens again.)
21:00	00:00	Drill 8 3/4" lateral from 15,560' to 15,580' (20') 6.6 fph Slides: 15,562-15,580 TF 45R.

Report Start Date	Report End Date	24hr Activity Summary
12/6/2013	12/7/2013	Drill 8 3/4" lateral F/ 15,580' to 15,673', Rig Service, Drill 8 3/4" lateral F/ 15,673' to 15,694', Rig Service, Attempt to pump up survey had to recycle, pumps 2 times to get survey, Clean up cycle, circulate clean hole prepare for TOOH for BHA & MWD. Circ. @ 100 rpm 120 spm circ 6 times bottoms up while working pipe up & down, Check Flow, Well Static, Pump slug, POOH. LRI=88 days

Start Time	End Time	Comment
00:00	05:30	Drill 8 3/4" lateral F/ 15,580' to 15,673' (93') 17 fph Slides: 15,560' to 15,588' TF 45R, 15,616' to 15,634' TF 45R, 15,659' to 15,673' TF 45R
05:30	06:00	Rig Service.
06:00	11:00	Drill 8 3/4" lateral F/ 15,673' to 15,694' (21') 4.2 fph Slides: 15,673' to 15,687' TF 50R,
11:00	11:30	Rig Service.
11:30	12:00	Attempt to pump up survey had to recycle, pumps 2 times to get survey.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
12:00	22:00	Clean up cycle, circulate clean hole prepare for TOOH for BHA & MWD Circ. 100 rpm 120 spm circ 6 times bottoms up working pipe up & down, Racking back 1 stand per bottoms up @ 8000 stks. build slug.
22:00	00:00	Check Flow, Well Static, Pump slug, POOH from 15,031' to 12,332' (2699') to replace mwd tool. After pulling 10 stds blow down topdrive & all mud lines continue TOOH, Well taking calculated fill on trip.

Report Start Date	Report End Date	24hr Activity Summary
12/7/2013	12/8/2013	Continue TOOH from 12,332' to BHA'. L/D P/U bit & mud motor install new MWD scribe same, TIH, Rig Service, Continue tripping to btm @ 15,664', Drill from 15,664' to 15,710' (46') 15.3' fph. LRI=89 days

Start Time	End Time	Comment
00:00	06:00	Continue TOOH from 12,332' to BHA' pull rotating rubber. Well took calculated hole fill on trip. Flow check @ 8573' 9 5/8 shoe well static.
06:00	11:00	Check scribe F/ motor to mule shoe all good, drain motor, break bit, l/d bit& motor, make up same, scribe motor. L/D MWD tool change out battery & program mwd tool, make up mwd tool in nmdc, mwd would not seat, broke out nmdc install in mouse holeto seat mwd tool, tool seated make up to string & scribe.
11:00	17:30	Function test MWD tool (good Test) TIH F/ 111' to 5420' install agitator @ 5420' , Continue TIH from 5420' to 11,855'.
17:30	18:00	Rig Service.
18:00	20:30	Trip in hole from 11,855' to 15,664', Installed rotating head @ 14,422', Hit tight spot @ 15,015' wash through same. Wash last 90' to bottom, well took calculated displacement on trip in hole.
20:30	21:30	Drill Slide 8.75 lateral from 15,664' to 15,681' (17') 4.8 fpm. Slide: 15,664' to 15,681' @ 30R TF.
21:30	22:00	Work on Slider @ 15.681' Rack back 1 srd DP. Plugged NOV laptop into SBC (single board computer) Checked node 5 first then flashed the apple com function test topdrive & Slider all systems good. Latched up stand out of derrick before drilling ahead double checked all systems all systems good.
22:00	00:00	Drill Slide 8.75 lateral from 15,681' to 15,710' (29') 14.5 fpm. Slide: 15,681' - 15,695' (14') @ 30R TF.

