

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 Yergensen #1-9-3-1		
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>				3. FIELD OR WILDCAT WILDCAT		
4. TYPE OF WELL Oil Well Coalbed Methane Well: NO				5. UNIT or COMMUNITIZATION AGREEMENT NAME		
6. NAME OF OPERATOR HARVEST (US) HOLDINGS, INC				7. OPERATOR PHONE 281 899-5722		
8. ADDRESS OF OPERATOR 1177 Enclave Parkway, Houston, TX, 77077				9. OPERATOR E-MAIL jmckee@harvestnr.com		
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) Fee		11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>		12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>		
13. NAME OF SURFACE OWNER (if box 12 = 'fee') Matt Yergensen				14. SURFACE OWNER PHONE (if box 12 = 'fee') 435-823-5124		
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee') P.O. Box 51, 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 <input type="checkbox"/> (Submit Commingling Application) NO <input checked="" type="checkbox"/>		19. SLANT VERTICAL <input checked="" type="checkbox"/> DIRECTIONAL <input type="checkbox"/> HORIZONTAL <input type="checkbox"/>		
20. LOCATION OF WELL	FOOTAGES	QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN
LOCATION AT SURFACE	1842 FNL 1667 FWL	SENW	9	3.0 S	1.0 W	U
Top of Uppermost Producing Zone	1842 FNL 1667 FWL	SENW	9	3.0 S	1.0 W	U
At Total Depth	1842 FNL 1667 FWL	SENW	9	3.0 S	1.0 W	U
21. COUNTY DUCHESNE		22. DISTANCE TO NEAREST LEASE LINE (Feet) 1667		23. NUMBER OF ACRES IN DRILLING UNIT 160		
		25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 0		26. PROPOSED DEPTH MD: 11650 TVD: 11650		
27. ELEVATION - GROUND LEVEL 5104		28. BOND NUMBER B004657		29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE Neil Moon Pond		

ATTACHMENTS

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

<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER	<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN
<input checked="" type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)	<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER
<input type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)	<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP

NAME Don Hamilton	TITLE Permitting Agent (Buys & Associates, Inc)	PHONE 435 719-2018
SIGNATURE	DATE 08/26/2010	EMAIL starpoint@etv.net
API NUMBER ASSIGNED 43013504270000	APPROVAL  Permit Manager	

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Cond	17.5	13.375	0	500		
Pipe	Grade	Length	Weight			
	Grade H-40 ST&C	500	48.0			

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Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
I1	8.75	7	0	10300		
Pipe	Grade	Length	Weight			
	Grade P-110 LT&C	10300	29.0			

CONFIDENTIAL

Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
Surf	12.25	9.625	0	3000		
Pipe	Grade	Length	Weight			
	Grade J-55 LT&C	3000	36.0			

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Proposed Hole, Casing, and Cement						
String	Hole Size	Casing Size	Top (MD)	Bottom (MD)		
L1	6	4.5	0	11650		
Pipe	Grade	Length	Weight			
	Grade P-110 LT&C	1650	15.1			

CONFIDENTIAL

CONFIDENTIAL STATUS

HARVEST (US) HOLDINGS, INC.

Yergensen #1-9-3-1
 Section 9-T3S-R1W
 Duchesne County, Utah

DRILLING PROGRAM

1. GEOLOGIC SURFACE FORMATION

Uinta formation of Upper Eocene Age

2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

UINTAH 0'
 GREEN RIVER 4,187'
 UTELAND BUTTE 8,769'
 WASATCH 9,168'
 TD 11,650'

3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS

Wasatch (Oil & Gas) 8,769' – 11,650'

Fresh water may be encountered in the Uintah Formation, but would not be expected below about 500'.

4. PROPOSED CASING PROGRAM

a. Casing Design:

Size	Interval		Wt	Grade	Coupling	Design Factors		
	Top	Bottom				Burst	Collapse	Tension
Conductor 20" Hole size 26"	0'	60'	0.25WT	X-42	A53B	N/A	N/A	N/A
Deep Conductor 13 3/8" Hole Size 17 1/2"	0'	500'	48.0	H-40	STC	1,730 psi 7.92 SF	740 psi 3.39 SF	322,000 lbf 13.41 SF
Surface - 9 5/8" Hole Size 12 1/4"	0'	3,000'	36	J-55	LTC	3,520 psi 1.88 SF	2,020 psi 1.44 SF	453,000 lbf 4.84 SF
Intermediate/Production 7" Hole Size 8 3/4"	0	10,300'	29	P-110	LT&C	11,220 psi 1.67	8,530 psi 1.54 SF	929,000 lbf 3.11
Production Liner 4 1/2" Hole Size 6"	10,000'	11,650'	15.1	P-110	LTC	14,420 psi 1.13 SF	14,350 psi 1.90 SF	406,000 lbf 2.40 SF

Assumptions:

- 1) Surface casing Maximum Allowable Surface Pressure (MASP) = Fracture gradient - Gas gradient
- 2) Production casing MASP (production mode) = Pore pressure - gas gradient
- 3) All collapse calculations assume fully evacuated casing w/gas gradient
- 4) All tension calculations assume air weight
 - Fracture gradient at 9 5/8" casing shoe= 12.45 ppg
 - Pore pressure at 9 5/8" casing shoe = 8.33 ppg

CONFIDENTIAL STATUS

Fracture gradient at 7" casing shoe= 16.0 ppg
 Pore pressure at 7" casing shoe= 11.9 ppg
 Pore Pressure at production casing shoe= 13.0 ppg
 Gas gradient = 0.115 psi/ft
 Frac gradient = 0.83 psi/ft

All casing shall be new or, if used, inspected and tested. Used casing shall meet or exceed API standards for new casing.

All casing strings shall have a minimum of one (1) centralizer on each of the bottom three (3) joints.

b. Cementing Design:

Job	Fill	Description	Sacks	OH Excess	Weight (ppg)	Yield (ft ³ /sk)
			ft ³			
Conductor casing 20"	60' to surface	Class G w/ 2% CaCl	135	50%	15.8	1.15
			155			
Deep Conductor casing 13 3/8"	500' to surface	Premium G w/ 2%CaCl, ¼ lb/sk Flocele	600	50%	15.8	1.15
			690			
Surface casing 9 5/8" Lead	2500' to surface	Premium Type V w/ 16% gel, 10 lbs/sk gilsonite, 3% salt, 3 lbs/sk GR 3, ¼ lb/sk Flocele	300	40%	11.0	3.82
			1146			
Surface casing 9 5/8" Tail	3000' to 2500'	Premium G w/ 2% CaCl, ¼ lb/sk Flocele	100	50%	15.8	1.15
			115			
Intermediate/Production casing 7" Lead	8000' to surface	Light Premium w/ 2% gel, 6 lbs/sk light weight additive, 0.125 lb/sk lost circulation additive	906	30%*	11.5	2.77
			2253			
Intermediate/Production casing 7" Tail	10300' to 8000'	50/50 Poz Premium w/ 2% expander, 0.3% fluid loss control, 0.3% retarder	536	30%*	14.3	1.29
			692			
Production Liner – 4 ½"	11650' to 10000'	BONDCEM system w/ 2% expander, 0.3% fluid loss control, 0.3% retarder	108	30%*	15.6	1.56
			168			

*Actual volume pumped will be 15% over the caliper log.

-Compressive strength of lead cement: 1800 psi @ 24 hours, 2250 psi @ 72 hours.

-Compressive strength of tail cement: 2500 psi @ 24 hours

Waiting on Cement (WOC): A minimum of four (4) hours shall elapse prior to attempting any pressure testing of the BOP equipment which would subject the surface casing cement to pressure, and a minimum of six (6) hours shall elapse before drilling out the wiper plug, cement, or shoe is begun. WOC time shall be recorded in the Driller's Log. Compressive Strength shall be a minimum of 500 psi prior to drilling out.

CONFIDENTIAL STATUS

The 9-5/8” surface casing shall, in all cases, be cemented back to surface. In the event that during the primary surface cementing operation, the cement does not circulate to surface, or if the cement level should fall back more than 8’ from surface, then a remedial surface cementing operation shall be performed to ensure adequate isolation and stabilization of the surface casing.

The intermediate/production casing cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals.

The production liner cementing program shall be conducted as approved to protect and or isolate all potentially productive zones, abnormally pressured zones and any prospectively valuable deposits of minerals. Overlap will be a minimum of 200’ w/ a 250’ cap on top of liner or isolation packer on top of the liner hanger.

As a minimum, usable water zones shall be isolated and/or protected by having a cement top for the production casing at least 200’ above the base of the usable water. If gilsonite is encountered while drilling, it shall be isolated and/or protected via the cementing program.

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable pre-flush fluid, inner string cement method, etc., shall be utilized to help isolate the cement from contamination by the mud being displaced ahead of the cement slurry.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or to 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield. If pressure declines more than 10% in 30 minutes, corrective action shall be taken. All production strings will be exposed to both positive as mentioned above and negative testing.

5. TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS

<i>Depth</i>	<i>Type</i>	<i>Weight</i>	<i>Vis</i>	<i>API Fluid Loss</i>
0-80’	Air or Water	8.33	N/A	N/A
80-500’	Air/Mist	8.4-8.6	45-55	N/C
500’-3,000’	Air/Mist or Water/Gel w/ FL	8.8-9.0	45-60	8-10
3,000’-10,300’	Water Base Mud	9.0-12.5	45	2-3
10,300-11,650’	Water Base Mud	12.5-13.7	45	2-3

From surface to 500’ feet will be drilled with air or fresh water and gel sweeps. From 500’-3,000’, when hole conditions dictate, air or a fresh water gel system will be utilized. From 3,000’ to Total Depth (TD), a Water Base Mud will be used. This system will typically contain Total Dissolved Solids (TDS) of less than 3000 PPM. Anticipated mud weight at TD is 13.7 ppg.

6. AUXILIARY SAFETY EQUIPMENT TO BE USED

Auxiliary safety equipment will be a Kelly Cock, bit float, and a TIW valve with drill pipe threads.

7. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL

CONFIDENTIAL STATUS

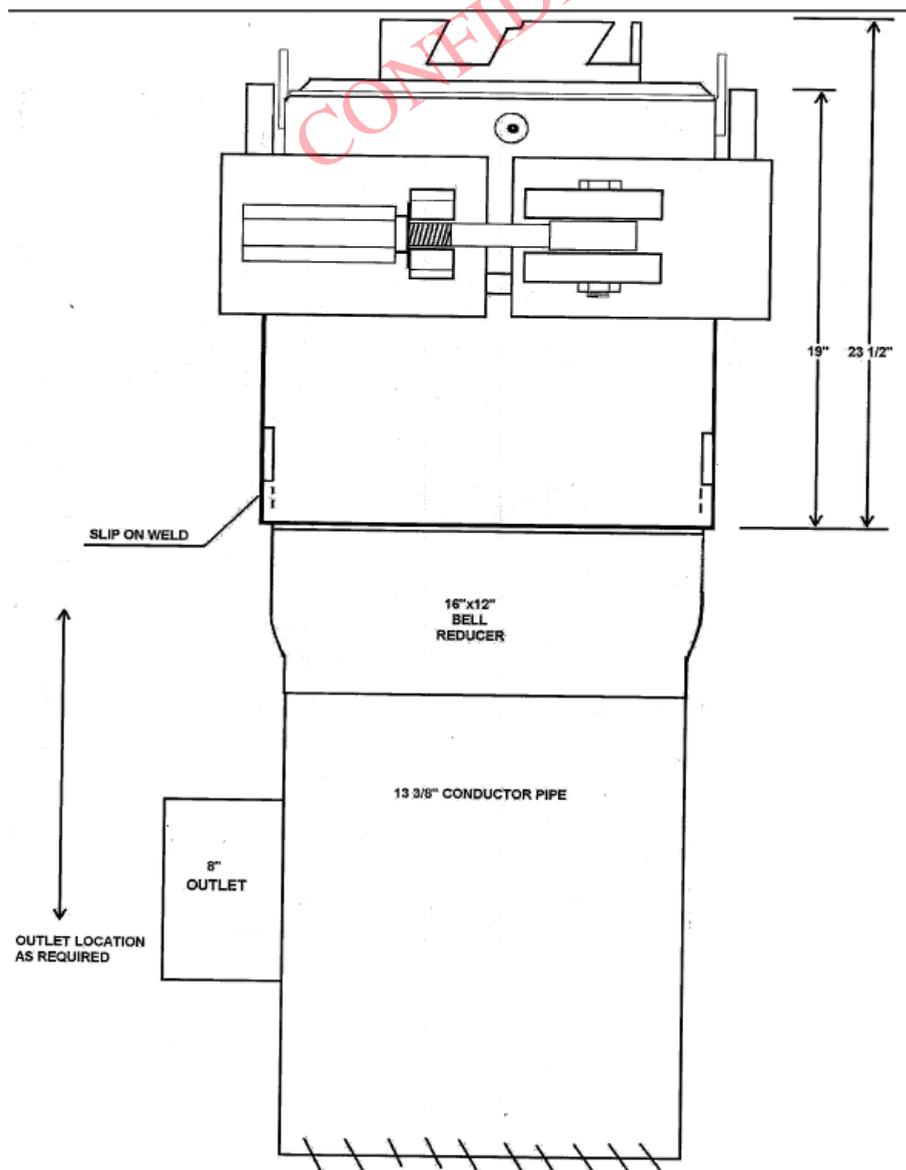
The Company's minimum specifications for pressure control equipment for a standard Green River/Wasatch well are as follows:

12-1/4" hole: 500' – 3000'.

A diverter system will be used with a minimum diameter of 8" flow line being plumbed to the cuttings pit if on air/mist system or directly to the mud system if it is necessary to convert to a fluid system if air volumes are insufficient.

Connections – All connections on the riser to the diverter will be welded. Flow line will be saddled to the riser with connections downstream being either welded or screwed.

Working pressure of the diverter element will exceed the friction pressure of any fluid in the 8" line to the open mud system pumping a flowrate sufficient to clean the hole.



CONFIDENTIAL STATUS

8 3/4" Hole: 3000' – 10,300'

A 5000 psi WP hydraulic BOP stack consisting of a double ram preventer and 3000 psi WP annular preventer will be installed before drilling beneath 9 5/8" surface casing.

Connections – All components on the stack and choke and kill lines shall have either flanged, studded, clamp hub or equivalent proprietary connections except control line outlets and pressure gauges.

Choke Manifold – The minimum equipment requirements are shown below. The choke manifold shall be located at least 5 feet from the BOP stack, outside the substructure.

Pressure Monitoring – A means of monitoring the inlet pressure of the choke manifold shall be provided. The capability to isolate this outlet shall be provided.

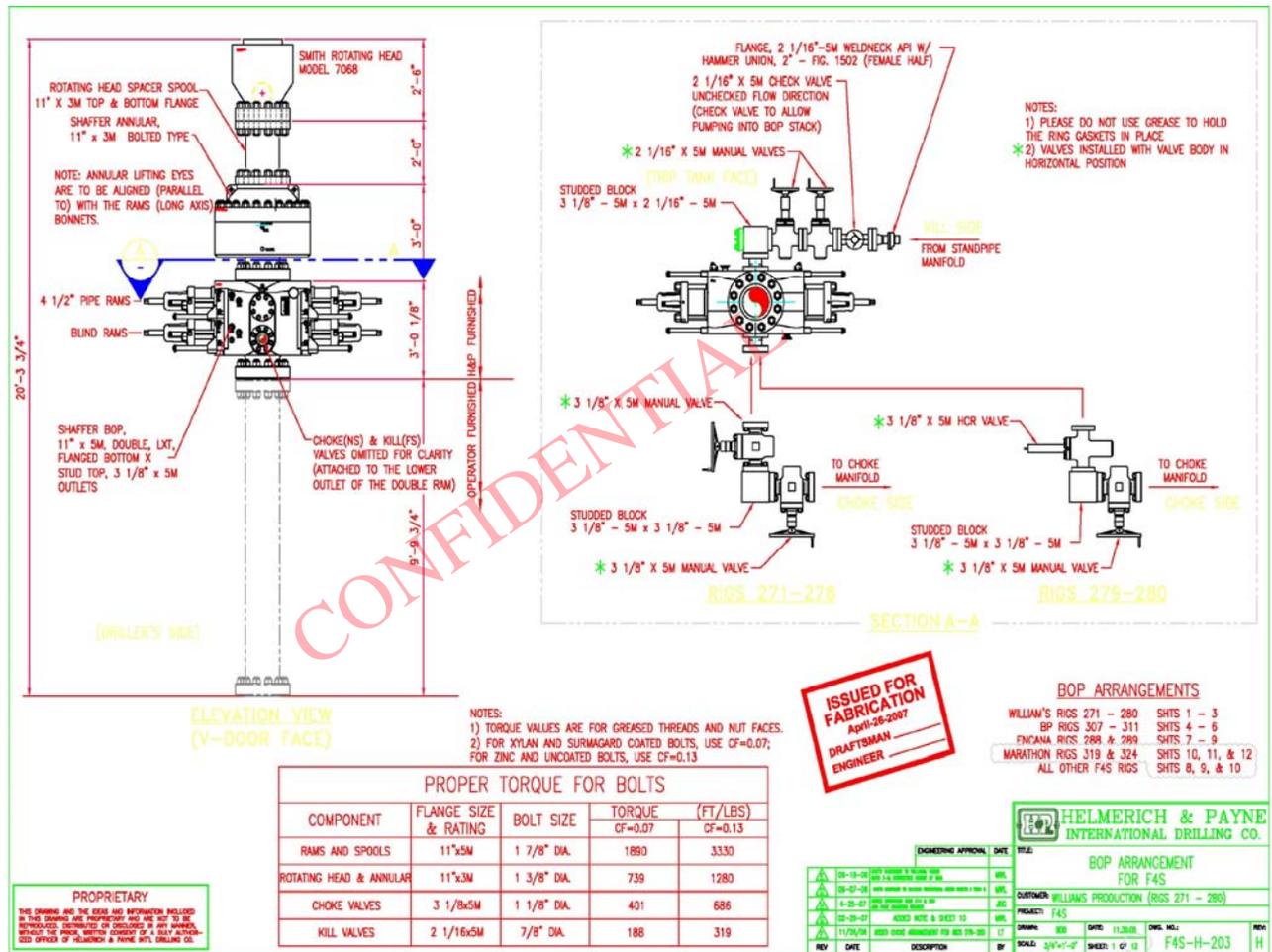
Drill String Control Devices – An upper and lower Kelly valve, drill string safety valve, including correct closing handle, and an inside BOP shall be provided. The safety valve and inside BOP shall have connections or crossovers to fit all tubulars with OD to allow adequate clearance for running in the hole. All drill string valves shall be rated to the required BOP working pressure.

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 (BLM) for equipment and testing requirements, procedures, etc., for a 5000 psi system, and individual components shall be operable as designed.

Function test of the BOP equipment shall be made daily. All required BOP tests and/or drills shall be recorded in the Daily report.

Chart recorders will be used for all pressure tests. Test charts, with individual test results identified, shall be maintained on location while drilling.

CONFIDENTIAL STATUS



6" Hole: 10,300 – PTD

A 10000 psi WP hydraulic BOP stack consisting of a double ram preventer and 5000 psi WP annular preventer will be installed before drilling beneath 7" intermediate/production casing.

Connections – All components on the stack and choke and kill lines shall have either flanged, studded, clamp hub or equivalent proprietary connections except control line outlets and pressure gauges.

Choke Manifold – The minimum equipment requirements are shown below. The choke manifold shall be located at least 5 feet from the BOP stack, outside the substructure.

Pressure Monitoring – A means of monitoring the inlet pressure of the choke manifold shall be provided. The capability to isolate this outlet shall be provided.