Report Start Date	Report End Date	24hr Activity Summary
12/8/2013	12/9/2013	Drill Slide 8.75 lateral from 15,701' to 15,15890' (189') 34.4 fph, Rig Service, Drill Slide 8.75 lateral from 15,890' to 16,039' (149') 21.3 fph, Rig Service, Drill Slide 8.75 lateral from 16,039' to 16,260' (221') 26 fph, Troubleshoot MWD. LRI=90 days

Start Time	End Time	Comment
00:00	05:30	Drill Slide 8.75 lateral from 15,701' to 15,890' (189') 34.4 fph. Slide: F/ 15,864' to 15,879' TF 170R
05:30	06:00	Rig Service.
06:00	13:00	Drill Slide 8.75 lateral from 15,890' to 16,039' (149') 21.3 fph. Slide: F/ 15,945' to 15,980' TF 160R
13:00	13:30	Rig Service.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
13:30	22:00	Drill Slide 8.75 lateral from 16,039' to 16,260' (221') 26 fph. Slide: 16,105'-16,136' (31') 160R, 16,232'-16,256' (24') 170R.
22:00	00:00	Troubleshoot Pathfinder MWD Tool as follows: After sliding to 16260 ft MD , turned on the rotary and recycled the pumps to bring the IPZIG tool on and we were not able to catch sync with the tool anymore. Tried recycling the pumps, reprogramming the tool to a higher data rate, rebooting acquisition system, isolating pumps one at a time. Both the MWD's and OSC was involved in the troubleshooting.

Report Start Date	Report End Date	24hr Activity Summary
12/9/2013	12/10/2013	Continue troubleshooting MWD. Drill Slide from 16,260' to 16,435' (175') 35' fph, Rig Service, Drill Slide from 16,435' to 16,708' (273') 31.4' fph, Rig Service. Circulate 6 clean up cycles prepare for trip out of hole due to motor failure @ 16,708'. LRI=91 days

Start Time	End Time	Comment
00:00	00:30	Continue Troubleshooting MWD.
00:30	05:30	Drill Slide from 16,260' to 16,435' (175') 35' fph. Slide: F/16,420' to 16,435' TF180
05:30	06:00	Rig Service.
06:00	14:30	Drill Slide from 16,435' to 16,704' (269') 31.6' fph. Slide: F/ 16,515' to 16,530' TF170R
14:30	15:00	Rig Service.
15:00	16:30	Drill Slide from 16,704' to 16,708' (4') 2.7' fph. Slide: F/ 16,704' to 16,708' TF170R
16:30	00:00	Clean up cycle, circulate clean hole prepare for TOOH F/ motor Circ. 100 rpm 127 spm circ 6 times bottoms up working pipe up & down, Racking back 1 stand per bottoms up @ 9500 stks. build slug. Prepare for trip out of hole from 16,708'.

Report Start Date	Report End Date	24hr Activity Summary
12/10/2013	12/11/2013	Rig Service,Continue circ btms up to 16,138', Flow check well static, Pump slug @ 16,138', TOOH, L/D P/U new BHA, Slip & Cut drill line, TIH, Install rotating head rubber. LRI=92 days

Start Time	End Time	Comment
00:00	00:30	Rig Service.
00:30	01:30	Continue circulating bottoms up @ 16,138', Flow check well static,
01:30	13:00	Pump slug @ 16,138'. TOOH F/ 16,138' to surface to change mud motor, Monitor well on trip tank, well took proper hole fill on trip out of hole, No abnormal drag.
13:00	16:00	L/D NMDC, Pull up to bit Drain motor, brake off bit & motor l/d pick up & make up same, scribe motor & check scribe on mwd tool, m/u cross over p/u nmdc & 1 stand test mwd tool. Function test MWD tool (good Test)
16:00	16:30	Rig Service.
16:30	21:30	TIH F/ 111' to 5420' install agitator @ 5420' , Continue TIH from 5420' to 8652'.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
21:30	23:00	Slip & Cut 120' drill line @ 8652' while circulating @ 20 stks/min.
23:00	00:00	Pull old rotating head rubber off drill pipe, Install new rotating head rubber.

Report Start Date	Report End Date	24hr Activity Summary
12/11/2013	12/12/2013	Test MWD Tool @ 8758' with 110 stks/min, Continue TIH from 8758' to 15,976', Rig Service, Cont. TIH F/ 15976 to 16708', Drill 8 3/4" lateral F/16,708' to 17,106' (398') 16.5 fph.LRI=93 days

Start Time	End Time	Comment
00:00	00:30	Test MWD Tool @ 8758' with 110 stks/min test all good.
00:30	05:30	Continue TIH from 8758' to 15,976', Well displaced calculated displacement on trip filled every 2500', Tag @ 15,976' wash same.
05:30	06:00	Rig Service.
06:00	08:00	Continue TIH from 15,976' to 16,708', Well displaced calculated displacement on trip filled every 2500'. Tight spots @ 15,976', 16,083', 16,115', 16,133', 16,468', 16,500'. Wash @ 120 strks, 418 gpm, 60 rpm.
08:00	17:30	Drill 8 3/4" lateral F/16,708' to 16,987', (279') 29 fpm Slides: 16,708'-16,720' @ 160R, 16,892'-16,907' 20R.
17:30	18:00	Rig Service.
18:00	00:00	Drill 8 3/4" lateral F/16,987' to 17,106', (119') 19.8 fpm Slides: 16,987'-17,011' (24') HS,

Report Start Date	Report End Date	24hr Activity Summary
12/12/2013	12/13/2013	Drill 8 3/4" lateral F/17,106' to 17,699', (593') 40 fph, Rig Service, Circulating 6x bottoms up @ 17,699' due too motor falure. Prepare TOOH. LRI=94 days

Start Time	End Time	Comment
00:00	05:00	Drill Slide from 17,106' to 17,271' (165') 33 fph. Slides: 17,125'- 17,153' (28') @ 5L TF,
05:00	05:30	Rig Service.
05:30	17:30	Drill Slide from 17,271' to 17,699' (428') 37.8 fph. Slides: 17610' to 17635' TF 20 R
17:30	18:00	Rig Service.
18:00	00:00	Circulate condition mud @ 17,699' Due to mud motor falure, Circulating 6 x bottoms up @ 63,000 stks total, 130 stks/min, 454 gpm, 100 rpm.

Report Start Date	Report End Date	24hr Activity Summary
12/13/2013	12/14/2013	Continue circulating bottoms up @ 17,699', Flow check well static, TOOH. to Shoe @ 8500' Ck for flow, TOH LD BIt Motor, PU new Bit & Motor, Download MWD. TIH to 8664', Slip & cut 585' drill line. LRI=95 days

Start Time	End Time	Comment
00:00	02:30	Continue Circulating bottoms up @ 17,644'.
02:30	05:30	Flow check well static, Pump slug, Trip out of hole from 17,644', Monitor well on trip tank. Pull 10 stds blow down topdrive & all mud lines. (Trip out of hole due to motor falure).
05:30	06:00	Rig Service.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
06:00	16:30	Trip out of hole to Shoe @ 8573', Flow Check f/ 15 Min. Trip out of hole to 107', Remove rotating head rubber, Drain Motor, LD Bit & Motor, PU New Bit & Motor, Download MWD scribe same.
16:30	17:00	Rig Service.
17:00	17:30	Install rotating head rubber.
17:30	22:30	Trip in hole from 105' to 8664', Filling pipe every 3000', Monitor displacement in trip tank on trip in hole, Test MWD tool @ 3000' test good, Continue TIH to 9 5/8 csg shoe.
22:30	00:00	Slip & Cut 585' drilling line, While circulateing @ 8664' 91' outside of 9 5/8 csg shoe.

Report Start Date	Report End Date	24hr Activity Summary
12/14/2013	12/15/2013	Continue cutting drill line, Rig Service, TIH. to 15,750' tagged up, started W&R from 15,750' to 17, 699' increasing MW to 14.5 ppg, Work on TF display reprogram MWD Tool, condition mud @ 17,699' due to packing off, Drill Slide from 17,699' to 17,724'. LRI=96 days

Start Time	End Time	Comment
00:00	00:30	Continue cutting drill line @ 8664'.
00:30	01:00	Rig Service.
01:00	01:30	Test MWD @ 8664' 110 SPM Highside tool
01:30	07:00	Trip in hole from 8664' to 15,750' Tagged up @ 15,750'
07:00	18:00	Wash and Ream from 15,750' to 17,648' Tight Spots @ 15,790', 15,830', 15,903', 15,945', 15,961', 16,004', 16,106', 16,137', 16,203', 16254', 16,360', 16,446', 16,720', 16,993', 17,011', 17,030', 17,099', 17,165' wash back through tight spots of 17,030' & 17,099', hole started packing off from 17,000' to 17,109, Work tight area's @ 60 RPM, 100 SPM 350 GPM, Increased MW from 14.1 ppg to 14.5 ppg Vis 88
18:00	18:30	Rig Service.
18:30	19:00	Wash from 17,648' to bottom @ 17,699', 120 spm, 70 rpm.
19:00	19:30	Program pathfinder MWD tool, Work on toolface display @ 17,699'.
19:30	21:00	Attempt to slide @ 17,699' with no success due to hole packing off pick up from 17,699' work full stand condition mud due to packing off.
21:00	00:00	Drill Slide from 17,699' to 17,724',(25') 8.3 fph, 120 spm, 70 rpm, 422 gpm. Slide: 17,699'- 17,724' (25') @ HS.