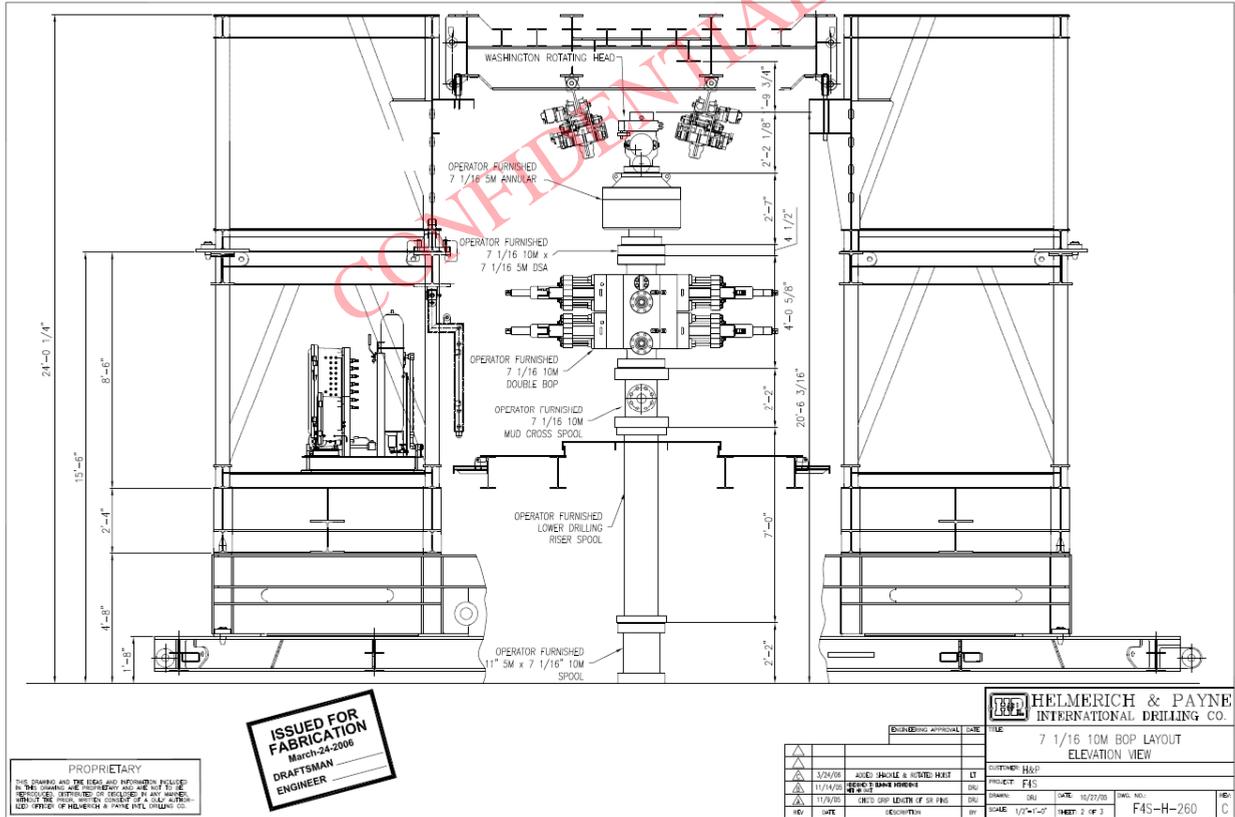
Drill String Control Devices – An upper and lower Kelly valve, drill string safety valve, including correct closing handle, and an inside BOP shall be provided. The safety valve and inside BOP shall have connections or crossovers to fit all tubulars with OD to allow adequate clearance for running in the hole. All drill string valves shall be rated to the required BOP working pressure.

CONFIDENTIAL STATUS

The BOP and related equipment shall meet the minimum requirements of Onshore Oil and Gas Order No. 2 (BLM) for equipment and testing requirements, procedures, etc., for a 10000 psi system, and individual components shall be operable as designed.

Function test of the BOP equipment shall be made daily. All required BOP tests and/or drills shall be recorded in the Daily report.

Chart recorders will be used for all pressure tests. Test charts, with individual test results identified, shall be maintained on location while drilling.



8. TESTING, LOGGING AND CORING PROGRAMS

a. Logging Program:

QUAD COMBO – TLD/CNL/DSI/SP/GR TD – 3,000’

CBL: A cement bond log will be run from 11,650’ to the cement top of the production casing, calculated to be ground level.

Note: The log types run may change at the discretion of the geologist.

b. Cores: No cores planned

CONFIDENTIAL STATUS

c. Drill Stem Tests: No DSTs are planned in the Green River or Wasatch formations

Drill stem tests, if they are run, will adhere to the following requirements: Initial opening of the drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the Authorized Officer (AO). However, DSTs may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e., lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the AO. Closed chamber DSTs may be performed day or night.

Some means of reverse circulation shall be provided in case of flow to the surface showing evidence of hydrocarbons.

Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

If a DST is performed, all engines within 100 feet of the wellbore that are required to be operational during the test shall have spark arresters or water-cooled exhausts.

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9. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE

Abnormal pressures and temperatures are anticipated. No hydrogen sulfide has been encountered or is known to exist from previous drilling in the area at this depth. Maximum anticipated bottom hole pressure will be 0.676 psi/foot at PTD.

10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:

Anticipated Commencement Date:	1 December 2010
Drilling Days:	Approximately 40
Completion Days:	Approximately 21

11. CONTACT INFORMATION:

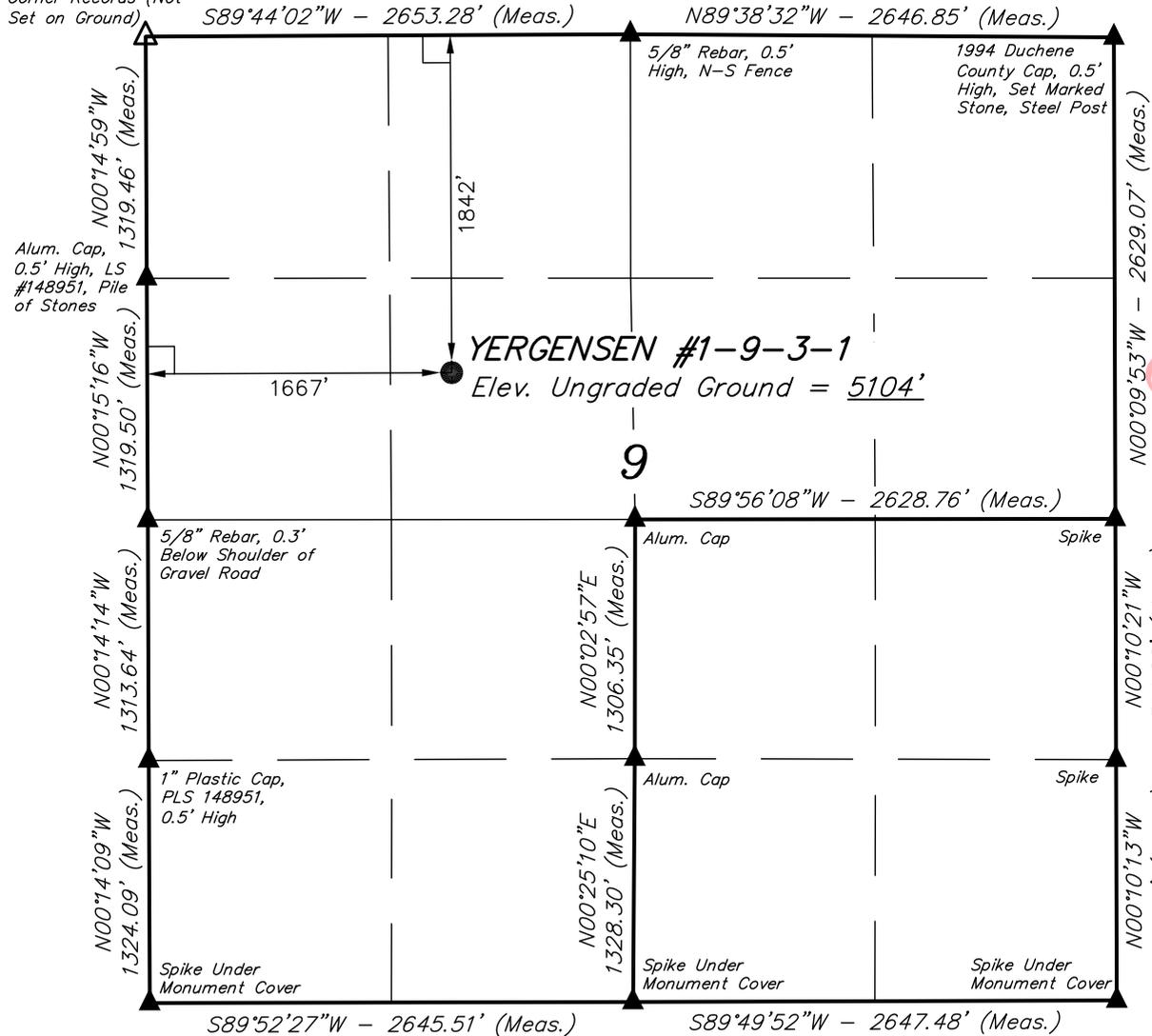
Buys & Associates, Inc.
Don Hamilton/Regulatory Specialist
435-719-2018 Office
435-719-2019 Fax
starpoint@etv.net

Please use the above mentioned contact for any questions or concerns regarding the Form 3 Application for Permit to Drill, Drilling Plan or scheduling the onsite inspection. If the above mentioned contact is not available you may reach the following person:

Harvest (US) Holding, Inc.
Jeff Schrutka
Drilling & Completion Manager
281-899-5776 Office
713-231-8319 Cell
jschrutka@harvestnr.com

T3S, R1W, U.S.B.&M.

Re-Established Using
Duchesne County
Corner Records (Not
Set on Ground)



HARVEST (US) HOLDINGS, INC.

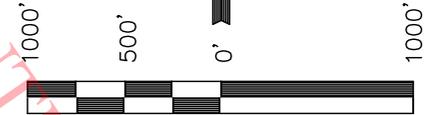
Well location, YERGENSEN #1-9-3-1, located as shown in the SE 1/4 NW 1/4 of Section 9, T3S, R1W, U.S.B.&M., Duchesne County, Utah.

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.



SCALE

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.

NO. 981319
ROBERT L. KAY
 REGISTERED LAND SURVEYOR
 REGISTRATION NO. 161319
 STATE OF UTAH

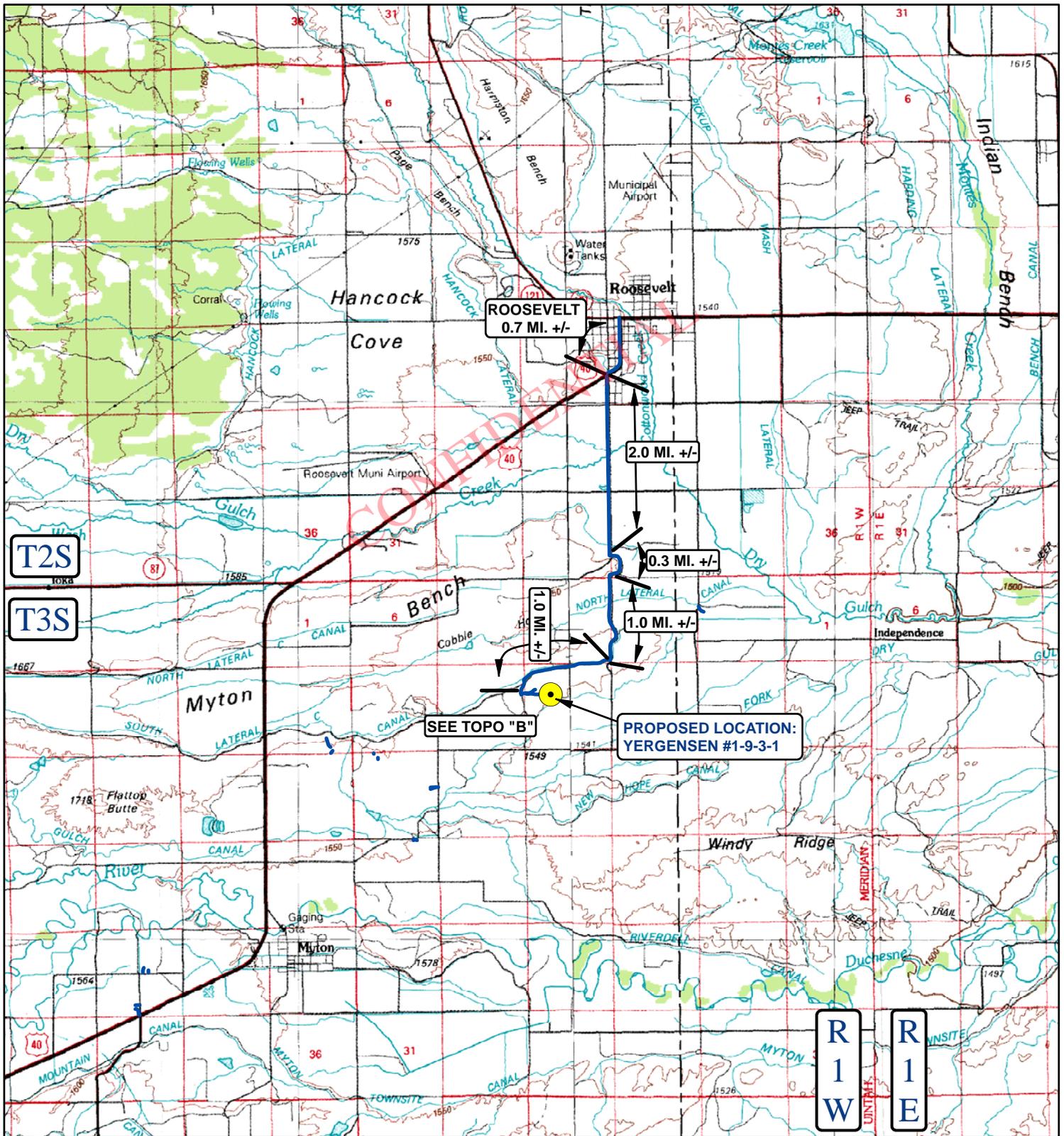
Revised: 09-20-10
 Revised: 08-09-10

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

LEGEND:

- = 90° SYMBOL
- = PROPOSED WELL HEAD.
- = SECTION CORNERS LOCATED.

(NAD 83)
 LATITUDE = 40°14'21.08" (40.239189)
 LONGITUDE = 110°00'16.93" (110.004703)
 (NAD 27)
 LATITUDE = 40°14'21.22" (40.239228)
 LONGITUDE = 110°00'14.39" (110.003997)



Legend:

 PROPOSED WELL LOCATION



HARVEST (US) HOLDINGS, INC.

YERGENSEN #1-9-3-1
SECTION 9, T3S, R1W, U.S.B.&M.
1842' FNL 1667' FWL



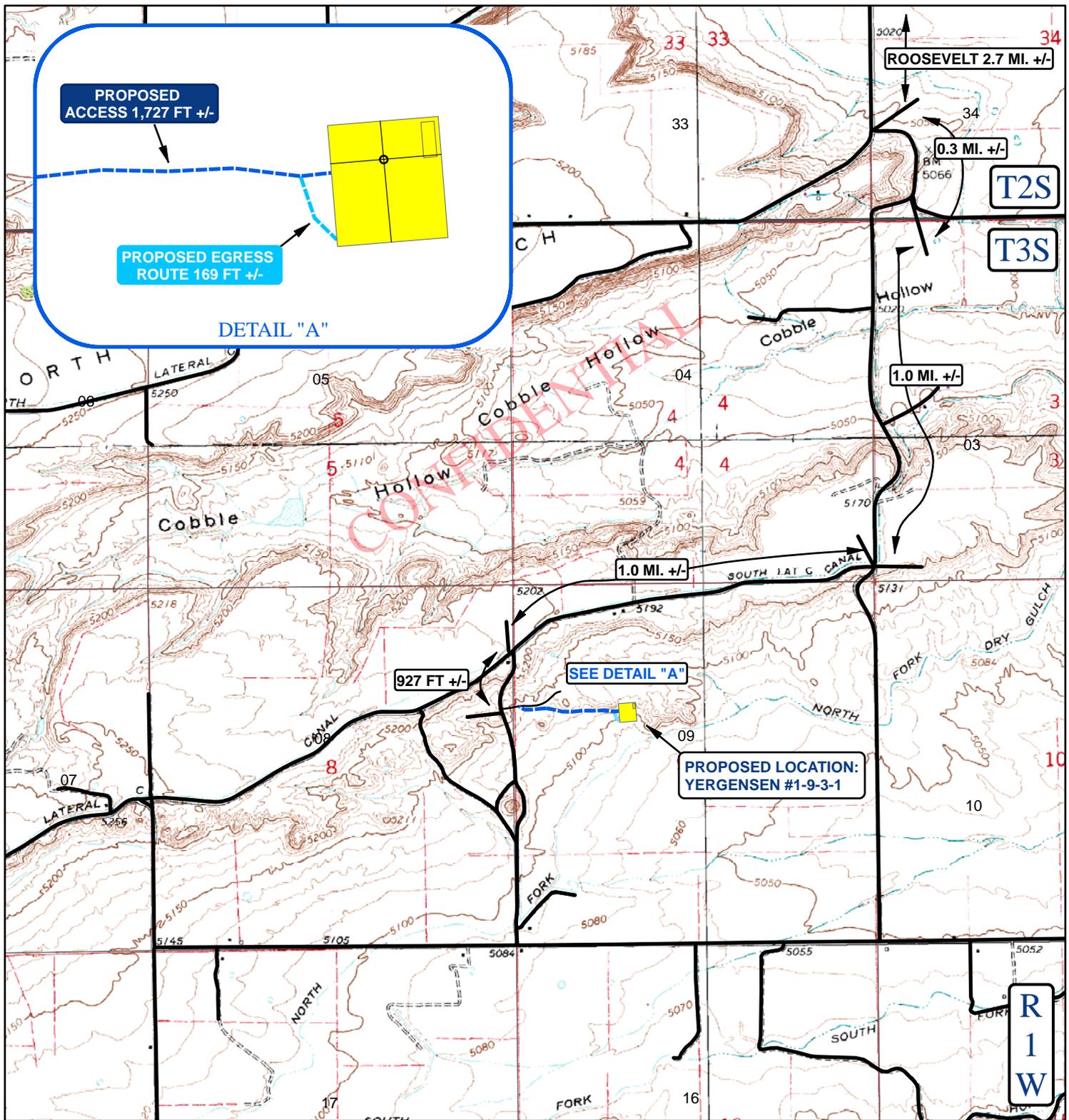
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC
MAP

07 29 10
MONTH DAY YEAR

SCALE: 1:100,000 DRAWN BY: L.M. REVISED: 9-20-10





Legend:

- EXISTING ROADS
- - - PROPOSED ACCESS ROAD
- - - PROPOSED EGRESS ROUTE



HARVEST (US) HOLDINGS, INC.
 YERGENSEN #1-9-3-1
 SECTION 9, T3S, R1W, U.S.B.&M.
 1842' FNL 1667' FWL



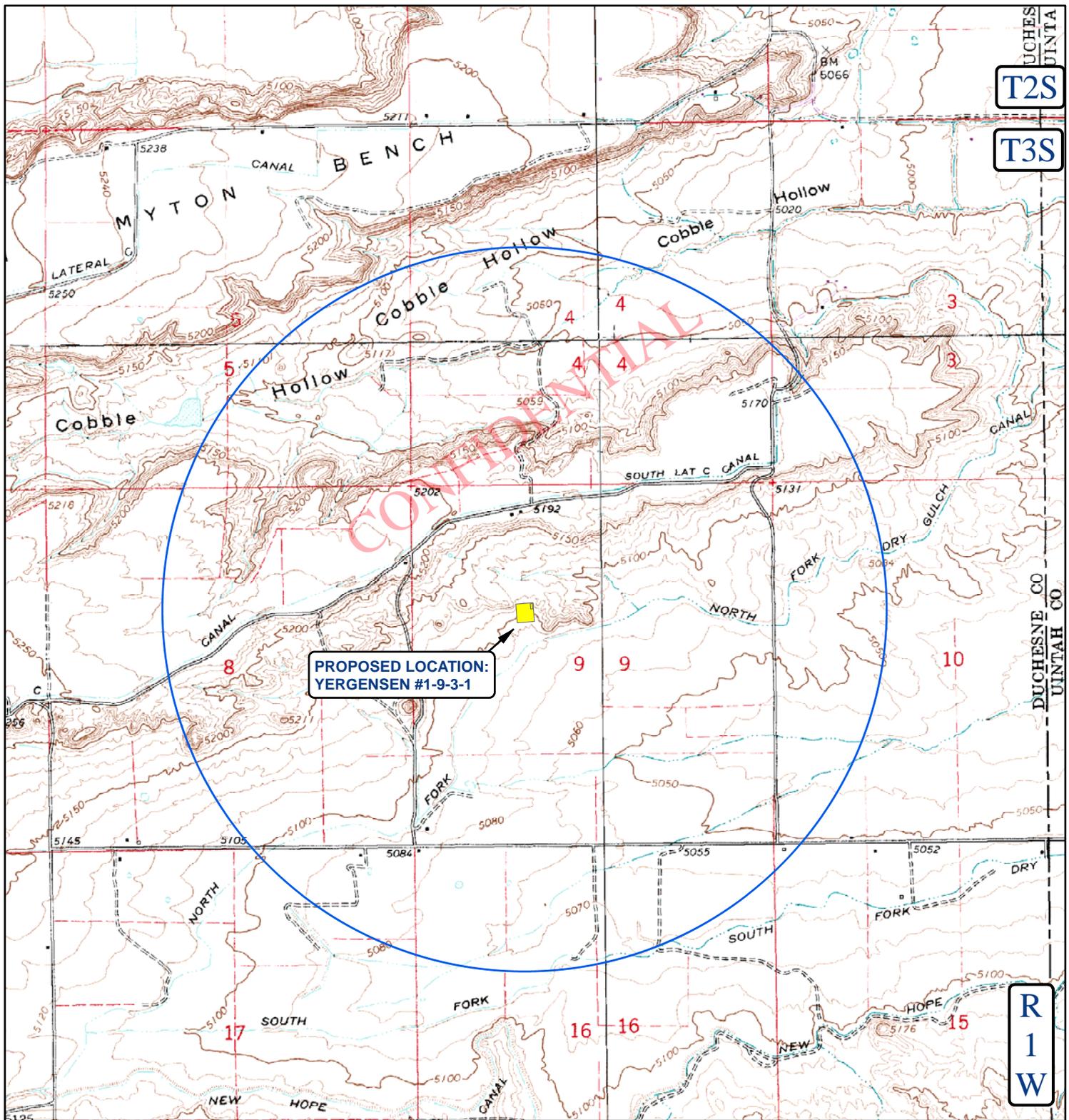
Uintah Engineering & Land Surveying
 85 South 200 East Vernal, Utah 84078
 (435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC
 MAP

07	29	10
MONTH	DAY	YEAR

SCALE: 1" = 2,000' DRAWN BY: L.M. REVISED: 9-20-10





Legend:

- ⊗ DISPOSAL WELLS ⊗ WATER WELLS
- PRODUCING WELLS ⊕ ABANDONED WELLS
- ⊖ SHUT IN WELLS ⊖ TEMPORARILY ABANDONED



HARVEST (US) HOLDINGS, INC.

YERGENSEN #1-9-3-1
SECTION 9, T3S, R1W, U.S.B.&M.
1842' FNL 1667' FWL



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

TOPOGRAPHIC
MAP

07 **29** **10**
 MONTH DAY YEAR

SCALE: 1" = 2,000' DRAWN BY: L.M. REVISED: 9-20-10



MEMORANDUM OF SURFACE DAMAGE RELEASE

State of Utah)(
County of)(

For Ten Dollars (\$10.00) and other adequate consideration, Matthew Charles Yergensen, and Andrew Scott Yergensen Successor Co-Trustees of the Michael Perry Yergensen Trust, dated the 10th day of January, 2005, whose address is P.O. Box 51, Roosevelt, Utah 84066, hereafter referred to as "Surface Owner" has granted, a Surface Damage Release, to Harvest (US) Holdings, Inc. of 1177 Enclave Parkway, Suite 300, Houston, Texas 77077, hereafter referred to as "Harvest", dated September 12, 2010, for the purpose of drilling, and producing oil, gas, and other minerals, laying pipelines, building roads, tanks, power stations, telephone lines and other structures, and producing, saving, take care of, treating, transporting, and owning oil, gas, and other minerals, all on or from Oil & Gas Well on the following lands (the "Lands") in Duchesne County Utah: Township 3 South-Range 1 West, USM, Section 9: SE/4NW/4 Duchesne County, see attached Plat for well locations:

The Surface Damage Release is effective as long thereafter as oil, gas, or other minerals are produced from the Lands, or other lands pooled with the Lands, according to and by the terms and provisions of the Lease(s) covering said Lands. This Memorandum is placed of record for the purpose of giving notice of the Surface Damage Release.

This instrument may be executed in multiple counterparts with each counterpart being considered an original for all purposes herein and binding upon the party executing same whether or not this instrument is executed by all parties hereto, and the signature and acknowledgment pages of the various counterparts hereto may be combined into one instrument for the purposes of recording this instrument in the records of the County Recorder's office.

Executed this 12 day of October, 2010.

SURFACE OWNER:

Matthew Charles Yergensen
Successor Co-Trustee

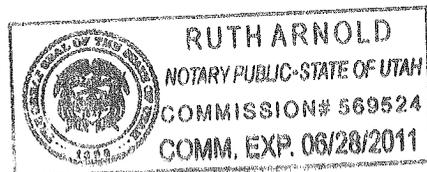
Andrew Scott Yergensen
Successor Co-Trustee

ACKNOWLEDGEMENT

STATE OF UTAH }
COUNTY OF Duchesne } :SS

BEFORE me, the undersigned, a Notary Public in and fore said County and State, on this 12 day of October, 2010, personally appeared Matthew Charles Yergensen Co-Trustee of the Michael Perry Yergensen Trust, dated the 10th day of January, 2005, known to be the identical person(s) who executed the within and foregoing instrument, and acknowledged to me that they executed the same as a free and voluntary act and deed, for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

[Signature]
Notary Public



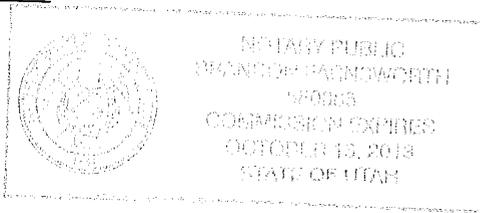
ACKNOWLEDGEMENT

STATE OF UTAH }
COUNTY OF } :SS
}

BEFORE me, the undersigned, a Notary Public in and fore said County and State, on this 9 day of October, 2010, personally appeared **Andrew Scott Yergensen Co-Trustee of the Michael Perry Yergensen Trust, dated the 10th day of January, 2005**, known to be the identical person(s) who executed the within and foregoing instrument, and acknowledged to me that they executed the same as a free and voluntary act and deed, for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.



Notary Public



CONFIDENTIAL

ROAD RIGHT-OF-WAY AGREEMENT

STATE OF UTAH }
 } :SS
COUNTY OF }

FOR AND IN CONSIDERATION OF TEN & 00/100ths DOLLARS (\$10.00) and other good and valuable consideration, in hand paid to **Matthew Charles Yergensen and Andrew Scott Yergensen, Successor Co-Trustees of the Michael Perry Yergensen Trust, dated the 10th day of January, 2005, whose address is P.O. Box 51 Roosevelt, UT 84066.**

("GRANTOR"), the receipt and sufficiency of which is hereby acknowledge, does hereby grant to **Harvest (US) Holdings, Inc. of 1177 Enclave Parkway, Suite 300, Houston, Texas 77077**, its successors or assigns, a right-of-way to construct, maintain and use a road for the purpose of drilling, operating and maintaining a well or wells for the production of the oil and/or gas, and for the transportation of oil, gas, produced water, or other substances therein, under, on, over and through the premises hereinafter described, and the Grantee is granted the right of ingress and egress, over and across said road and lands for any purpose necessary or incidental to the drilling, operating and maintaining a well or wells owned by Grantee.

The said right-of-way shall be located over and across the following described lands owned by the Grantor in Duchesne County, State of Utah , to-wit:

Township 3 South-Range 1 West, USM, Section 9: Duchesne County, see attached Plat(s) for the described right-of-way location:

To have and to hold said easements, rights, and right-of-way unto the said Grantee, its successors and assigns.

Grantor shall not place anything over or so close to any road, or other facility of Grantee as will be likely to interfere with Grantee's access thereto by use of equipment of means customarily employed in the maintenance of the road. Grantee to pay for all damage to growing crops, drainage tile and fences of Grantor arising out of the construction or repair of any of the roads, and facilities herein authorized to be maintained and operated by Grantee. This easement shall not exceed seventy (70') feet for construction and forty (40') feet permanent easement. Disturbed ground not in the permanent road easement to be reseeded at recommended seeding rates per Surface Owner once cleanup is completed.

The foregoing sets out the entire agreement between Grantor and Grantee, and supersedes any prior oral or written agreements or negotiations not set out in writing herein or in the oil and gas lease covering the above described lands. No provisions of this agreement shall be modified, altered or waived except by written amendment executed by the parties or their representatives as set forth below.

For the same consideration, the undersigned agree to account to any party who may be entitled to any portion of the aforementioned sum, and to indemnify and hold harmless **Harvest (US) Holdings, Inc.**, its successors and assigns, from any claim by any other party for damages to the above described lands and the improvements and crops and other things situated thereon.

Grantor shall be held harmless from any claim or demand made on the grounds of damage to property or injury to or death of persons, arising out of Grantee's exercise of the rights herein granted.

This agreement shall terminate within six (6) months after cessation of use by Grantee, at which time Grantee agrees to restore the surface of said land as nearly as is reasonably practical to its original condition.

This agreement shall be binding upon the successors and assigns of the parties hereto and shall be deemed to be a covenant running with the lands described above.

IN WITNESS WHEREOF, the GRANTOR and GRANTEE herein named have hereunto set their hand and seal this 12 day of October, 2010.


Matthew Charles Yergensen
Successor Co-Trustee

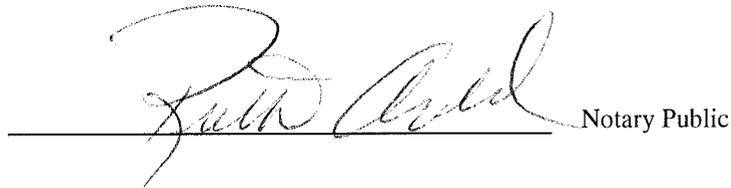

Andrew Scott Yergensen
Successor Co-Trustee

ACKNOWLEDGEMENT

STATE OF UTAH }
 } :SS
COUNTY OF Duchesne }

BEFORE me, the undersigned, a Notary Public in and fore said County and State, on this 12 day of October, 2010, personally appeared **Matthew Charles Yergensen Successor Co-Trustee of the Michael Perry Yergensen Trust, dated the 10th day of January, 2005**, me known to be the identical person(s) who executed the within and foregoing instrument, and acknowledged to me that they executed the same as a free and voluntary act and deed, for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

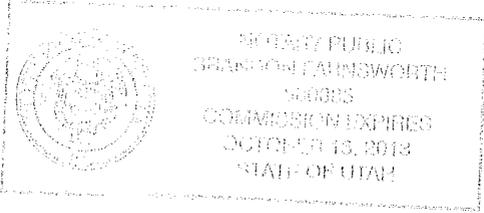



Notary Public

ACKNOWLEDGEMENT

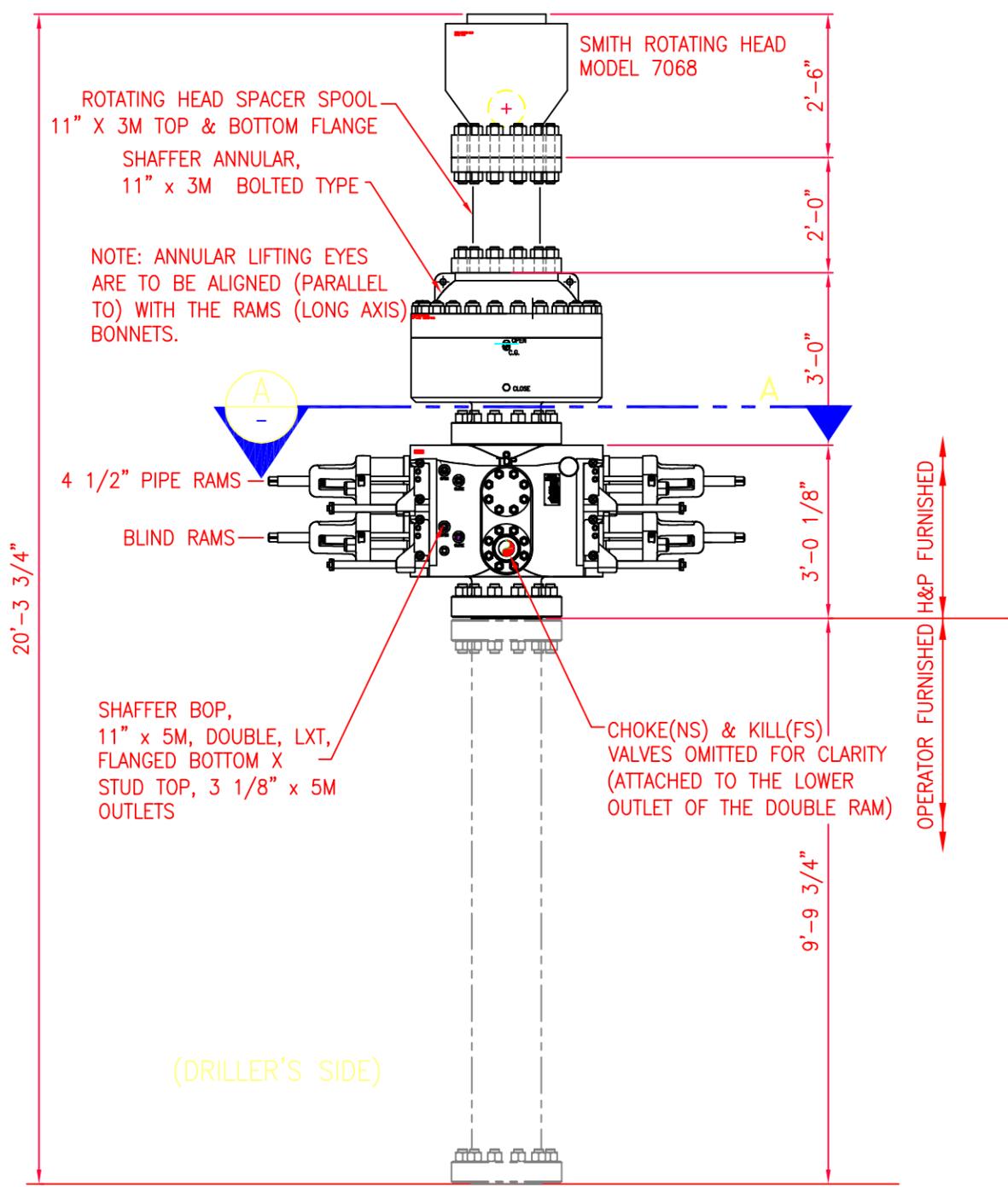
STATE OF UTAH }
 } :SS
COUNTY OF }

BEFORE me, the undersigned, a Notary Public in and fore said County and State, on this 9 day of October, 2010, personally appeared Andrew Scott Yergensen Successor Co-Trustee of the Michael Perry Yergensen Trust, dated the 10th day of January, 2005, me known to be the identical person(s) who executed the within and foregoing instrument, and acknowledged to me that they executed the same as a free and voluntary act and deed, for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

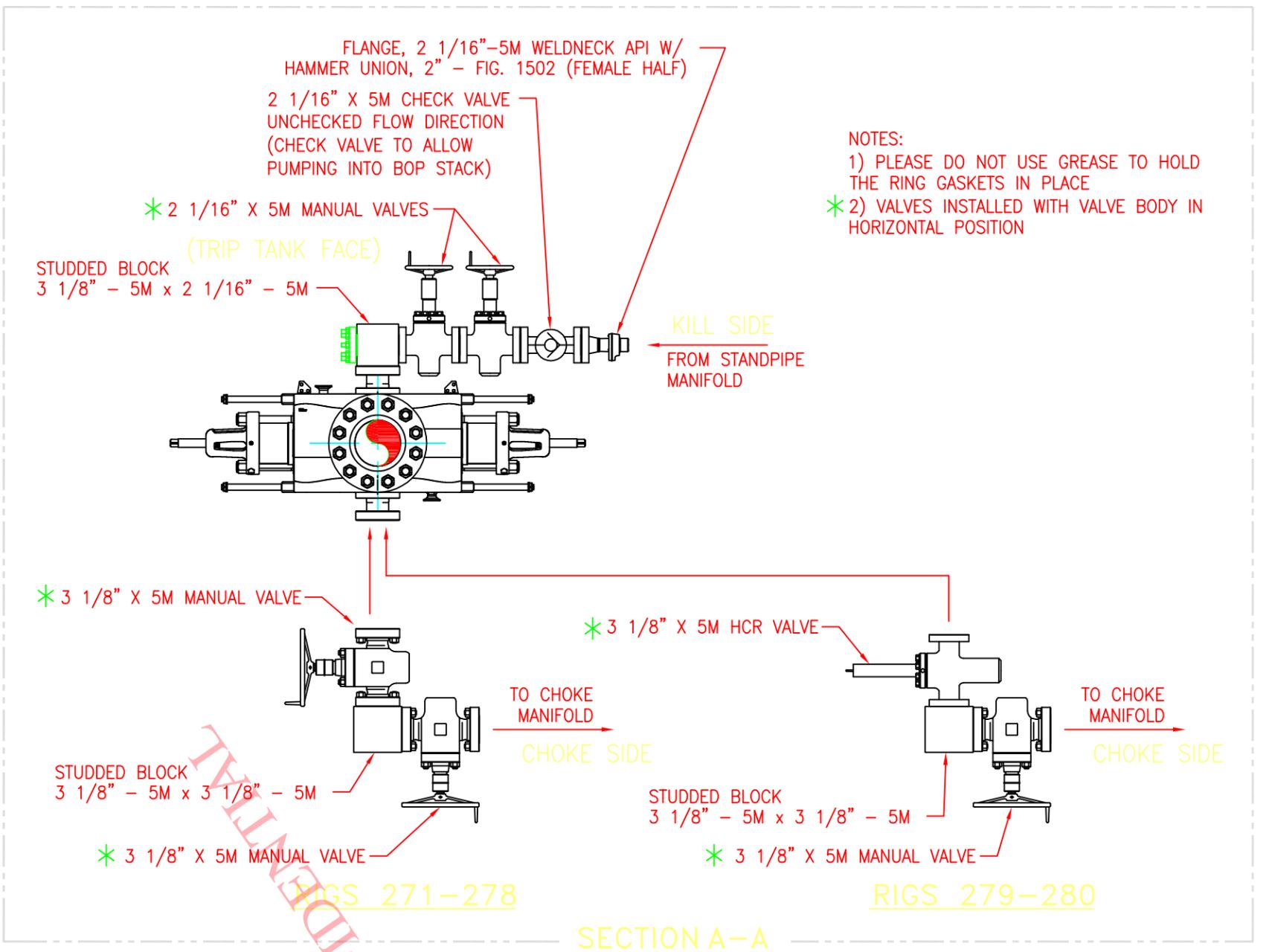


[Signature] Notary Public

CONFIDENTIAL



ELEVATION VIEW
(V-DOOR FACE)



- NOTES:
- PLEASE DO NOT USE GREASE TO HOLD THE RING GASKETS IN PLACE
 - VALVES INSTALLED WITH VALVE BODY IN HORIZONTAL POSITION

- NOTES:
- TORQUE VALUES ARE FOR GREASED THREADS AND NUT FACES.
 - FOR XYLAN AND SURMAGARD COATED BOLTS, USE CF=0.07; FOR ZINC AND UNCOATED BOLTS, USE CF=0.13

ISSUED FOR FABRICATION
April-26-2007
DRAFTSMAN _____
ENGINEER _____

BOP ARRANGEMENTS

WILLIAM'S RIGS 271 - 280	SHTS 1 - 3
BP RIGS 307 - 311	SHTS 4 - 6
ENCANA RIGS 288 & 289	SHTS 7 - 9
MARATHON RIGS 319 & 324	SHTS 10, 11, & 12
ALL OTHER F4S RIGS	SHTS 8, 9, & 10

PROPER TORQUE FOR BOLTS

COMPONENT	FLANGE SIZE & RATING	BOLT SIZE	TORQUE (FT/LBS)	
			CF=0.07	CF=0.13
RAMS AND SPOOLS	11"x5M	1 7/8" DIA.	1890	3330
ROTATING HEAD & ANNULAR	11"x3M	1 3/8" DIA.	739	1280
CHOKES VALVES	3 1/8x5M	1 1/8" DIA.	401	686
KILL VALVES	2 1/16x5M	7/8" DIA.	188	319

PROPRIETARY

THIS DRAWING AND THE IDEAS AND INFORMATION INCLUDED IN THIS DRAWING ARE PROPRIETARY AND ARE NOT TO BE REPRODUCED, DISTRIBUTED OR DISCLOSED IN ANY MANNER, WITHOUT THE PRIOR, WRITTEN CONSENT OF, A DULY AUTHORIZED OFFICER OF HELMERICH & PAYNE INT'L DRILLING CO.