Report Start Date	Report End Date	24hr Activity Summary
12/15/2013	12/16/2013	Drill Slide from 17,724' to 18,344' (620') 31.3 fph. Rig Service. LRI=97 days

Start Time	End Time	Comment
00:00	13:30	Drill Slide from 17,724' to 18,122' (398') 29.4 fph. Slides: 17,952' to 17962' 10', 70 RPM 120 SPM 420 GPM
13:30	14:00	Rig Service.
14:00	00:00	Drill Slide from 18,122' to 18,344' (222') 22.2 fph. 70 RPM 120 SPM 420 GPM Slides: 18,190' to 18,208' (18') 180 TF, 18,322'-18,332' (10') TF HS.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
12/16/2013	12/17/2013	Drill Slide from 18,344' to 19,108' (764') 44.2 fph. Rig Service, Pump Repair, T/D @ 19,108' 12/16/13, 22:50 hrs. LRI=98 days

Start Time	End Time	Comment
00:00	05:30	Drill Slide from 18,344' to 18,564' (220') 40 fph.
05:30	06:00	Rig Service
06:00	09:00	Drill Slide from 18,564' to 18,654' (90') 30 fph.
09:00	09:30	Rig Service
09:30	10:30	Drill Slide from 18,654' to 18,690' (36') 36 fph.
10:30	11:30	Blown Swabs in pump #1 & #2 Replace put back on line.
11:30	23:00	Drill Slide from 18,690' to 19,108' (418') 36.3 fph. T/D Aubrey 2-15-22-3-2WH 12/16/13 22:50 hrs @ 19,108'. Straight line projection @ bit 19,108' MD, 91.10 inc, 179.69 azm, TVD 8958.73, / 41.95' right of plan, 8.05' right of fairway, 91.95' left of fairway.
23:00	00:00	Circulate condition mud @ 19,108' Due to T/D well, Circulating 10 x bottoms up @ 115,750 stks total, 120 stks/min, 420 gpm, 100 rpm. After each bottoms up rack back a stand.

Report Start Date	Report End Date	24hr Activity Summary
12/17/2013	12/18/2013	Circulate condition mud @ 19,108' Due to T/D well, Circulating 10 x bottoms up @ 115,750 stks total, 120 stks/min, 420 gpm, 100 rpm. After each bottoms up rack back a stand. Trip back to bottom, Circulate 2 bottoms up, TOOH from TD to 11,242' LRI=99 days

Start Time	End Time	Comment
00:00	13:30	Circulate and condition mud @ 19,108' (TD), Circulating 10 x bottoms up @ 115,750 stks total, 122 spm (427 gpm), 100 rpm. After each bottoms up rack back a stand for 10 stds. Cuttings- coffee ground in size 100% coverage on shakers. Parameters at beggining of clean up: Torque- 17Kft-lbs PP-4900psi PU-219klbs SO-180klbs
13:30	14:30	TIH. Wash back to bottom.
14:30	16:00	Begin circulating 2 bottoms up at TD
16:00	16:30	Rig Service. Continue circulating 2 bottoms up.
16:30	17:00	Finish 2 bottoms up with 100 rpm 122spm (427gpm). final bottoms up 10-15% coverage very fine - fines. Parameters at end of clean up: Torque- 7Kft-lbs PP-4900psi PU-207Klbs SO-197Klbs
17:00	00:00	Fill trip tanks. Flow check. Well static. TOOH for logs from TD to 11,243'. 50Klbs over pull coming off bottom. Intermittent drag from TD to 15,000' with 20-40klbs over pull.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Daily Operations

Report Start Date	Report End Date	24hr Activity Summary
12/18/2013	12/19/2013	TOOH from 11,242' to BHA, LD MWD, Bit & Motor, PU Push log tools test, Rig Service, TIH W/Push Logs. RIH to 8484'. Rig up sheaves. Install crossovers and side entry sub. Run wire line wet connect to logging tools. LRI=100 days

Start Time	End Time	Comment
00:00	05:30	TOOH from 11,242' to 2268'
05:30	06:00	Rig Service
06:00	08:00	Trip out of hole from 2268' to BHA (Pulling Wet)
08:00	08:30	Pull Rotating head
08:30	10:30	LD Dir Tools, Drain motor, break bit pull MWD
10:30	11:00	Held Safety Mtg. w/ Halliburton Loggers and Crews
11:00	14:00	Lay out Logging tools, and stage, PU and install, Test Logging tools, Prep to TIH with Logging tools
14:00	14:30	Rig Service
14:30	20:30	Trip in hole with Logging tools@ 1min/Std to 8,484'. Filling pipe every 2,000', Halliburton tool length:147.02'. HPJSM with Halliburton and night crew on running tool pusher logs.
20:30	21:30	HPJSM with HES wireline to rig up sheaves. Rig up sheaves while circulating at 44spm (155gpm) with 200 psi
21:30	22:00	Rig Service
22:00	00:00	Stop circulating. Break out and make up crossover, Side entry sub, and crossover. Run wet connect in to logging tools.

Report Start Date	Report End Date	24hr Activity Summary
12/19/2013	12/20/2013	Connect to logging tools with wet connect on 2nd attempt. RIH to 17,003' at 45 fpm, Log Lateral @ 25'/min from 17,003' to 8,484'. Rig down HES sheaves and side entry sub. Slip and cut 165' of drill line. LRI=101 days

Start Time	End Time	Comment
00:00	01:30	Connect to logging tools with wet connect on 2nd attempt with 115 spm at 1250psi. Rig up floor sheaves and wireline guide on floor.
01:30	09:00	RIH while logging to 17,003' (side entry sub 54' from shoe) at 45 fpm. Filling every 2,000'. Shut down tool & Restart (2-Caliber arms not working on TIH) after restart all 6 arms working on Logging Tool..
09:00	17:30	TOOH while logging @ 25'/min from 17003' to 10,089' hole slick
17:30	18:00	Rig Service.
18:00	20:30	TOOH while logging @ 25'/min from 10,089' to 8,467' (side entry sub)
20:30	22:30	Rig down floor sheaves. POOH with wet connect on wireline. Lay down crossover, Side entry sub, crossover, and wet connect spear. Rig down sheave in derrick and lay down same.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
22:30	00:00	Slip and cut 22 wraps(165') of drill line.

Report Start Date	Report End Date	24hr Activity Summary
12/20/2013	12/21/2013	Rig Service. Prep and check equipment to LDDP. LDDP from 8,484' to Logging tools, LD Logging tools, Pull Wear Bushing, Rig Service, HPJSM with Kimzey. Pick up and make up shoe track, and sage rider tool. Pick up 2 joints and test floats. Test good. Trouble shoot amphion and top drive. LRI=102 days

Start Time	End Time	Comment
00:00	00:30	Rig Service. Prep for LDDP
00:30	11:30	LDDP from 8484'. to logging tools, Cleaning pins and boxes.
11:30	14:00	JSA w/ Halliburton & Crews. LD Logging Tools
14:00	14:30	Pull Wear Bushing
14:30	15:00	Rig Service
15:00	16:00	Rig up casing crews.Rig up power tongs, 250k elevators, flush mounted slips, bail extensions, and prep floor to run casing.
16:00	16:30	HPJSM on running casing with Kimzey, Pioneer, and NFX.
16:30	19:00	Pick up shoe, 1 joint, float collar, and one joint. Make up shoe track. Pick up sage rider tool with crossovers and make up same. RIH with 2 joints. Rig up fill tool. Test floats with 35 spm. Test good. Pick up and make up 5th joint.
19:00	19:30	Rig Service
19:30	00:00	Tried to pick up 6th joint of 5.5" casing the top drive bail tilts would not link out to pick up casing and top drive locked out due to a hydraulic pressure problem. Reset whole top dog house and trouble shoot. Waiting on electrician and top drive tech. Reset top dog house and drillers chair 3 more times. On third time drillers chair amphion lost communication with system. Begin trouble shooting driller chair. Reporgrammed single board computer flashcard. Program did not work. Check service loop. Service loop(42-pin communication line) had wear on outside. Trouble shoot and test pins on service loop. 42-pin working. Hooked 42-pin back up to top drive. Electrician started trouble shooting amphion with NOV over the phone. Electrician on location at 8pm and top drive tech on location by midnight. Monitor well on trip tank and verify back side is staying full. No flow on flow checks.