REV	DATE	DESCRIPTION	BY
△	09-18-06	CHFD CUSTOMER TO WILLIAMS; ADDED SHTS 7-9; CORRECTED HEIGHT OF RAM	MWL
△	09-07-06	CHFD CUSTOMER TO WILLIAMS PRODUCTION; ADDED SHEETS 2 THRU 6	MWL
△	4-25-07	ADDED MARATHON RIGS 314 & 324 AND PAGE NUMBERS REVISED	JBG
△	02-26-07	ADDED NOTE & SHEET 10	MWL
△	11/28/06	ADDED CHOKES ARRANGEMENT FOR RIGS 279-280	LT

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

TITLE: **BOP ARRANGEMENT FOR F4S**

CUSTOMER: WILLIAMS PRODUCTION (RIGS 271 - 280)

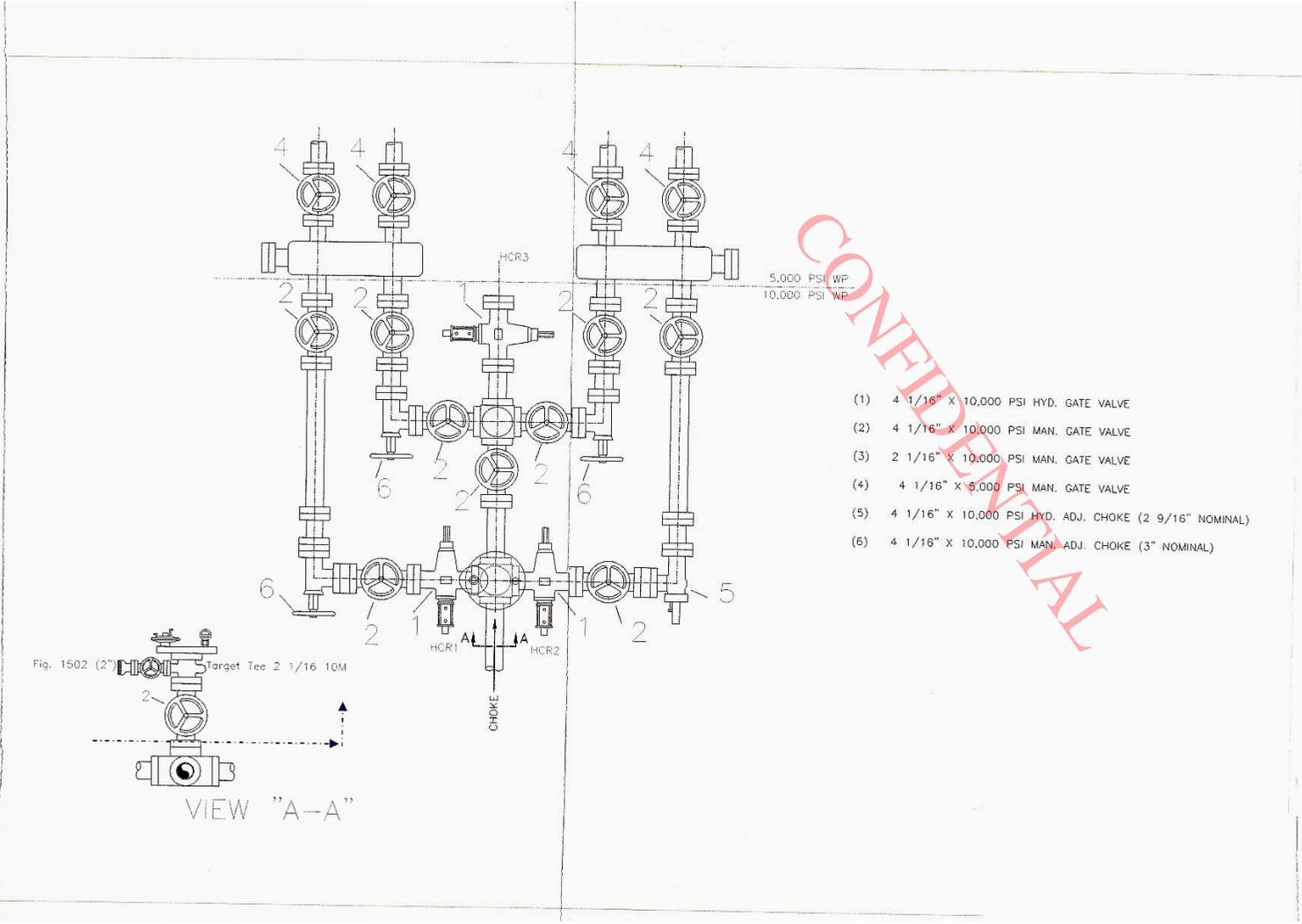
PROJECT: F4S

DRAWN: BDB DATE: 11.30.05 DWG. NO.: F4S-H-203

SCALE: 3/4"=1'-0" SHEET: 1 OF 12

APIWellNo:43013504270000

CONFIDENTIAL STATUS





2580 Creekview Road
Moab, Utah 84532
435/719-2018

September 10, 2010

Mrs. Diana Mason
State of Utah
Division of Oil Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: Request for Exception to Spacing – Harvest (US) Holdings, Inc. – **Yergensen #1-9-3-1**
1570' FNL, 455' FWL, SW/4 NW/4, Section 9, T3S, R1W, USB&M
Duchesne County, Utah

Dear Diana:

Harvest (US) Holdings, Inc. respectfully submits this request for exception to spacing (Cause No. 131-51) based on topography since the well is located less than 1320' to the external boundary of a governmental section. Harvest (US) Holdings, Inc. is the only owner and operator within 460' of the surface and target location as well as all points along the intended well bore path and are not within 460 feet of any uncommitted tracts or a unit boundary.

Thank you very much for your timely consideration of this application. Please feel free to contact me at 435-719-2018 if you have any questions or need additional information.

Sincerely,

Don Hamilton

Don Hamilton
Agent for Harvest (US) Holdings, Inc.

cc: Gil S. Porter, CPL, Harvest (US) Holdings, Inc.
Bob B. Berry, PE, Harvest (US) Holdings, Inc.

CONFIDENTIAL

API Number: 4301350427
Well Name: Yergensen #1-9-3-1
Township 03.0 S Range 01.0 W Section 09
Meridian: UBM
Operator: HARVEST (US) HOLDINGS, INC

Map Prepared:
Map Produced by Diana Mason

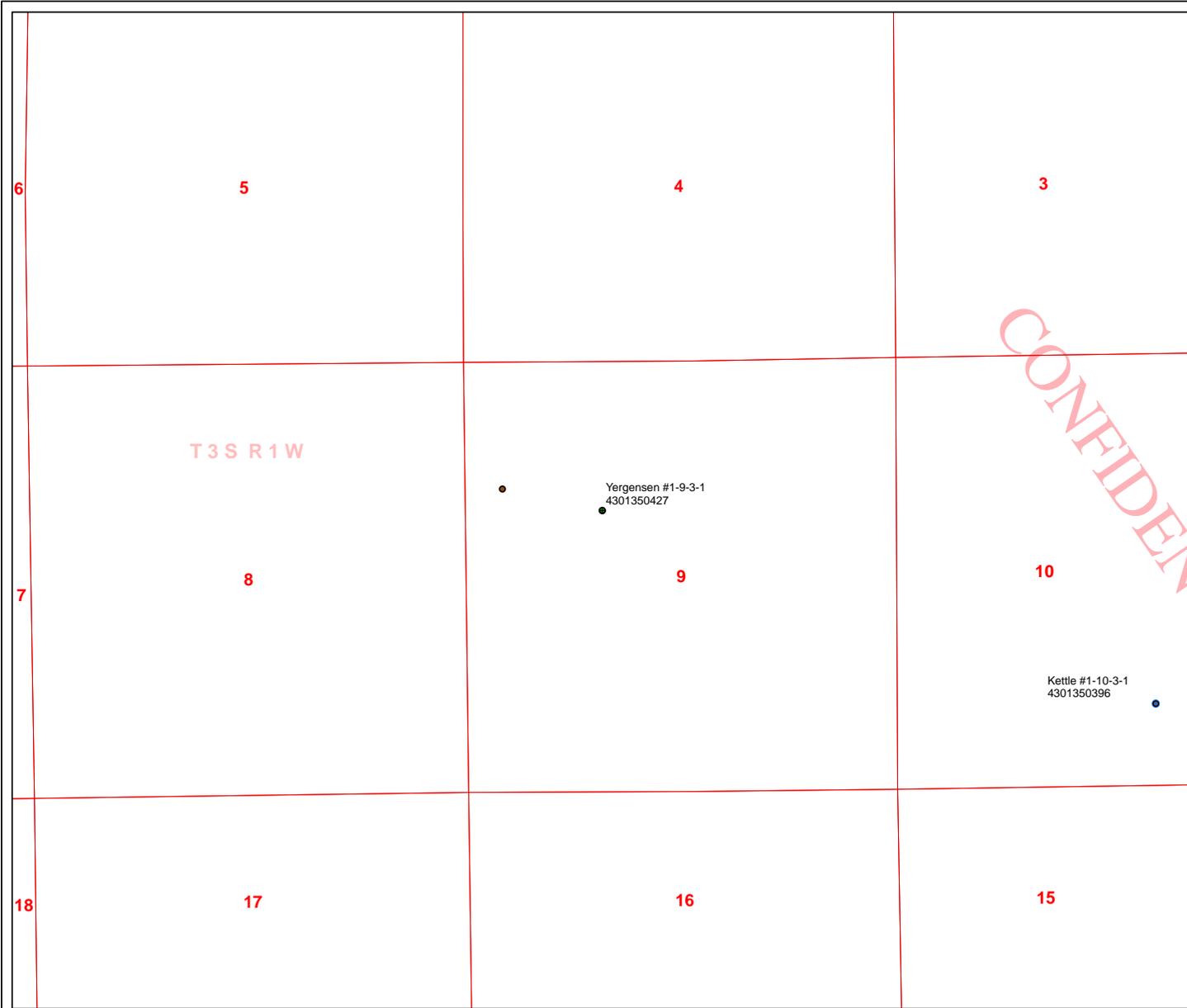
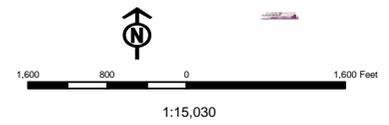
- | Units | Wells Query |
|-----------------------------|--------------------------------------|
| STATUS | ✕ -all other values- |
| ACTIVE | ◆ APD - Approved Permit |
| EXPLORATORY | ⊙ DRL - Spudded (Drilling Commenced) |
| GAS STORAGE | ⊙ GW - Gas Injection |
| NF PP OIL | ⊙ GS - Gas Storage |
| NF SECONDARY | ⊙ LA - Location Abandoned |
| PI OIL | ⊙ LOC - New Location |
| PP GAS | ⊙ OPS - Operation Suspended |
| PP GEOTHERMAL | ⊙ PA - Plugged Abandoned |
| PP OIL | ⊙ PGW - Producing Gas Well |
| SECONDARY | ⊙ POW - Producing Oil Well |
| TERMINATED | ⊙ RET - Returned APD |
| Fields | ⊙ SGW - Shut-in Gas Well |
| Sections | ⊙ SOW - Shut-in Oil Well |
| Township | ⊙ TA - Temp. Abandoned |
| Bottom Hole Location - AGRC | ⊙ TW - Test Well |
| | ⊙ WDW - Water Disposal |
| | ⊙ WW - Water Injection Well |
| | ⊙ WSW - Water Supply Well |

T3S R1W

Yergensen #1-9-3-1
4301350427

Kettle #1-10-3-1
4301350396

CONFIDENTIAL



Well Name	HARVEST (US) HOLDINGS, INC Yergensen #1-9-3-1 43013504270000			
String	Cond	Surf	I1	Prod
Casing Size(")	13.375	9.625	7.000	5.500
Setting Depth (TVD)	500	3000	10300	11650
Previous Shoe Setting Depth (TVD)	0	500	3000	10300
Max Mud Weight (ppg)	8.3	8.6	12.5	13.7
BOPE Proposed (psi)	500	500	5000	10000
Casing Internal Yield (psi)	1730	3520	11220	11220
Operators Max Anticipated Pressure (psi)	7875			13.0

Calculations	Cond String	13.375	"
Max BHP (psi)	.052*Setting Depth*MW=	216	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	156	YES <input type="checkbox"/> air drill, gel sweeps
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	106	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	106	NO <input type="checkbox"/> OK
Required Casing/BOPE Test Pressure=		500	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

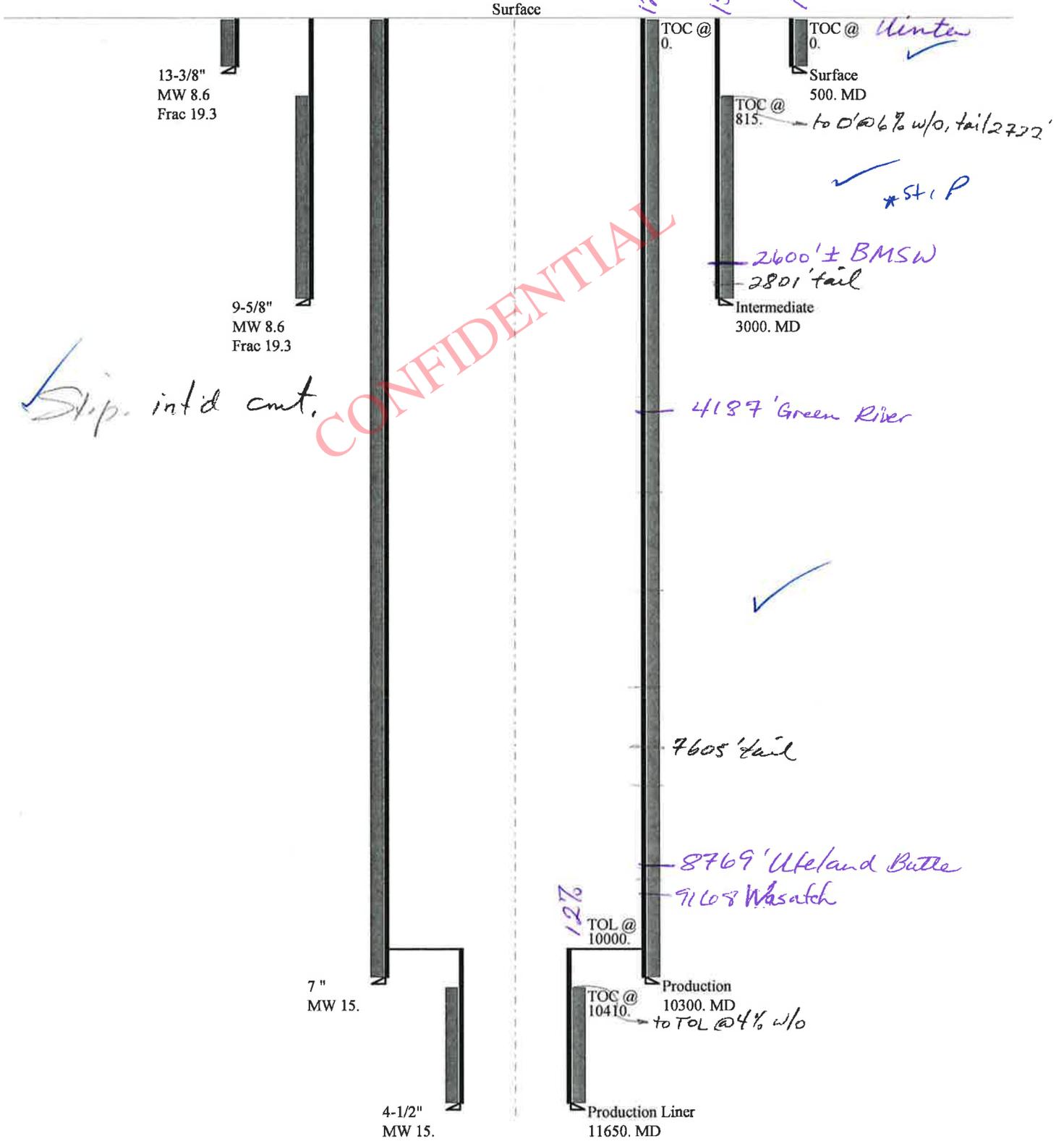
Calculations	Surf String	9.625	"
Max BHP (psi)	.052*Setting Depth*MW=	1342	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	982	NO <input type="checkbox"/> air drill, gel sweeps
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	682	NO <input type="checkbox"/> Reasonable depth in area, no expected pressures
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	792	NO <input type="checkbox"/> OK
Required Casing/BOPE Test Pressure=		2464	psi
*Max Pressure Allowed @ Previous Casing Shoe=		500	psi *Assumes 1psi/ft frac gradient

Calculations	I1 String	7.000	"
Max BHP (psi)	.052*Setting Depth*MW=	6695	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5459	NO <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4429	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5089	NO <input type="checkbox"/> Reasonable
Required Casing/BOPE Test Pressure=		7854	psi
*Max Pressure Allowed @ Previous Casing Shoe=		3000	psi *Assumes 1psi/ft frac gradient

Calculations	Prod String	5.500	"
Max BHP (psi)	.052*Setting Depth*MW=	8299	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	6901	YES <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	5736	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	8002	YES <input type="checkbox"/> OK
Required Casing/BOPE Test Pressure=		7854	psi
*Max Pressure Allowed @ Previous Casing Shoe=		10300	psi *Assumes 1psi/ft frac gradient

43013504270000 Yergensen #1-9-3-1

Casing Schematic



Well name:	43013504270000 Yergensen #1-9-3-1	
Operator:	HARVEST (US) HOLDINGS, INC	
String type:	Surface	Project ID: 43-013-50427
Location:	DUCHESNE COUNTY	

Design parameters:

Collapse

Mud weight: 8.600 ppg
Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 81 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Burst:

Design factor 1.00

Cement top: Surface

Burst

Max anticipated surface pressure: 440 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 500 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 437 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 3,000 ft
Next mud weight: 9.000 ppg
Next setting BHP: 1,403 psi
Fracture mud wt: 19,250 ppg
Fracture depth: 500 ft
Injection pressure: 500 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	500	13.375	48.00	H-40	ST&C	500	500	12.59	6201

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	223	740	3.313	500	1730	3.46	24	322	13.42 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801 538-5357
FAX: 801-359-3940

Date: October 19, 2010
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 500 ft, a mud weight of 8.6 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.

Well name:	43013504270000 Yergensen #1-9-3-1		
Operator:	HARVEST (US) HOLDINGS, INC		
String type:	Intermediate	Project ID:	43-013-50427
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

Mud weight: 8.600 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 116 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 815 ft

Burst

Max anticipated surface pressure: 2,340 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 3,000 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
 8 Round LTC: 1.70 (J)
 Buttress: 1.60 (J)
 Premium: 1.50 (J)
 Body yield: 1.50 (B)

Tension is based on air weight.
 Neutral point: 2,618 ft

Non-directional string.

Re subsequent strings:

Next setting depth: 10,300 ft
 Next mud weight: 15.000 ppg
 Next setting BHP: 8,026 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 3,000 ft
 Injection pressure: 3,000 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	3000	9.625	36.00	J-55	LT&C	3000	3000	8.796	24532
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	1340	2020	1.507	3000	3520	1.17	108	453	4.19 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: October 19, 2010
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 3000 ft, a mud weight of 8.6 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.

Well name:	43013504270000 Yergensen #1-9-3-1		
Operator:	HARVEST (US) HOLDINGS, INC		
String type:	Production	Project ID:	43-013-50427
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

Mud weight: 15.000 ppg
 Internal fluid density: 1.000 ppg

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 218 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,000 ft

Cement top: Surface

Burst

Max anticipated surface pressure: 5,760 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 8,026 psi

No backup mud specified.

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)

Non-directional string.

Tension is based on air weight.
 Neutral point: 7,961 ft

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	10300	7	29.00	P-110	LT&C	10300	10300	6.059	116313
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	7491	8530	1.139	8026	11220	1.40	298.7	797	2.67 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: October 18, 2010
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 10300 ft, a mud weight of 15 ppg. An internal gradient of .052 psi/ft was used for collapse from TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Well name:	43013504270000 Yergensen #1-9-3-1		
Operator:	HARVEST (US) HOLDINGS, INC		
String type:	Production Liner	Project ID:	43-013-50427
Location:	DUCHESNE COUNTY		

Design parameters:

Collapse

Mud weight: 15.000 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 237 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 1,000 ft

Cement top: 10,410 ft

Liner top: 10,000 ft

Non-directional string.

Burst

Max anticipated surface pressure: 6,515 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 9,078 psi

No backup mud specified.

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 air weight.
 Neutral point: 11,275 ft

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	1650	4.5	15.10	P-110	LT&C	11650	11650	3.701	10345
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	9078	14350	1.581	9078	14420	1.59	24.9	406	16.30 J

Prepared by: Helen Sadik-Macdonald
 Div of Oil, Gas & Mining

Phone: 801 538-5357
 FAX: 801-359-3940

Date: October 19,2010
 Salt Lake City, Utah

Remarks:

For this liner string, the top is rounded to the nearest 100 ft. Collapse is based on a vertical depth of 11650 ft, a mud weight of 15 ppg. The Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator	HARVEST (US) HOLDINGS, INC				
Well Name	Yergensen #1-9-3-1				
API Number	43013504270000	APD No	2995	Field/Unit	WILDCAT
Location: 1/4,1/4	SENW	Sec	9	Tw	3.0S
GPS Coord (UTM)	584726	4454578	Rng	1.0W	1842 FNL 1667 FWL
			Surface Owner	Matt Yergensen	

Participants

Matt Yergensen (surface owner); Jeff Schrutka (Harvest Natural Resources); Zander McLantgre (dirt contractor); Dennis Ingram (DOGM)

Regional/Local Setting & Topography

Proposed wellsite was moved east after reviewing spacing orders, and is found by turning south in Roosevelt Utah on State Street from U.S. Highway 40, then driving 3.3 miles along this road, then west on a county road for another mile then south onto location access road for 1727 feet. This well pad staked up on the first, or lower bench north from the Duchesne River bottom and the town of Myton, which is found approximately 3.0 miles to the south. The land to the north of wellsite climbs onto North Myton Bench, which is rural farmland. Another quarter mile north Cobble Hollow cuts into the north Myton Bench and drains easterly; further north is the town of Roosevelt, Utah.. Landmarks to the west are North Myton Bench and Flattop Butte. Much of this region is dry, arid, desert habitat other than where man has irrigated or pivot sprinklers to improve lands into crop lands.

Surface Use Plan

Current Surface Use
Recreational

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.3	Width 250 Length 274	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate?

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Shadscale, Greasewood, Russian Olive trees, willows, rabbit Brush, nap weed, ; coyote, rabbit, field mice, hawks native to region, potential raccoon.

Soil Type and Characteristics

Tan to light brown sandy loam with clays

Erosion Issues Y

Surface slopes to south and has ongoing erosion depending upon snow melt or weather

Sedimentation Issues Y

Site Stability Issues N

Drainage Diversion Required? Y

Diversion ditch or berm around east side of location, may not be an issue because of limited collection potential above location.

Berm Required? Y

Crop land to the south and below proposed wellsite.

Erosion Sedimentation Control Required? Y

Location berm should eliminate any sediment or erosion issues.

Paleo Survey Run? N Paleo Potential Observed? N Cultural Survey Run? N Cultural Resources? N

Reserve Pit

Site-Specific Factors

Site Ranking

- Distance to Groundwater (feet)**
- Distance to Surface Water (feet)**
- Dist. Nearest Municipal Well (ft)**
- Distance to Other Wells (feet)**
- Native Soil Type**
- Fluid Type**
- Drill Cuttings**
- Annual Precipitation (inches)**
- Affected Populations**
- Presence Nearby Utility Conduits**

Final Score

Sensitivity Level

Characteristics / Requirements

A small shale pit has been request running north/south along the northeast corner of the well pad, and proposed as 80' long by 30' wide. Because cutting are not dry a synthetic liner is required to prevent fluids from leaching away.

Closed Loop Mud Required? Y Liner Required? Y Liner Thickness 16 Pit Underlayment Required?

Other Observations / Comments

Access road was re-routed to the south around existing road that belongs to a different landowner to stay on Yergensen lands, location slopes to the south and has crop field and pivot wheel to north, land is not utilized for grazing and no request for fencing other than after lease is put into production, shallow wash down eastern boundary of location but has little or zero load potential from storm water. Any run off from snow melt or storm will most likely be naturally re-routed because of the location elevation. However, if necessary the operator will re-route this drainage to eliminate any problems. Surface slopes to the south and shows a ten foot cut on the north side of lease and five foot fill on the southern part of location. Also bermed area for dry cuttings will run north to south starting at location corner number six.

Dennis Ingram
Evaluator

9/7/2010
Date / Time

Application for Permit to Drill Statement of Basis

11/23/2010

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
2995	43013504270000	LOCKED	OW	P	No
Operator	HARVEST (US) HOLDINGS, INC		Surface Owner-APD	Matt Yergensen	
Well Name	Yergensen #1-9-3-1		Unit		
Field	WILDCAT		Type of Work	DRILL	
Location	SENW 9 3S 1W U 1842 FNL 1667 FWL		GPS Coord (UTM)	584731E	4454570N

Geologic Statement of Basis

Harvest proposes to set 60' of conductor and 500' of surface casing at this location. The base of the moderately saline water at this location is estimated to be at a depth of 2,600'. A search of Division of Water Rights records shows 6 water wells within a 10,000 foot radius of the center of Section 9. The wells are privately owned. Depth is listed as ranging from 33 feet to 300 feet. Water use is listed as irrigation, stock watering, and domestic use. All wells are over 1 mile from the proposed location. 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. Cement for the intermediate string should be brought up above the base of the moderately saline ground water in order to isolate fresher waters uphole.

Brad Hill
APD Evaluator

10/13/2010
Date / Time

Surface Statement of Basis

A presite was scheduled and performed on September 7, 2010, to review and discuss surface issues for the construction and operations of this well pad. Matt Yergensen was shown as the landowner of record and therefore invited to the presite meeting. This wellsite was moved east and re-staked by Harvest after reviewing state spacing orders for the area. Furthermore, a second onsite was done on October 12, 2010 by the Division review and address any issues or change that have occurred. Mr. Yergensen was notified but did not attend the presite; he did, however, make comments that he did not have any issues with this site.

There isn't any grazing or pasture where this well staked up so fencing is not an issue unless the operator makes a well, at which time Harvest agreed to fence the site for security reasons. The surface slopes to the south, and shows nearly ten feet of cut at the northern boundary and six feet of fill to the south. A couple small, dry wash drains in a southerly direction near pit corner number 6, and a diversion ditch or berm may need cut or constructed to direct any storm water or snow melt along the eastern border of the location. While constructing this location, if any other drainage problems occur the operator needs to divert those problem areas around the location in a southerly direction and tie them back into existing drainage if possible. The operator also stipulated they would bring in six inches of roadbase to compact and stabilize the location surface.

The operator plans to utilize a closed loop system, and has shown on the location layout they plan to store dry cutting from drilling activity between location corner number six and seven. This shallow pit (or bermed area) was originally proposed to run east/west but has been changed north/south because of ease in accessing with drilling rig on the pad. These pits have shown to contain wet cutting or mud from the drilling process and so the operator needs to line the cuttings pit with a 16 mil synthetic liner to prevent leaching of fluids into the soil..

Dennis Ingram
Onsite Evaluator

9/7/2010
Date / Time

Application for Permit to Drill Statement of Basis

11/23/2010

Utah Division of Oil, Gas and Mining

Page 2

Category	Condition
Pits	A closed loop mud circulation system is required for this location.
Pits	A synthetic liner with a minimum thickness of 16 mils shall be properly installed and maintained in the cuttings pit.
Surface	The well site shall be bermed to prevent fluids from leaving the pad.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.

CONFIDENTIAL

**WORKSHEET
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 8/26/2010

API NO. ASSIGNED: 43013504270000

WELL NAME: Yergensen #1-9-3-1

OPERATOR: HARVEST (US) HOLDINGS, INC (N3520)

PHONE NUMBER: 435 719-2018

CONTACT: Don Hamilton

PROPOSED LOCATION: SENW 09 030S 010W

Permit Tech Review:

SURFACE: 1842 FNL 1667 FWL

Engineering Review:

BOTTOM: 1842 FNL 1667 FWL

Geology Review:

COUNTY: DUCHESNE

LATITUDE: 40.23918

LONGITUDE: -110.00392

UTM SURF EASTINGS: 584731.00

NORTHINGS: 4454570.00

FIELD NAME: WILDCAT

LEASE TYPE: 4 - Fee

LEASE NUMBER: Fee

PROPOSED PRODUCING FORMATION(S): WASATCH

SURFACE OWNER: 4 - Fee

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT**
- Bond:** STATE/FEE - B004657
- Potash**
- Oil Shale 190-5**
- Oil Shale 190-3**
- Oil Shale 190-13**
- Water Permit:** Neil Moon Pond
- RDCC Review:**
- Fee Surface Agreement**
- Intent to Commingle**

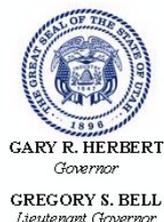
Commingleing Approved

LOCATION AND SITING:

- R649-2-3.**
 - Unit:**
 - R649-3-2. General**
 - R649-3-3. Exception**
 - Drilling Unit**
 - Board Cause No:** Cause 131-51
 - Effective Date:** 10/27/1983
 - Siting:** 1320' Fr Exterior Bdry of section
 - R649-3-11. Directional Drill**
-

Comments: Presite Completed

Stipulations: 5 - Statement of Basis - bhill
9 - Cement casing to Surface - hmacdonald



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: Yergensen #1-9-3-1
API Well Number: 43013504270000
Lease Number: Fee
Surface Owner: FEE (PRIVATE)
Approval Date: 11/23/2010

Issued to:

HARVEST (US) HOLDINGS, INC, 1177 Enclave Parkway, Houston, TX 77077

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 131-51. 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

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:

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

The cement volumes for the 9 5/8" casing shall be determined from actual hole conditions and the setting depth of the casing in order to place cement from the pipe setting depth back to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan – contact Dustin Doucet
- Significant plug back of the well – contact Dustin Doucet
- Plug and abandonment of the well – contact Dustin Doucet

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

OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website at <https://oilgas.ogm.utah.gov>

- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing – contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program – contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well – contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

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

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: Fee	

SUNDRY NOTICES AND REPORTS ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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.	7. UNIT or CA AGREEMENT NAME:

1. TYPE OF WELL Oil Well	8. WELL NAME and NUMBER: Yergensen #1-9-3-1
------------------------------------	---

2. NAME OF OPERATOR: HARVEST (US) HOLDINGS, INC	9. API NUMBER: 43013504270000
---	---

3. ADDRESS OF OPERATOR: 1177 Enclave Parkway , Houston, TX, 77077	PHONE NUMBER: 281 899-5722 Ext	9. FIELD and POOL or WILDCAT: WILDCAT
---	--	---

4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1667 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.0S Range: 01.0W 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		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 50px;" type="text"/>
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:			
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 11/30/2010			
<input type="checkbox"/> DRILLING REPORT Report Date:			

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

The Yergensen #1-9-3-1 was spud @ 0900 hrs. on 11/30/10 utilizing Leon Ross Construction

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

NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A	DATE 12/7/2010	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
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:
1. TYPE OF WELL Oil Well		7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: HARVEST (US) HOLDINGS, INC		8. WELL NAME and NUMBER: Vergensen #1-9-3-1
3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077 PHONE NUMBER: 281 899-5722 Ext		9. API NUMBER: 43013504270000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1867 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.05 Range: 01.0W Meridian: U		9. FIELD and POOL or WILDCAT: WILDCAT
		COUNTY: DUCHESNE
		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/4/2010	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:		<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION
<input type="checkbox"/> SPUD REPORT Date of Spud:		OTHER: <input style="width: 50px;" type="text"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Attached please find the drilling reports ending 12-4-2010		
CONFIDENTIAL - TIGHT HOLE		
NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 12/7/2010

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY**

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

FORM 6

ENTITY ACTION FORM

Operator: Harvest (US) Holdings, Inc. Operator Account Number: N 3520
 Address: 1177 Enclave Parkway
city Houston
state TX zip 77077 Phone Number: (281) 899-5722

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301350427	Yergensen #1-9-3-1		SENW	9	03S	01W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	17883	11/30/2010		12/14/10		
Comments: <u>WSTC</u> The well was spud utilizing Leon Ross Construction at 0900 hrs. <div style="text-align: right; font-weight: bold; font-size: 1.2em;">CONFIDENTIAL</div>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Don Hamilton
 Name (Please Print)
Don Hamilton
 Signature
 Agent for Harvest
 Title
 Date 12/7/2010

RECEIVED
DEC 07 2010

DIV. OF OIL, GAS & MINING

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

FORM 9

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.

1. TYPE OF WELL Oil Well	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
2. NAME OF OPERATOR: HARVEST (US) HOLDINGS, INC	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077	7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: 281 899-5722 Ext.	8. WELL NAME and NUMBER: Yergensen #1-9-3-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1867 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.05 Range: 01.0W Meridian: U	9. API NUMBER: 43013504270000
	9. FIELD and POOL or WILDCAT: WILDCAT
	COUNTY: DUCHESENE
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 12/11/2010	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Attached please find the drilling reports ending 12-11-2010

CONFIDENTIAL - TIGHT HOLE

NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 12/13/2010

**Accepted by the
Utah Division of
Oil, Gas and Mining
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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

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.

1. TYPE OF WELL Oil Well	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
2. NAME OF OPERATOR: HARVEST (US) HOLDINGS, INC	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077	7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: 281 899-5722 Ext.	8. WELL NAME and NUMBER: YERGENSEN #1-9-3-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1667 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.05 Range: 01.0W Meridian: U	9. API NUMBER: 43013504270000
	9. FIELD and POOL or WILDCAT: WILDCAT
	COUNTY: DUCHESENE
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/8/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Attached please find the drilling reports ending 1-8-2011

CONFIDENTIAL - TIGHT HOLE

NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 1/10/2011

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	6-Jan-11	Current Operation:	RU	Depth @ Midnight:	525 '	
				Depth @ 06:00:	525 '	Footage last 24 hrs: 0 '
Spud Date:	30-Nov-10	Days Since Spud:	20			

Time Breakdown:		
From:	To:	
0:00	0:00	Mobilize Rig: 95%, RU: 60%

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	7-Jan-11	Current Operation:	RU & Break Tower	Depth @ Midnight:	525 '	
				Depth @ 06:00:	525 '	Footage last 24 hrs: 0 '
Spud Date:	30-Nov-10	Days Since Spud:	21			

Time Breakdown:		
From:	To:	
0:00	0:00	Mobilize Rig: 100%, RU: 95%

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

RECEIVED January 10, 2011

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	8-Jan-11	Current Operation:	PU BHA	Depth @ Midnight:	525 '	
				Depth @ 06:00:	525 '	Footage last 24 hrs: 0 '
Spud Date:	30-Nov-10	Days Since Spud:	22			

Time Breakdown:		
From:	To:	
0:00	0:00	Finish RU. NU 13 3/8" Riser

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

RECEIVED January 10, 2011

Carol Daniels - Cement operations re: Harvest Natural Resources

T035 R01W 5-09 API # 43-013-50427

From: "Field Supervisor"
To: "Carol Daniels", "Chrissy Vance", "Dan Jarvis", "Dennis Ingram", "Don Hamilton",
"Dustin Doucet", "Jeff Schrutka", "Victor King"
Date: 1/12/2011 2:03 PM
Subject: Cement operations re: Harvest Natural Resources

Please consider this email as our notice that we will be running our 9 5/8" surface casing and cementing today on the Harvest Natural Resources Yergensen # 1-9-3-1 well. API # 43013504270000. Cement time should be approximately 18:00 hours on 1/12/11. I have placed a call to Mr. Ingram, but only reached his voice mail... thanks

Bill Calobrevés
Harvest Natural Resources
435-790-2060

This E-mail has been scanned by HNR Content Security and is believed to be clean.

RECEIVED**JAN 12 2011****DIV. OF OIL, GAS & MINING**

Carol Daniels - BOP Test

T03SR01W 5-09 43-013-50427

From: "Field Supervisor"
To: "Dan Jarvis" , "Dennis Ingram" , "Carol Daniels" , "Chrissy Vance" , "Don Hamilton" ,
"Dustin Doucet" , "Jeff Schrutka" , "Victor King"
Date: 1/12/2011 8:14 PM
Subject: BOP Test
CC: "Jeff Schrutka"

This is our notification that Harvest Natural Resources plans to NU & test our 11" x 5K BOP tomorrow 1/13/11 on the Yergensen # 1-9-3-1, API #43013504270000. Please feel free to contact me if there are any questions.
Thank you

Bill Calobreves
Harvest Natural Resources
435-790-2060

This E-mail has been scanned by HNR Content Security and is believed to be clean.

RECEIVED

JAN 13 2011

DIV. OF OIL, GAS & MINING

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

FORM 9

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.

1. TYPE OF WELL Oil Well	5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
2. NAME OF OPERATOR: HARVEST (US) HOLDINGS, INC	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077	7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: 281 899-5722 Ext.	8. WELL NAME and NUMBER: YERGENSEN #1-9-3-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1667 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.05 Range: 01.0W Meridian: U	9. API NUMBER: 43013504270000
	9. FIELD and POOL or WILDCAT: WILDCAT
	COUNTY: DUCHESTER
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/15/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Attached please find the drilling reports ending 1-15-2011

CONFIDENTIAL - TIGHT HOLE

NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 1/18/2011

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**

Carol Daniels - Yergensen #1-9-3-1, Run/cement 7" Intermediate Casing, Test 7" 10M BOPE*TOBS ROW 5-09 43-013-50427*

From: "Field Supervisor"
To: "Carol Daniels", "Chrissy Vance", "Dan Jarvis", "Dennis Ingram", "Don Hamilton",
"Dustin Doucet", "Jeff Schrutka", "Victor King"
Date: 1/24/2011 8:11 AM
Subject: Yergensen #1-9-3-1, Run/cement 7" Intermediate Casing, Test 7" 10M BOPE

Ladies and Gentlemen:

Please be advised that Harvest Natural Resources anticipates running 7" intermediate casing starting approximately 06:00 hrs 1/25 & cementing starting approximately 11:00 hrs 1/26. Setting depth will be ~8900'.