Report Start Date	Report End Date	24hr Activity Summary
12/21/2013	12/22/2013	Trouble shoot amphion system. Waiting on NOV to make and send new program for control card. New program did not work. Try to troubleshoot over the phone with NOV. Wait on NOV tech out of Houstion. Cleaning rig. Monitor well on trip tank. LRI=103 days

Start Time	End Time	Comment
00:00	00:00	Trouble shoot amphion system. Waiting on NOV to make and send new program for control card. New program did not work. Try to troubleshoot over the phone with NOV. Wait on NOV tech out of Houstion. Cleaning rig. Monitor well on trip tank.

Report Start Date	Report End Date	24hr Activity Summary
12/22/2013	12/23/2013	Tech on location at 01:00am. Fix Amphion. Fix hydaulic motor on top drive. Run 206 total joints of 5.5" Casing. Circulate and condition mud at 9 5/8" casing shoe. LRI=104 days

Start Time	End Time	Comment
00:00	01:00	Wait on NOV tech. Arrived on location at 01:00am. Cleaning rig. Monitor well on trip tank.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
01:00	08:30	NOV tech on location. Loaded new SBC flashcard with right software. Amphion working. Brought topdrive down to the floor and stung into casing with CRT. Began to swap out hydraulic pump on top drive and found the love joy coupler was broken on shaft of pump. Swap out hydraulic pumps and pump love joy
08:30	09:00	PJSM on running casing with Kimzey, Pioneer, and NFX.
09:00	22:00	Run 5.5" Casing 20# P-110 Tenaris XP.(206 total joints run) Filling every 2000' Install marker jt. @ # 80 - 3387' (Marker @ 15,696' when landed) Install marker jt. @ # 152 - 6,384' (Marker @ 12,699' when landed)
22:00	00:00	Circulate at shoe after 206 joints (8,567') to condition thick mud. Circulate 8,733 strokes(BU @ 4,800strokes) at 70spm(246gpm). Begining MW and vis In- 15.5ppg, 382 sec/qt. Out- 15.2ppg, 155 sec/qt. Ending MW and Vis In- 15.3ppg, 113 sec/qt. Out- 15.3ppg, 93sec/qt.(@12:30am)

Report Start Date	Report End Date	24hr Activity Summary
12/23/2013	12/24/2013	Finish circulating 11,012 strokes at 12:30am. Continue to run 5.5" casing 20# P-110 Tenaris XP. Run to 19,085'. Filling every 2000'. Pick up tag joint. Tag up at 19,108'(25' in on tag joint). Rig down Kimzey. Pick up RCH and install. Circulate, load cement, spot in, and rig up HES cementers. LRI=105 days

Start Time	End Time	Comment
00:00	00:30	Finish circulating 11,012 strokes (BU @ 4,800strokes) at 70spm(246gpm).
00:30	17:00	Run 5.5" Casing 20# P-110 Tenaris XP. Run to 19,085'. Filling every 2000' Install marker jt. @ # 242 - 10153' (Marker @ 8,930' when landed) Make casing up @ 15 RPMS Per Deep Well thread rep. Pick up and make up tag joint. Sting in with CRT tool. Tag bottom 19108' (25' in on tag joint). Pick up and lay down tag joint. Final SO-108klbs, PU-270klbs.
17:00	17:30	Rig Service
17:30	18:30	Rig down Kimzey bails, elevators, and CRT tool. Install rig elevators. PU and install GSI rotating cement head.
18:30	00:00	Circulate and condition hole. Stage pumps up to 100spm(348.6 gpm/8.3bpm).33,200 strokes at midnight. Rotate 5.5" casing string at 15rpm with 6,700 ft-lbs of torque. Rotating wieght-178klbs. Load cement, rig up HES hardlines, spot in, and rig up HES pump trucks.