Testing of the 7" 10M BOPE should begin approximately 05:00 hrs 1/27.

Regards,
Glenn Randel
HNR Rep
H&P 319

This E-mail has been scanned by HNR Content Security and is believed to be clean.

RECEIVED

JAN 24 2011

DIV. OF OIL, GAS & MINING

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077	7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: 281 899-5722 Ext.	8. WELL NAME and NUMBER: YERGENSEN #1-9-3-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1667 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.05 Range: 01.0W Meridian: U	9. API NUMBER: 43013504270000
	9. FIELD and POOL or WILDCAT: WILDCAT
	COUNTY: DUCHESTER
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/22/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
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	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Attached please find the drilling reports ending 1-22-2011

CONFIDENTIAL - TIGHT HOLE

NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 1/26/2011

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**

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

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077	7. UNIT or CA AGREEMENT NAME:
PHONE NUMBER: 281 899-5722 Ext.	8. WELL NAME and NUMBER: YERGENSEN #1-9-3-1
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1667 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.05 Range: 01.0W Meridian: U	9. API NUMBER: 43013504270000
	9. FIELD and POOL or WILDCAT: WILDCAT
	COUNTY: DUCHESTER
	STATE: UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 1/29/2011	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
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	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> OTHER	OTHER: <input style="width:50px;" type="text"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.
Attached please find the drilling reports ending 1-29-2011

CONFIDENTIAL - TIGHT HOLE

NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 1/30/2011

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY**

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	23-Jan-11	Current Operation:	POH to run E-Logs.	Depth @ Midnight:	8,900 '	
				Depth @ 06:00:	8,900 '	Footage last 24 hrs: 505 '
Spud Date:	30-Nov-10	Days Since Spud:	36			

Time Breakdown:

From:	To:	
0:00	10:45	Rotate and slide drill 8-3/4" hole from 8395' to 8900'. MW to 10.5 ppg due to high BGG. Pump LCM for 3-4 bph losses.
10:45	14:15	Circ samples and hole clean. Pump slug, POH to shoe.
14:15	14:45	Routine rig service.
14:45	17:15	RIH, saw bridge at 8635', filled string and wash/reamed to TD. No issues washing thru bridge.
17:15	0:00	Circ around a Super Sweep pill and circ hole clean. Mix/pump slug. POH to run E-Logs. Flow check at shoe, static.

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

RECEIVED January 30, 2011

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	24-Jan-11	Current Operation:	Making cleanout run prior to running 7" casing.	Depth @ Midnight:	8,900 '	
				Depth @ 06:00:	8,900 '	Footage last 24 hrs: 0 '
Spud Date:	30-Nov-10	Days Since Spud:	37			

Time Breakdown:		
From:	To:	
0:00	1:00	Held JSA and L/D mud motor, MWD and stabilizer.
1:00	3:30	Wait on Halliburton E-loggers to arrive.
3:30	5:30	Held JSA & spot logging truck, RU wireline unit.
5:30	11:00	RIH with Triple Combo tool and run log. Logger's TD = 8894'.
11:00	11:30	LD Triple Combo tools.
11:30	15:30	Wait on Halliburton FMI & Sonic tools to arrive.
15:30	16:30	Unload and PU FMI / Sonic tools.
16:30	21:45	Run FMI / Sonic from 8894'.
21:45	22:30	RD Halliburton loggers.
22:30	0:00	MU Bit #6, bit sub w/float and PU stab. RIH with BHA.

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

RECEIVED January 30, 2011

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	26-Jan-11	Current Operation:	Finished 7" cement job. RD Halliburton.	Depth @ Midnight:	8,900'	
				Depth @ 06:00:	8,900'	Footage last 24 hrs: 0'
Spud Date:	30-Nov-10	Days Since Spud:	39			

Time Breakdown:		
From:	To:	
0:00	17:15	Run a total of 209 jts of 7" 29 ppf HCP110, LTC R3 casing. Landed with shoe at 8892' and float collar @ 8802'. Ran a total of 40 semi-rigid centralizers. Pumped LCM sweeps and built mud during casing running due to losses. With casing on bottom, performed lost circulation test, volume held steady at 5.5 bpm or less, but observed losses at higher pump rate.
17:15	21:15	Circ and reciprocate casing while RU Halliburton. Landed casing in wellhead and released CRT. Installed cement head and lines. Test lines.
21:15	23:30	Halliburton mixed and pumped cement job per design. Pumped 20 bbls 8.4 ppg Mud Flush and 40 bbls 12 ppg Super Flush and dropped btm plug at 21:12 hrs. Mixed and pumped 750 sx (220 bbls) of lead 50% Class G + 50% Poz + 2% BWOC bentonite + 0.75% BWOC Halad 322 + 0.1% BWOC HR-5 +3% BWOW KCl + 0.25 pps Poly-E-Flake + 5 pps Silicalite + 8.23 gps water mixed at 13 ppg. Followed by 295 sx (71 bbls) of tail 80% Class G + 20% Poz + 0.3% BWOC Halad 344 + 0.3% BWOC HR-5 + 3% BWOC Microbond-HT + 0.25 pps Poly-E-Flake + 10 pps Silicalite + 5.87 gps water mixed at 15 ppg. Dropped top plug and displaced with 327 bbls of 10.8 ppg mud. Bumped plug with 1000 psi over final displacement pressure of 1200 psi, total 2200 psi. Held pressure 10 mins, bled off 2.5 bbls, floats held. CIP at 23:13 hrs. Full returns throughout job. Estimated 30 bbls spacer back to surface, no cement.
23:30	0:00	Routine rig service. Rig down Halliburton.

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

RECEIVED January 30, 2011

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	27-Jan-11	Current Operation:	Testing BOP's.	Depth @ Midnight:	8,900 '	
				Depth @ 06:00:	8,900 '	Footage last 24 hrs: 0 '
Spud Date:	30-Nov-10	Days Since Spud:	40			

Time Breakdown:		
From:	To:	
0:00	0:30	RD Halliburton.
0:30	6:00	Nipple down 11" 5M BOPE. Bolt down 11" BOP in home position. Change pipe rams back to 4-1/2".
6:00	8:00	Install Cameron tubing hanger spool and test.
8:00	17:30	NU 7-1/16 10M BOPE including choke manifold. RD CRT and slips. Build flow nipple for rotating head to flowline.
		Function test BOP.
17:30	18:00	Routine rig service.
18:00	22:00	Install 3-1/2" saver sub on top drive. Change stabbing guide and dies. Unload and rack 3-1/2" DP, DC's and HWDP.
		Fabricate downstream side of 10M choke manifold.
22:00	0:00	Test BOP's.

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

RECEIVED January 30, 2011

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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.		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
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		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Oil Well		8. WELL NAME and NUMBER: YERGENSEN #1-9-3-1
2. NAME OF OPERATOR: HARVEST (US) HOLDINGS, INC		9. API NUMBER: 43013504270000
3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077		9. FIELD and POOL or WILDCAT: WILDCAT
3. ADDRESS OF OPERATOR: 1177 Enclave Parkway, Houston, TX, 77077		PHONE NUMBER: 281 899-5722 Ext
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		STATE: UTAH
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<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:		<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION
<input type="checkbox"/> SPUD REPORT Date of Spud:		OTHER: <input style="width: 50px;" type="text"/>
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 2/5/2011		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Attached please find the drilling reports ending 2-5-2011		
CONFIDENTIAL - TIGHT HOLE		
NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 2/7/2011

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY**

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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		7. UNIT or CA AGREEMENT NAME:
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		STATE: UTAH
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<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:		<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION
<input type="checkbox"/> SPUD REPORT Date of Spud:		OTHER: <input style="width: 50px;" type="text"/>
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 2/12/2011		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Attached please find the drilling reports ending 2-12-2011		
CONFIDENTIAL - TIGHT HOLE		
NAME (PLEASE PRINT) Don Hamilton	PHONE NUMBER 435 719-2018	TITLE Permitting Agent (Buys & Associates, Inc)
SIGNATURE N/A		DATE 2/13/2011

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY**

YERGENSEN #1-9-3-1 DAILY OPERATIONS SUMMARY

Date:	6-Feb-11	Current Operation:	LDDP	Depth @ Midnight:	11,513'	
Spud Date:	30-Nov-10	Days Since Spud:	50	Depth @ 06:00:	11,513'	Footage last 24 hrs: 0'

Time Breakdown:

From:	To:	
0:00		Set Liner Hanger
		Circulate out excess cement
		Tested liner top to 1500 psi.
		POOH - LD Liner Hanger setting tool. PU RTTS
		GIH to 8701'
		Negative test Liner top to 8.33 ppg
		Displace 7" casing w/ FW.
	0:00	POOH w/ RTTS - LDDP

Daily Cost:
Cumulative Cost:
AFE:
AFE Remaining:

CONFIDENTIAL

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

AMENDED REPORT
(highlight changes)

FORM 8

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____
d. TYPE OF WORK: NEW WELL HORIZ. LATS. DEEP-EN RE-ENTRY DIFF. RESVR. OTHER _____

2. NAME OF OPERATOR: Harvest (US) Holdings, Inc.

3. ADDRESS OF OPERATOR: 1177 Enclave Parkway CITY Houston STATE TX ZIP 77077 PHONE NUMBER: (281) 899-5722

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: 1842 FNL 1667 FWL
AT TOP PRODUCING INTERVAL REPORTED BELOW: 1842 FNL 1667 FWL
AT TOTAL DEPTH: 1842 FNL 1667 FWL

14. DATE SPUNDED: 11/30/2010 15. DATE T.D. REACHED: 2/2/2011 16. DATE COMPLETED: 3/16/2011 ABANDONED READY TO PRODUCE

18. TOTAL DEPTH: MD 11,604 TVD 11,604 19. PLUG BACK T.D.: MD 11,513 TVD 11,513 20. IF MULTIPLE COMPLETIONS, HOW MANY? * 10

22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
Spectral Density, Dual Spaced Neutron, Array Compensated Resistivity

23. WAS WELL CORED? NO YES (Submit analysis)
WAS DST RUN? NO YES (Submit report)
DIRECTIONAL SURVEY? NO YES (Submit copy)

24. CASING AND LINER RECORD (Report all strings set in well)

HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
17.50	13-3/8 H-40	48.5	0	522		G 500	102	0-CIR	
12.25	9-5/8 J-55	36	0	2,998		POZ:G 1,075	337	0-CIR	
8.75	7 P-11	29	0	8,892		POZ:G 1,045	291	1009-CAL	
6.00	4-1/2 P-11	15.1	8,701	11,597		Bondc 200	57	8701-CIR	

25. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-7/8	6,738	6,723						

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) Green River	6,800	8,970	6,800	8,970
(B) Wasatch	8,970		8,970	
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
6,812 8,952	.3	584	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
8,994 11,430	.3	340	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>
			Open <input type="checkbox"/> Squeezed <input type="checkbox"/>

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6812-8887	222,800 lb 20/40 Sand, 31,400 lb 20/40 Resin sand, 6,800 lb 100 mesh sand
8946-11430	252,580 lb 20/40 Sand, 56,900 lb 20/40 Resin sand, 99,900 lb 40/70 sand

29. ENCLOSED ATTACHMENTS: ELECTRICAL/MECHANICAL LOGS GEOLOGIC REPORT DST REPORT DIRECTIONAL SURVEY
 SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION CORE ANALYSIS OTHER: _____

30. WELL STATUS: Producing

(5/2000)

(CONTINUED ON BACK)

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31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 3/16/2011		TEST DATE: 3/23/2011		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 715	GAS - MCF: 543	WATER - BBL: 773	PROD. METHOD: flowing
CHOKE SIZE: 28/64	TBG. PRESS. 380	CSG. PRESS. 40	API GRAVITY 45.30	BTU - GAS	GAS/OIL RATIO 759	24 HR PRODUCTION RATES: →	OIL - BBL: 715	GAS - MCF: 543	WATER - BBL: 773	INTERVAL STATUS:

INTERVAL B (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL C (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

INTERVAL D (As shown in item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Ventad, Etc.)

Sold

33. 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.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
			See Geologic Report		

35. ADDITIONAL REMARKS (Include plugging procedure)

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) Don Hamilton TITLE Agent for Harvest (US) Holdings, Inc.

SIGNATURE Don Hamilton DATE 5/16/2011

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top - Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining Phone: 801-538-5340
 1594 West North Temple, Suite 1210
 Box 145801 Fax: 801-359-3940
 Salt Lake City, Utah 84114-5801

GEOLOGIC REPORT

Provided by
Decollement Consulting Inc.

For
Harvest (US) Holdings, Inc.
1177 Enclave Pkwy
Houston, TX 77077

Harvest (US) Holdings Inc.
Yergensen 1-9-3-2
SE/NW Sec.9.T3S, R1W.
Duchesne County,UT

January, 2010

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**January 2011
Decollement Consulting, Inc**

**Dennis Springer
Well site Geologist**

Well Data Summary

Well Name	Yergensen 1-9-3-1
Operator	Harvest (US) Holdings, Inc.
Surface Location	SE/NW Sec.9, T3S, R1W
API #	43-013-5042
Well Classification	Wildcat
Drilling Contractor	H & P Rig #319
Elevation-Ground level	5103
Kelly Bushing	5129
Spud Date	1/9/2011
TD Date	2/2/11
TD Depth	11,602
Surface Casing	9 5/8" Sat @ 2997'
Intermediate Csg	7" Sat @ 8892'
Hole Size	8 3/4, 6
Sample Interval	3000' to 11,602' TD
Gas Detection	3000' to 11,602 TD
Open Hole Logs	GR, SP. Cal., Triple Combo, Sonic, Image @ 8891, Triple Combo, Sonic, Vel Survey @ 11602
Mud Type	Terra-Max
Well Status	Run 5 inch Liner to TD

Formation Tops

Yergensen 1-9-3-1

Kelly Bushing 5129

Formation	Prognosis	Spl Top (md)	Spl Top (tvd)	Log Top (md)	Log (tvd)	Sub Sea
Uinta	Surface					
Green River 1		3900	3900	3943	3943	1185
Green River 2		5437	5437	5288	5288	(-160)
Smith	5508	5557	5557	5424	5424	(-296)
Mahogeny Bench	5624	5632	5632	5496	5496	(-368)
DJ	6063	5924	5924	5962	5962	(-834)
DJ1	6355	6224	6224	6264	6264	(-1136)
Garden Gulch J Marker	6526	6526	6526	6528	6528	(-1400)
Green River 3 H Marker		6798	6798	6800	6800	(-1672)
HI Marker	7088	6964	6964	6988	6988	(-1860)
I Marker	7473	7336	7336	7365	7365	(-2237)
K Marker (Douglas Creek)	7806	7662	7662	7702	7702	(-2574)
Castle Peak	8380	8286	8286	8292	8292	(-3164)
Control Point 80	8464	8364	8364	8379	8379	(-3251)
Bar "F" Unconformity	8476	8388	8388	8410	8410	(-3282)
UB1	8573	8508	8508	8508	8508	(-3380)
Ute Land Butte CP 90	8738	8688	8688	8662	8662	(-3534)
Wasatch	8977	8930	8930	8970	8970	(-3841)
Red Beds	9723	9834	9834	9832	9832	(-4703)
CP190				9814	9814	(-4685)
CP 200				9912	9912	(-4783)
CP210				9950	9950	(-4821)
Massive Red Beds						

Formation Evaluation
Harvest (US) Holdings, Inc.
Yergensen 1-9-3-1

Decollement Consulting arrived on Helmerich & Payne Rig #319, January 13, 2011. Total depth of 11602' was reached on February 2, 2011. Gas detection and lagged samples were caught under 2997' of 9 5/8" surface casing and were collected to total depth (11602). Under surface we drilled 8 3/4" hole to 8900 open hole E-logs (Triple-Combo, Sonic, Image) were run from 8891' to surface. Seven inch intermediate casing was run after logging and set at 8892. We drilled out with a 6 inch bit to Total Depth of 11602 where E-Logs (Triple Combo, Sonic, and Velocity Survey) were run. Shows 1-9 were in fractured oil Shales and Limestones with occasional sandstone stringers in Bar F and UB 1 . The first set of logs indicates approximately 70' of pay from the H to UB1 with 13% average porosity and over 40 ohm resistivity. The second set through the Wasatch had 58 feet of pay with average porosity of 10% and over 40 ohms resistivity and another 53 feet of possible fractures. Open hole logs indicated a total of 180' of pay in the hole with 11% average porosity and over 40 ohms resistivity. Logs indicate a well that will be economically questionable in tight sands with some possible fracture pay.

Bit Record
Harvest (US) Holdings, Inc.
Yergensen 1-9-3-1

BIT	SIZE	MAKE	TYPE	SERIAL #	JETS	OUT
1	12 ¼	Ulterra	MS1666BCU	8404	6x12	3000
2	8 ¾	Ulterra	MS1666	7421	3x12 3x11	4674
3	8 ¾	Smith	MSI 1616	JE1826	3x12 3x11	5971
4	8 ¾	Ulterra	MSI	56600	2x13 4x11	7795
5	8 ¾	Reed	E1100-B1	125512	6x12	8900
6	8 ¾	Smith	FDS+	P51258	3x32	8900
7	6	Ulterra	MS1665	8900	5x15	11200
8	6	Ulterra	MS1665	8899	5x15	11602

BIT	FT	HRS	TOT HR	WT	RPM	PP	MUD WT	VIS	DEV
1	2498	43.5	43.5	25	55	2800	9.6	45	.3
2	1674	31	54.5	28	80	2750	10.1	47	1.2
3	1297	43	97.5	28	50/80	1670	9.8	34	1.9
4	1824	56	153.5	23	55/80	2100	10.0	38	2.8
5	1105	23	176.5	15	60/80	2700	10.7	40	2.1
6	0	0	176.5	0	60	1590	10.7	40	2.1
7	2300	73	249.5	18	100	3250	12.1	40	2.8
8	402	18 ¼	265.75	18	110	3400	12.2	41	na

Daily Drilling Summary
Harvest (US) Holdings, Inc.
Giles #1-19-3-25

DATE	DEPTH	PROG	HRS	MUD	VIS	WL	PH	ACTIVITY
1/13/11	3000	0	0					Cement Surf @ 2997 Rig Up
1/14/11	3000	191	2 ¾	9.8	36	32	8.0	Nipple Up, Test Bops, Drill
1/15/11	3191	1000	17 ¾	10.1	37	28.4	9.8	Drill, Ream, Survey
1/16/11	4191	606	10 ¼	9.8	47	14.0	8.5	Drill, Trip for BHA
1/17/11	4797	760	21 ¾	9.9	38	8.8	8.3	Drill, Survey
1/18/11	5557	477	21 ¾	9.8	34	8.2	8.0	Drill, Survey
1/19/11	5971	477	14	9.9	34	6.6	8.4	Trip Bit Depth Corr 63 up Drill
1/20/11	6468	826	23 ½	10.0	38	6.2	8.7	Drill, Slide, Survey
1/21/11	7294	501	18 ½	10.0	38	5.0	8.7	Drill, Trip for Bit & Motor
1/22/11	7795	860	17 ½	10.0	40	5.0	8.7	Trip, Drill
1/23/11	8655	245	4 ¾	10.7	40	5.0	8.6	Drill, Trip for Logs
1/24/11	8900	0	0	10.7	40	5.0	8.6	Log, Trip
1/25/11	8900	0	0	10.7	40	5.0	8.6	Lay down pipe run csg
1/26/11	8900	0	0	10.7	40	5.0	8.6	Run csg, rig up to cement
1/27/11	8900	0	0	10.7	40	5.0	8.6	Finish cementing, Nipple down
1/28/11	8900	76	2 ½	10.7	36	7.2	8.4	Test BOPs, PU DP, Drill out
1/29/11	8976	606	23 ½	10.8	38	7.6	8.8	Drill, survey
1/30/11	9582	921	23	11.35	40	5.2	8.8	Drill, rig serv
1/31/11	10503	697	23 ½	12.1	40	5.0	8.6	Drill, rig serv
2/1/11	11200	192	7 ¾	12.2	41	5.0	8.5	Trip for Bit #8, Drill
2/2/11	11392	210	10 ½	12.2	41	6.2	8.0	Drill, Trip for Logs
2/3/11	11602	0	0	12.2	40	6.8	8.0	Log
2/4/11	11602	0	0	12.2	40	6.8	8.0	Finish logs, trip ciru bu,
2/5/11	11602	0	0	12.2	40	6.8	8.0	Run liner cement
2/6/11	11602	0	0	12.2	40	6.8	8.0	Released rig down



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& DIRECTIONAL SERVICES

OPERATOR		FIELD NAME	Well name/No.	Rig Name	& No.	QDM Job No.	Calculation Method: Minimum Curvature							
Harvest		Yergensen	Yergensen 1-9-3-1	H&P	319	02610-432-21	Proposed Azimuth:							
MWD OPERATOR		DIR SUPERVISOR	COUNTY	STATE	Start Date	Depth Ref	GREAT V							
Chris Wilson		Mark O'Rear	Duchesne	Utah	13-Jan-11		Job Service: Directional							
Dip/	65.977	Mag Field:	0.52421	Mag Dec.	11.373	Grid Cor.:	Yergensen							
Mag Spacing Req.		Mag Spacing Actual		Mag Spacing Req.		Mag Spacing Actual								
Below: 5		Below: 44		Above: 9		Above: 18								
Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (°/100')	Build Rate (°/100')	Walk Rate (°/100')	
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth				
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	
1	100.00	0.25	62.90	100.00	100.00	0.10	0.10	N	0.19	0.22	422.9	0.2	0.3	62.9
2	200.00	0.50	73.06	100.00	200.00	0.33	0.33	N	0.81	0.87	68.0	0.3	0.3	10.2
3	300.00	0.75	102.21	100.00	299.99	0.31	0.31	N	1.86	1.89	80.4	0.4	0.3	29.2
4	400.00	1.50	138.36	100.00	399.97	-0.80	0.80	S	3.37	3.47	103.4	1.0	0.8	36.2
5	500.00	2.25	149.51	100.00	499.92	-3.47	3.47	S	5.24	6.28	123.5	0.8	0.8	11.2
6	600.00	2.50	163.67	100.00	599.83	-7.26	7.26	S	6.85	9.98	136.7	0.6	0.3	14.2
7	700.00	1.75	164.83	100.00	699.76	-10.82	10.82	S	7.86	13.38	144.0	0.8	-0.8	1.2
8	800.00	1.75	174.99	100.00	799.72	-13.82	13.82	S	8.39	16.17	148.7	0.3	0.0	10.2
9	900.00	1.50	185.15	100.00	899.68	-16.64	16.64	S	8.41	18.65	153.2	0.4	-0.3	10.2
10	1000.00	1.75	188.31	100.00	999.64	-19.46	19.46	S	8.07	21.06	157.5	0.3	0.3	3.2
11	1100.00	1.50	170.46	100.00	1099.60	-22.26	22.26	S	8.07	23.68	160.1	0.6	-0.3	-17.9
12	1200.00	1.25	154.61	100.00	1199.57	-24.53	24.53	S	8.75	26.05	160.4	0.5	-0.3	-15.9
13	1300.00	1.50	172.77	100.00	1299.54	-26.82	26.82	S	9.38	28.41	160.7	0.5	0.3	18.2
14	1400.00	1.25	183.71	100.00	1399.51	-29.21	29.21	S	9.48	30.70	162.0	0.4	-0.3	10.9
15	1500.00	1.50	185.87	100.00	1499.48	-31.60	31.60	S	9.27	32.93	163.6	0.3	0.3	2.2
16	1600.00	1.50	180.03	100.00	1599.45	-34.21	34.21	S	9.14	35.41	165.0	0.2	0.0	-5.8
17	1700.00	1.00	181.18	100.00	1699.42	-36.39	36.39	S	9.12	37.51	165.9	0.5	-0.5	1.2
18	1800.00	1.00	192.34	100.00	1799.41	-38.11	38.11	S	8.92	39.14	166.8	0.2	0.0	11.2
19	1900.00	1.00	190.50	100.00	1899.39	-39.82	39.82	S	8.57	40.74	167.9	0.0	0.0	-1.8
20	2000.00	1.25	177.65	100.00	1999.38	-41.77	41.77	S	8.46	42.62	168.6	0.4	0.3	-12.9
21	2100.00	1.25	172.80	100.00	2099.35	-43.94	43.94	S	8.64	44.78	168.9	0.1	0.0	-4.8
22	2200.00	1.00	183.96	100.00	2199.33	-45.90	45.90	S	8.71	46.72	169.2	0.3	-0.3	11.2
23	2300.00	1.00	181.12	100.00	2299.32	-47.64	47.64	S	8.64	48.42	169.7	0.0	0.0	-2.8



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24	2400.00	1.00	169.27	100.00	2399.30	-49.37	49.37	S	8.78	E	50.14	169.9	0.2	0.0	-11.9
25	2500.00	1.00	138.43	100.00	2499.29	-50.88	50.88	S	9.52	E	51.76	169.4	0.5	0.0	-30.8
26	2600.00	0.75	139.59	100.00	2599.28	-52.03	52.03	S	10.53	E	53.08	168.6	0.3	-0.3	1.2
27	2689.00	0.50	140.74	89.00	2888.27	-52.77	52.77	S	11.15	E	53.94	168.1	0.3	-0.3	1.3
28	2739.00	0.40	8.80	50.00	2738.27	-52.77	52.77	S	11.31	E	53.97	167.9	1.6	-0.2	-263.9
29	2987.00	0.40	167.60	248.00	2986.27	-52.76	52.76	S	11.63	E	54.03	167.6	0.3	0.0	64.0
30	3148.00	0.20	165.20	161.00	3147.28	-53.58	53.58	S	11.83	E	54.87	167.6	0.1	-0.1	-1.5
31	3337.00	0.10	215.10	189.00	3336.28	-54.04	54.04	S	11.82	E	55.31	167.7	0.1	-0.1	26.4
32	3526.00	0.00	179.70	189.00	3525.28	-54.17	54.17	S	11.72	E	55.42	167.8	0.1	-0.1	-18.7
33	3714.00	0.30	158.50	188.00	3713.28	-54.63	54.63	S	11.90	E	55.91	167.7	0.2	0.2	-11.3
34	4091.00	0.60	204.10	377.00	4090.25	-57.35	57.35	S	11.46	E	58.48	168.7	0.1	0.1	12.1
35	4468.00	1.20	192.10	377.00	4467.20	-63.01	63.01	S	9.82	E	63.77	171.1	0.2	0.2	-3.2
36	4562.00	1.50	191.70	94.00	4561.18	-65.18	65.18	S	9.37	E	65.85	171.8	0.3	0.3	-0.4
37	4649.00	1.60	189.60	87.00	4648.15	-67.49	67.49	S	8.93	E	68.08	172.5	0.1	0.1	-2.4
38	4744.00	1.40	189.90	95.00	4743.11	-69.94	69.94	S	8.51	E	70.46	173.1	0.2	-0.2	0.3
39	4838.00	1.40	179.90	94.00	4837.09	-72.22	72.22	S	8.32	E	72.70	173.4	0.3	0.0	-10.6
40	4932.00	1.50	188.60	94.00	4931.08	-74.59	74.59	S	8.14	E	75.03	173.8	0.3	0.1	9.3
41	5027.00	1.50	189.30	95.00	5026.02	-77.04	77.04	S	7.75	E	77.43	174.3	0.0	0.0	0.7
42	5121.00	1.70	184.60	94.00	5119.99	-79.65	79.65	S	7.44	E	79.99	174.7	0.3	0.2	-5.0
43	5215.00	1.80	181.80	94.00	5213.94	-82.51	82.51	S	7.28	E	82.83	175.0	0.1	0.1	-3.0
44	5404.00	1.90	179.10	189.00	5402.84	-88.61	88.61	S	7.24	E	88.91	175.3	0.1	0.1	-1.4
45	5593.00	2.20	163.90	189.00	5591.72	-95.23	95.23	S	8.29	E	95.59	175.0	0.3	0.2	-8.0
46	5687.00	2.00	166.00	94.00	5685.66	-98.55	98.55	S	9.19	E	98.98	174.7	0.2	-0.2	2.2
47	5782.00	2.00	169.10	95.00	5780.60	-101.79	101.79	S	9.90	E	102.27	174.4	0.1	0.0	3.3
48	5876.00	1.80	154.50	94.00	5874.55	-104.73	104.73	S	10.85	E	105.29	174.1	0.6	-0.2	-15.5
49	6042.00	2.70	169.10	166.00	6040.42	-110.93	110.93	S	12.71	E	111.65	173.5	0.6	0.5	8.8
50	6136.00	2.30	161.30	94.00	6134.33	-114.89	114.89	S	13.73	E	115.70	173.2	0.6	-0.4	-8.3
51	6230.00	2.30	163.10	94.00	6228.26	-118.48	118.48	S	14.89	E	119.41	172.8	0.1	0.0	1.9
52	6324.00	1.50	164.40	94.00	6322.21	-121.47	121.47	S	15.77	E	122.49	172.6	0.9	-0.9	1.4
53	6418.00	1.80	180.20	94.00	6416.17	-124.13	124.13	S	16.09	E	125.17	172.6	0.6	0.3	16.8
54	6513.00	2.50	176.40	95.00	6511.10	-127.69	127.69	S	16.22	E	128.71	172.8	0.8	0.7	-4.0
55	6603.00	2.30	176.20	90.00	6601.02	-131.45	131.45	S	16.46	E	132.48	172.9	0.2	-0.2	-0.2
56	6702.00	2.20	167.60	99.00	6699.94	-135.29	135.29	S	17.00	E	136.35	172.8	0.4	-0.1	-8.7
57	6794.00	1.50	166.90	92.00	6791.90	-138.19	138.19	S	17.65	E	139.31	172.7	0.8	-0.8	-0.8
58	6890.00	1.80	156.00	96.00	6887.86	-140.79	140.79	S	18.55	E	142.00	172.5	0.5	0.3	-11.4



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59	6984.00	2.10	158.40	94.00	8981.80	-143.74	143.74	S	19.78	E	145.09	172.2	0.3	0.3	2.6
60	7079.00	2.10	168.40	95.00	7076.74	-147.06	147.06	S	20.77	E	148.52	172.0	0.4	0.0	10.5
61	7173.00	1.80	173.40	94.00	7170.88	-150.21	150.21	S	21.29	E	151.72	171.9	0.4	-0.3	5.3
62	7267.00	2.50	167.60	94.00	7264.62	-153.68	153.68	S	21.90	E	155.24	171.9	0.8	0.7	-6.2
63	7363.00	2.00	156.90	96.00	7380.54	-157.27	157.27	S	23.01	E	158.94	171.7	0.7	-0.5	-11.1
64	7456.00	2.20	155.50	93.00	7453.48	-160.39	160.39	S	24.38	E	162.23	171.4	0.2	0.2	-1.5
65	7550.00	2.50	174.70	94.00	7647.40	-164.07	164.07	S	25.32	E	166.01	171.2	0.9	0.3	20.4
66	7644.00	2.30	178.30	94.00	7641.32	-168.00	168.00	S	25.57	E	169.93	171.3	0.3	-0.2	3.8
67	7739.00	2.80	173.90	95.00	7738.23	-172.21	172.21	S	25.87	E	174.14	171.5	0.6	0.5	-4.6
68	7833.00	2.70	163.90	94.00	7830.12	-176.62	176.62	S	26.73	E	178.63	171.4	0.5	-0.1	-10.6
69	7927.00	1.90	138.00	94.00	7924.04	-179.90	179.90	S	28.38	E	182.13	171.0	1.4	-0.9	-27.6
70	8022.00	2.40	160.30	95.00	8018.88	-182.95	182.95	S	30.11	E	185.41	170.7	1.0	0.5	23.5
71	8116.00	2.10	157.60	94.00	8112.91	-186.39	186.39	S	31.43	E	189.02	170.4	0.3	-0.3	-2.9
72	8211.00	2.10	144.50	95.00	8207.84	-189.42	189.42	S	33.10	E	192.29	170.1	0.5	0.0	-13.8
73	8305.00	1.90	152.80	94.00	8301.79	-192.21	192.21	S	34.82	E	195.33	169.7	0.4	-0.2	8.8
74	8399.00	2.10	174.10	94.00	8395.73	-195.31	195.31	S	35.70	E	198.54	169.6	0.8	0.2	22.7
75	8493.00	1.50	183.60	94.00	8489.88	-198.25	198.25	S	35.80	E	201.45	169.8	0.7	-0.6	10.1
76	8591.00	1.90	193.20	98.00	8587.64	-201.11	201.11	S	35.35	E	204.19	170.0	0.5	0.4	9.8
77	8685.00	2.20	192.50	94.00	8681.58	-204.39	204.39	S	34.61	E	207.30	170.4	0.3	0.3	-0.7
78	8779.00	2.10	189.50	94.00	8775.61	-207.85	207.85	S	33.93	E	210.60	170.7	0.2	-0.1	-3.2
79	8850.00	2.10	190.00	71.00	8848.47	-210.41	210.41	S	33.49	E	213.06	171.0	0.0	0.0	0.7
80	8937.00	2.30	191.40	87.00	8933.40	-213.69	213.69	S	32.87	E	216.21	171.3	0.2	0.2	1.6
81	9032.00	2.20	190.50	95.00	9028.33	-217.35	217.35	S	32.16	E	219.72	171.6	0.1	-0.1	-0.9
82	9127.00	2.50	191.20	95.00	9123.25	-221.18	221.18	S	31.43	E	223.40	171.9	0.3	0.3	0.7
83	9222.00	2.30	186.30	95.00	9218.16	-225.11	225.11	S	30.81	E	227.21	172.2	0.3	-0.2	-5.2
84	9317.00	2.50	188.80	95.00	9313.08	-229.05	229.05	S	30.29	E	231.04	172.5	0.2	0.2	2.6
85	9412.00	2.60	188.70	95.00	9407.99	-233.23	233.23	S	29.64	E	235.10	172.8	0.1	0.1	-0.1
86	9507.00	2.60	189.20	95.00	9502.89	-237.48	237.48	S	28.97	E	239.24	173.0	0.0	0.0	0.5
87	9602.00	2.50	192.10	95.00	9597.80	-241.64	241.64	S	28.20	E	243.28	173.3	0.2	-0.1	3.1
88	9697.00	2.40	188.90	95.00	9692.71	-245.63	245.63	S	27.45	E	247.16	173.6	0.2	-0.1	-3.4
89	9792.00	2.50	192.10	95.00	9787.62	-249.62	249.62	S	26.71	E	251.04	173.9	0.2	0.1	3.4
90	9887.00	2.40	188.90	95.00	9882.53	-253.61	253.61	S	25.97	E	254.94	174.2	0.2	-0.1	-3.4
91	9982.00	2.50	192.10	95.00	9977.45	-257.60	257.60	S	25.23	E	258.83	174.4	0.2	0.1	3.4
92	10077.00	2.50	189.00	95.00	10072.36	-261.67	261.67	S	24.47	E	262.81	174.7	0.1	0.0	-3.3
93	10172.00	2.50	189.90	95.00	10167.27	-265.76	265.76	S	23.79	E	266.82	174.9	0.0	0.0	0.9



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94	10267.00	2.60	188.20	95.00	10282.17	-269.93	269.93	S	23.13	E	270.92	175.1	0.1	0.1	-1.8
95	10362.00	2.50	191.50	95.00	10357.08	-274.10	274.10	S	22.40	E	275.01	175.3	0.2	-0.1	3.5
96	10457.00	2.50	186.80	95.00	10451.99	-278.18	278.18	S	21.75	E	279.03	175.5	0.2	0.0	-4.9
97	10552.00	2.70	188.00	95.00	10546.89	-282.46	282.46	S	21.19	E	283.25	175.7	0.2	0.2	1.3
98	10647.00	2.60	189.30	95.00	10641.79	-286.80	286.80	S	20.53	E	287.53	175.9	0.1	-0.1	1.4
99	10742.00	2.60	187.50	95.00	10736.69	-291.06	291.06	S	19.90	E	291.74	176.1	0.1	0.0	-1.9
100	10837.00	2.60	189.40	95.00	10831.59	-295.32	295.32	S	19.27	E	295.95	176.3	0.1	0.0	2.0
101	10932.00	2.70	186.70	95.00	10926.49	-299.67	299.67	S	18.65	E	300.25	176.4	0.2	0.1	-2.8
102	11026.00	2.90	185.40	94.00	11020.38	-304.24	304.24	S	18.17	E	304.78	176.6	0.2	0.2	-1.4
103	11121.00	2.80	187.40	95.00	11115.28	-308.93	308.93	S	17.65	E	309.44	176.7	0.1	-0.1	2.1
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Sample Descriptions

Harvest (US) Holdings, Inc.
Yergensen 1-9-3-1

- 3000-30** **Abundant cement drilling out**
- SHALE-40%** Gray brown gray, blocky to platy, earthy, firm, slightly calcareous
- SANDSTONE-10%** White, light gray salt and pepper, very fine (lower) to fine (upper) grained, sub angular, well sorted, clay matrix, carbonaceous inclusions, tight, calcareous cement, firm, no show
- 3030-60** **SHALE- 60%** Light to medium gray gray brown maroon, blocky, earthy to sub waxy, soft, non to slightly calcareous
- SANDSTONE-40%** White light gray salt and pepper, very fine (lower) grained, sub rounded, well sorted, white clay matrix, carbonaceous inclusions, tight, friable, calcareous cement, no show
- 3060-90** **SHALE- 70%** Light to medium gray gray brown maroon, blocky, earthy to sub waxy, soft, non to slightly calcareous
- SANDSTONE-30%** White light gray salt and pepper, very fine (lower) grained, sub rounded, well sorted, white clay matrix, carbonaceous inclusions, tight, friable, calcareous cement, no show
- 3090-3120** **SHALE- 70%** Light to medium gray gray brown maroon, blocky, earthy to sub waxy, soft, non to slightly calcareous
- SANDSTONE-30%** White light gray salt and pepper, very fine (lower) grained, sub rounded, well sorted, white clay matrix, carbonaceous inclusions, tight, friable, calcareous cement, no show

- 3120-50** **SHALE- 30% Light to medium gray gray brown maroon, blocky, earthy to sub waxy, soft, non to slightly calcareous**
- SANDSTONE-70% White light gray salt and pepper, very fine (lower) to medium (upper) grained, sub rounded, poorly sorted, white clay matrix, micaceous, tight, friable, calcareous cement, no show**
- 3150-80** **SHALE- 20% Light to medium gray gray brown maroon, blocky, earthy to sub waxy, soft, non to slightly calcareous**
- SILTSTONE-20% Light to medium gray, argillaceous, arenaceous, micaceous, friable, calcareous**
- SANDSTONE-60% Light gray tan, very fine (lower) to fine (upper) grained, sub angular, moderate to well sorted, white clay matrix, micaceous , tight, friable, calcareous cement, no show**
- 3180-3210** **SHALE-70% Medium gray gray brown (100%), blocky, sub waxy, mica and carbonaceous inclusions, firm, non calc**
- SANDSTONE-30% Light gray tan, very fine (lower) to fine (upper) grained, sub angular, moderate to well sorted, white clay matrix, micaceous , tight, friable, calcareous cement, no show**
- 3210-40** **SHALE-80% Medium gray gray brown (100%), blocky, sub waxy, mica and carbonaceous inclusions, firm, non calc**
- SANDSTONE-20% Light gray tan, very fine (lower) to fine (upper) grained, sub angular, moderate to well sorted, white clay matrix, micaceous , tight, friable, calcareous cement, no show**
- 3240-70** **SHALE-30% Medium gray gray brown, blocky, sub waxy, mica and carbonaceous inclusions, firm, non calc**
- SILTSTONE-20% Light to medium gray, argillaceous, arenaceous, micaceous, friable, slightly calcareous**
- SANDSTONE-50% Light gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderate sorted, white clay matrix, carbonaceous and mica inclusions , tight, friable, calcareous cement, no show**