Report Start Date	Report End Date	24hr Activity Summary
12/24/2013	12/25/2013	HPJSM with HES cementers. Rig up hardlines to RCH. Pump production cement job.Shut in well. WOC. Bleed pressure down and open well. ND BOPE. Rough cut casing. Laydown RCH and cut joint. Lay over BOPE. Make final cut and begin to install tubing head and frac valve. LRI=106 days

Start Time	End Time	Comment
00:00	00:30	HPJSM w/ HES cementers.
00:30	03:00	Rig up HES hardlines to RCH. Went to pump through all lines and a valve on HES's ground manifold was closed. HES accidentally mixed 35 sks of conventional lead(144' of coverage lost) instead of 40bbls of spacer. Had to pump cement over to peak's 3-sided bin. While trying to pump over cement discovered an actual ice plug in low torque valve on the ground. Had to swap it out for a fresh valve. Went to pressure test and the nitrogen side had a leak. HES swapped out a seal on 1502 line.

NEWFIELD

Summary Rig Activity

Well Name: Aubrey 2-15-22-3-2WH

Start Time	End Time	Comment
03:00	10:30	1.)Pump 10 bbls CaCl2 through backside iron to test in-line equipment 2.)Pressure test cement lines to 6,500 psi hold pressure while testing N2 3.)Pressure test N2 lines to 7,500 psi (bleed off in reverse order) 4.)Pump 40 bbls of Tuned Spacer™ III with surfactant at 15.5 ppg – 5 bpm 5.)Pump 281 bbls (1160 sks) of TergoVis™ I – 4 bpm 1.)15.7 ppg, 1.36 ft3/sk, 6.99 gal/sk 6.)Pump 223 bbls (1170 sks) of Conventional Lead Cement – 5 bpm(Volumes Reflect 35 sacks lost from begining of job) 1.)15.7 ppg, 1.07 ft3/sk, 4.48 gal/sk 2.)Bring on foamer at 220 bbls away – 128 gal needed for job 3.)Bring on N2 at 225 bbls away – 185,000 scf needed for job plus cooldown 7.)Pump 372 bbls (1135 sks) of foamed lead – 5 bpm 1.)Mixed at 17.3 ppg, 1.84 ft3/sk, 7.48 gal/sk 2.)Foamed to 15.7 ppg, 2.01 ft3/sk 3.)Casing stalled out at 16Kft-lbs. Held torque. 8.)Pump 16.4 bbls (50 sks) of unfoamed tail – 4 bpm 1.)17.3 ppg, 1.84 ft3/sk, 7.48 gal/sk 9.)Shutdown, wash up to peak three sided tanks, drop plug 10.)Pump 10 bbls of MMCR+Cla-Web Water – 5 bpm 11.)Pump 413 bbls of Cla-Web Water at 4-8 bpm 1.) Full returns throughout cement job. 2.) Did not see spacer or turgovis back to surface. 3.) Slowed down last 20 bbls of displacement to 4bpm. 4.)Bumped plug 1,000psi over FCP(4,200psi) 7.5 bbls early 5.)Held Pressure for 5mins. Bled back 6.5bbls. 6.)Casing began to rotate again slowly with 16Kft-lbs at the end of displacement 12.)Shut in well and monitor annular pressures
10:30	11:00	Rig down HES cementers. HPJSM with Clean harbors. Began cleaning pits. Monitor annular pressure
11:00	15:00	WOC for a total of 4 hours. Annular pressure gradually climbed to 790 psi. Bled off. Pressure bled off quick. Open choke 100%. No Flow. Open Annular no flow well dead. Cleaning pits.
15:00	00:00	Cleaning Pits, Wash out stack & Lines, ND BOP & Flow line, Snup Lines, Set Slips @ 140k to energize. Cut off Csg.Break out RCH and cut casing. Lay down both. Lay over BOPE . Make final cut to casing. Clear sub of heaters inorder to lift tubing head and frac valve into sub. Begin installing tubing head and frac valve.

Report Start Date	Report End Date	24hr Activity Summary
12/25/2013	12/26/2013	LRI=107 days

Start Time	End Time	Comment
00:00	03:00	JSA Safety Mtg. W/ Cameron & Crews, install wellhead, torque bolts & Test Wellhead ok! Clean pits
03:00	03:30	Safety Mtg. LDDP, Clean Pits
03:30	04:00	Rig Service, Clean Pits
04:00	00:00	LDDP in Derrick LD using Mouse hole. Clean Harbor @ 07:30 AM Quit Cleaning pits (Said they had put in enough hours and left they arrived on location 12/24/13 @ 07:30 and left @ 07:30 12/25/13) 4-C Restoration on Location @ 11:30 Held Safety Mtg. Clean Pits Release Rig @12:00pm. Finish cleaning pits. Begin rigging floor down.