- 3270-3300** **SHALE-80%** Green gray purple, blocky, earthy to sub waxy, firm, non calc
- SANDSTONE-20%** Light gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderate sorted, white clay matrix, carbonaceous and mica inclusions , tight, friable, calcareous cement, no show
- 3300-30** **SHALE-60%** Tan brown (80%) green gray gray (20%), blocky to platy, earthy, soft, limy, slow streaming yellow cut
- SANDSTONE-20%** Light gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderate sorted, white clay matrix, carbonaceous and mica inclusions , tight, friable, calcareous cement, no show
- LIMESTONE-20%** Tan brown, cryptocrystalline, marlstone, argillaceous, firm, slow streaming yellow cut
- 3330-60** **SHALE-60%** Tan brown (80%) green gray gray (20%), blocky to platy, earthy, soft, limy, slow streaming yellow cut
- SANDSTONE-10%** Light gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderate sorted, white clay matrix, carbonaceous and mica inclusions , tight, friable, calcareous cement, no show
- LIMESTONE-30%** Tan brown, cryptocrystalline, marlstone, argillaceous, firm, slow streaming yellow cut
- 3360-90** **SHALE-80%** Light gray green gray (100%), sub blocky, sub waxy to earthy, firm, non calcareous
- SANDSTONE-20%** White light gray salt and pepper, very fine (lower) to fine (lower) grained, sub rounded, well sorted, carbonaceous and mica inclusions, clay matrix, friable, tight, calcareous cement, no show
- 3390-3420** **SHALE-80%** Medium to dark gray gray brown (100%), sub blocky, sub waxy to earthy, firm, non calcareous
- SANDSTONE-20%** White light gray salt and pepper, very fine (lower) to fine (lower) grained, sub rounded, well sorted, carbonaceous and mica inclusions, clay matrix, friable, tight, calcareous cement, no show

3420-50 **SHALE-20% Light gray green gray (100%), sub blocky, sub waxy to earthy, firm, non calcareous**

SANDSTONE-80% White light gray salt and pepper, very fine (lower) to fine (lower) grained, sub angular , well sorted, carbonaceous and mica inclusions, white clay matrix, friable, tight, calcareous cement, no show

3450-80 **SHALE-70% Light to medium gray (70%) light brown tan (30%), sub to platy, earthy, firm, calcareous to limy, no show**

SANDSTONE-30% White gray salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show

3480-3510 **SHALE-80% Light to medium gray (80%) light brown tan (20%), sub to platy, earthy, firm, calcareous to limy, no show**

SANDSTONE-20% White gray salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show

3510-40 **SHALE-90% Light to medium gray (90%) light brown tan (10%), sub to platy, earthy, firm, calcareous to limy, no show**

SANDSTONE-10% White gray salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show

3540-70 **SHALE-70% Light to medium gray (90%) light brown tan (10%), sub to platy, earthy, firm, calcareous to limy, no show**

SANDSTONE-30% White gray salt and pepper, very fine (lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show

- 3570-3600** **SHALE-80%** Light to medium gray (90%) light brown tan (10%), sub blocky to platy, earthy, firm, calcareous to limy, no show
- SANDSTONE-20%** White gray salt and pepper, very fine (lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show
- 3600-30** **SHALE-80%** Light to dark gray rare black (100%), blocky, earthy, firm, calcareous, no show
- SANDSTONE-20%** White light gray salt and pepper, very fine (lower), sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show
- 3630-60** **SHALE-90%** Light to dark gray rare black (100%), blocky, earthy, firm, calcareous, no show
- SANDSTONE-10%** White light gray salt and pepper, very fine (lower), sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no show
- 3660-90** **SHALE-30%** Light to dark gray rare black (100%), blocky, earthy, firm, calcareous, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine (lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, tight, friable, calcareous cement, no show
- 3690-3720** **SHALE-20%** Light to dark gray rare black (100%), blocky, earthy, firm, calcareous, no show
- SANDSTONE-80%** White light gray salt and pepper, very fine (lower) to medium (lower) grained, sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show

- 3720-50** **SHALE-10%** Light to dark gray rare black (100%), blocky, earthy, firm, calcareous, no show
- SANDSTONE-90%** White light gray salt and pepper, very fine (lower) to medium (lower) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3750-80** **SANDSTONE-100%** White light gray salt and pepper, very fine (lower) to medium (lower) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3780-3810** **SHALE-60%** Medium to dark gray (100%), sub blocky to platy, earthy, firm, calc
- SANDSTONE-40%** White light gray salt and pepper, very fine (lower)to medium (lower) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3810-40** **SHALE-20%** Medium to dark gray (100%), sub blocky to platy, earthy, firm, calc
- SANDSTONE-80%** White light gray salt and pepper, very fine (lower)to fine (upper) grained , sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3840-70** **Poor Sample abundant nut plug from sweep**
- SHALE-80%** Medium to dark gray (100%), sub blocky to platy, earthy, firm, calc
- SANDSTONE-20%** White light gray salt and pepper, very fine (lower)to fine (upper) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show

- 3870-3900** **SHALE-30%** Medium to dark gray (100%), sub blocky to platy, earthy, firm, calc
- SANDSTONE-70%** White light gray salt and pepper, very fine (lower)to fine (upper) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3900-30** **SHALE-100%** Brown tan (100%), blocky to sub platy, earthy, limy, slow streaming yellow cut
- 3930-60** **SHALE-30%** Medium to dark gray (70%) brown tan (30%) , sub blocky to platy, earthy, soft to firm, calc to limy in part, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine (lower)to fine (upper) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3960-90** **SHALE-60%** Medium to dark gray (80%) brown tan (20%)s, blocky to sub platy, earthy, firm, very calc to limy, no show
- SANDSTONE-40%** White light gray salt and pepper, very fine (lower)to fine (upper) grained , sub angular, poorly sorted, carbonaceous inclusions, white clay matrix, fair porosity, friable, calcareous cement, no show
- 3990-4020** **SHALE-100%** Light brown gray brown (100%) blocky to platy, earthy, soft to firm, limy, no show
- 4020-50** **SHALE-100%** Light brown gray brown (100%) blocky to platy, earthy, soft to firm, limy, no show
- 4050-80** **SHALE-100%** Light brown gray brown (100%) blocky to platy, earthy, trace calcite filled fractures, soft to firm, limy, no show
- 4080-4110** **SHALE-100%** Light brown gray brown (100%) blocky to platy, earthy, soft to firm, limy, no show

- 4110-40** **SHALE-100%** Light brown gray brown (100%) blocky to platy, earthy, mudstone, soft to firm, limy, no show
- 4140-70** **SHALE-100%** Gray brown light brown (100%) blocky to platy, earthy, soft to firm, limy, no show
- 4170-4200** **SHALE-100%** Gray brown light brown (100%) blocky to platy, earthy, soft to firm, limy, no show
- 4200-30** **SHALE-100%** Gray brown light brown (100%) blocky to platy, earthy, trace calcite filled fractures, soft to firm, limy, no show
- 4230-60** **SHALE-80%** Medium to dark brown (100%), blocky, earthy, shell fragments, calcite fracture fill, trace pyrite, soft to firm, gold florescence, immediate streaming yellow cut
- LIMESTONE-20%** Light to medium brown, cryptocrystalline, argillaceous, mudstone, firm, gold florescence, immediate streaming yellow cut
- 4260-90** **SHALE-80%** Light to dark brown (100%), blocky, earthy, sandy, shell fragments, calcite fracture fill, trace pyrite, soft to firm, gold florescence, immediate streaming yellow cut
- LIMESTONE-20%** Light to medium brown, cryptocrystalline, argillaceous, mudstone, firm, gold florescence, immediate streaming yellow cut
- 4290-4320** **SHALE-80%** Light to dark brown (100%), blocky, earthy, shell fragments, calcite fracture fill, trace pyrite, soft to firm, gold florescence, immediate streaming yellow cut
- LIMESTONE-20%** Light brown, chalky, argillaceous, mudstone, soft, no show

- 4320-50** **SHALE-80% Light to dark brown (100%), blocky, earthy, shell fragments, calcite fracture fill, soft to firm, spotty gold florescence, immediate streaming yellow cut**
- LIMESTONE-20% Light brown, chalky, argillaceous, mudstone, firm, no show**
- 4350-80** **SHALE-100% Light to dark brown (100%), blocky, earthy, shell fragments, calcite fracture fill, soft to firm, spotty gold florescence, immediate streaming yellow cut**
- 4380-4410** **SHALE-100% Gray brown light gray (70%) light to dark brown (30%), blocky, earthy, soft to firm, slow streaming yellow cut**
- 4410-40** **SHALE-100% Gray brown light gray (20%) light to dark brown (80%), blocky, earthy, soft to firm, spotty gold florescence, immediate streaming yellow cut**
- 4440-70** **SHALE-100% Light to dark brown (100%), blocky, earthy, trace calcite filled fractures, limy, soft to firm, spotty gold florescence, immediate streaming yellow cut**
- 4470-4500** **SHALE-100% Light to dark brown (100%), blocky, earthy, trace calcite filled fractures, limy, soft to firm, spotty gold florescence, immediate streaming yellow cut**
- 4500-30** **SHALE-100% Gray brown light gray (30%) light to dark brown (70%), blocky, earthy, soft to firm, slow streaming yellow cut**
- 4530-60** **SHALE-100% Gray brown light gray (30%) light to dark brown (70%), blocky, earthy, soft to firm, slow streaming yellow cut**
- 4560-90** **SHALE-80% Light gray gray brown (50%) light to dark brown, (50%) blocky, earthy, soft to firm, slow streaming yellow cut**
- LIMESTONE-20% Tan light brown, chalky, argillaceous, mudstone, very soft, no show**

- 4590-4620** SHALE-100% Light to dark brown (100%), blocky, earthy, shell fragments, trace calcite filled fractures, limy, soft to firm, immediate streaming yellow cut
- 4620-50** SHALE-100% Light to dark brown (100%), blocky, earthy, occasional shell fragments, trace calcite filled fractures, limy, soft to firm, slow streaming yellow cut
- 4650-80** SHALE-100% Gray brown light gray (70%) light to dark brown (30%), blocky, earthy, soft to firm, limy, no show
- 4680-4710** SHALE-100% Medium to dark brown (100%), blocky, earthy, occasional shell fragments, trace calcite filled fractures, limy, soft to firm, immediate streaming yellow cut, black asphaltic oil in samples
- 4710-40** Very Poor Sample abundant nut plug from sweep
SHALE- As above
- 4740-70** SHALE-60% Medium to dark brown (60%) gray brown (40%), blocky, earthy, limy, trace shell fragments, soft to firm, slow streaming yellow cut
LIMESTONE-40% Tan light brown, cryptocrystalline, chalky, argillaceous, mudstone, very soft to firm, slow streaming yellow cut
- 4770-4800** SHALE-30% Medium to dark brown (60%) gray brown (40%)
blocky, earthy, trace shell fragments, soft to firm, slow streaming yellow cut
LIMESTONE-70% Tan light brown, cryptocrystalline, chalky, argillaceous, mudstone, very soft to firm, immediate streaming yellow cut
- 4800-30** SHALE-30% Medium to dark brown (60%) gray brown (40%), blocky, earthy, limy, trace shell fragments, soft to firm, slow streaming yellow cut
LIMESTONE-70% Tan brown, cryptocrystalline, chalky in part, argillaceous, trace pyrite, mudstone, trace calcite filled fractures, firm, immediate streaming yellow cut

- 4830-60** **SHALE-70% Medium to dark brown gray brown (100%)**
blocky, earthy, limy, soft to firm, immediate streaming yellow cut
- LIMESTONE-70% Tan brown, cryptocrystalline, chalky in part,**
argillaceous, trace pyrite, mudstone, trace calcite filled fractures, firm,
immediate streaming yellow cut
- 4860-90** **SHALE-60% Medium to dark brown gray brown (100%)**
blocky, earthy, limy, soft to firm, immediate streaming yellow cut
- LIMESTONE-40% Tan brown, cryptocrystalline, chalky in part,**
argillaceous, trace pyrite, mudstone, trace calcite filled fractures, firm,
immediate streaming yellow cut
- 4890-4920** **SHALE-20% Medium to dark brown gray brown (100%)**
blocky, earthy, limy, soft to firm, immediate streaming yellow cut
- LIMESTONE-80% Tan brown, cryptocrystalline, chalky in part,**
argillaceous, marlstone, soft to firm, immediate streaming yellow cut
- 4920-50** **SHALE-20% Medium to dark brown gray brown (100%)**
blocky, earthy, limy, soft to firm, immediate streaming yellow cut
- LIMESTONE-40% Tan brown, cryptocrystalline to microcrystalline**
argillaceous, trace mica, trace calcite filled fractures, soft to firm,
immediate streaming yellow cut
- 4950-80** **SHALE-100% Light to medium gray, earthy to sub waxy, calcareous, soft,**
no show
- 4980-5010** **SHALE-80% Light to medium gray, earthy to sub waxy, calcareous, soft,**
no show
- LIMESTONE-20% Light gray, chalky, argillaceous, soft, no show**
- 5010-40** **SHALE-70% Light to medium gray, earthy to sub waxy, calcareous, soft,**
no show
- LIMESTONE-30% Light gray, chalky, argillaceous, soft, no show**

- 5040-70** **SILTSTONE-60%** Light gray, arenaceous, limy, firm, no show
- LIMESTONE-20%** Light gray, chalky, argillaceous, arenaceous, firm, no show
- 5070-5100** **SHALE-30%** Light to medium gray gray brown, earthy to sub waxy, calcareous, soft, no show
- LIMESTONE-70%** Light gray gray brown, cryptocrystalline, chalky in part, argillaceous, soft to firm, no show
- 5100-30** **SHALE-70%** Gray brown gray (100%), blocky to sub platy, earthy, silty in part, limy, soft, no show
- LIMESTONE-30%** Gray gray brown, cryptocrystalline, chalky in part, argillaceous, soft to firm, no show
- 5130-60** **SHALE-60%** Dark brown black (100%) blocky, black carbonaceous lens, trace calcite filled fractures, firm, limy, slow streaming yellow cut
- LIMESTONE-40%** Dark brown, cryptocrystalline, argillaceous, black carbonaceous partings, firm, slow streaming yellow cut
- 5160-90** **SHALE-80%** Dark brown black (100%) blocky, black carbonaceous lens, trace calcite filled fractures, firm, limy, slow streaming yellow cut
- LIMESTONE-20%** Dark brown, cryptocrystalline, argillaceous, black carbonaceous partings, firm, slow streaming yellow cut
- 5190-5220** **SHALE-80%** Dark brown black (100%) blocky, black carbonaceous lens, trace calcite filled fractures, firm, limy, slow streaming yellow cut
- LIMESTONE-20%** Dark brown, cryptocrystalline, argillaceous, black carbonaceous partings, firm, slow streaming yellow cut

- 5220-50** **SHALE-80% Dark to medium brown dark gray brown black (100%) blocky to platy, earthy, black carbonaceous lens, firm, limy, slow streaming yellow cut**
- LIMESTONE-40% Dark brown, cryptocrystalline, argillaceous, black carbonaceous partings, firm, slow streaming yellow cut**
- 5250-80** **SHALE-100% Dark to medium brown dark gray brown(100%) blocky to sub platy, earthy, black carbonaceous lens, firm, limy, slow streaming yellow cut**
- 5280-5310** **SHALE-100% Dark to medium brown (100%) blocky to sub platy, earthy, occasional shell fragments, soft to firm, limy, slow streaming yellow cut, trace dark brown oil in sample**
- 5310-40** **SHALE-100% Dark brown (100%) blocky to sub platy, earthy, firm, limy, slow streaming yellow cut**
- 5340-70** **SHALE-50% Medium brown (100%), blocky, earthy, soft to firm, limy, no show**
- LIMESTONE-50% Light to medium brown, cryptocrystalline, chalky in part, soft to firm, no show**
- 5370-5400** **SHALE-40% Medium brown (100%), blocky, earthy, soft to firm, limy, no show**
- LIMESTONE-60% Medium to dark brown, cryptocrystalline, chalky in part, argillaceous, soft to firm, slow streaming yellow cut**
- 5400-30** **SHALE-80% Medium to dark brown (100%), blocky to sub platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut**
- LIMESTONE-20% Medium to dark brown, cryptocrystalline, chalky in part, argillaceous, soft to firm, slow streaming yellow cut**

- 5430-60** SHALE-100% Medium to dark brown (100%), blocky to sub platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- 5460-90** SHALE-100% Medium to dark brown (100%), blocky to platy, earthy, silty in part, soft to firm, limy, immediate streaming yellow cut
- 5490-5520** SHALE-100% Medium to dark brown dark gray brown(100%), blocky to platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- 5520-50** SHALE-100% Medium to dark brown dark gray brown(100%), blocky to platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- 5550-80** SHALE-100% Medium to dark brown dark gray brown(100%), blocky to platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- 5580-5610** SHALE-80% Medium to dark brown dark gray brown(100%), blocky to platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- DOLOMITE-20% Dark gray brown dark brown, cryptocrystalline, trace pyrite, limy, firm, slow streaming yellow cut
- 5610-40** SHALE-80% Medium to dark brown dark gray brown(100%), blocky to platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- DOLOMITE-20% Dark gray brown dark brown, cryptocrystalline, trace pyrite, limy, firm, slow streaming yellow cut
- 5640-70** SHALE-60% Dark brown dark gray brown black(100%), blocky to platy, earthy, black carbonaceous partings, soft to firm, limy, immediate streaming yellow cut
- LIMESTONE 40% Dark gray brown dark gray, cryptocrystalline to microcrystalline, argillaceous, firm, immediate streaming yellow cut

- 5670-5700** **SHALE-70%** Dark brown dark gray brown (100%), blocky to platy, earthy, trace calcite filled fractures, soft to firm, limy, immediate streaming yellow cut
- LIMESTONE 30%** Dark gray brown dark gray, cryptocrystalline to microcrystalline, argillaceous, firm, immediate streaming yellow cut
- 5700-30** **SHALE-100%** Dark brown dark gray brown (100%), blocky to platy, earthy, trace calcite filled fractures, soft to firm, limy, immediate streaming yellow cut
- 5730-60** **SHALE-80%** Dark brown dark gray brown (100%), blocky to platy, earthy, trace calcite filled fractures, soft to firm, limy, immediate streaming yellow cut
- LIMESTONE 20%** Dark gray brown dark gray, cryptocrystalline, chalky in part, argillaceous, marlstone, firm, immediate streaming yellow cut
- 5760-90** **SHALE-80%** Dark brown dark gray brown (100%), blocky to platy, earthy, trace calcite filled fractures, soft to firm, limy, slow streaming yellow cut
- LIMESTONE 20%** Dark gray brown dark gray, cryptocrystalline, chalky in part, argillaceous, marlstone, firm, slow streaming yellow cut
- 5790-5820** **SHALE-60%** Brown gray brown (100%), blocky to platy, earthy, soft to firm, limy, slow streaming yellow cut
- LIMESTONE 40%** Light gray gray brown, cryptocrystalline, argillaceous, firm, dolomitic, no show
- 5820-50** **SHALE-20%** Brown gray brown (100%), blocky to platy, earthy, soft to firm, limy, slow streaming yellow cut
- LIMESTONE 10%** Light gray gray brown, cryptocrystalline, argillaceous, firm, dolomitic, no show
- SANDSTONE-70%** White light brown salt and pepper, very fine(lower) to fine(upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, friable, calcareous cement, spotty light brown stain, immediate streaming yellow cut

- 5850-80** SHALE-20% Brown gray brown (100%), blocky to platy, earthy, soft to firm, limy, slow streaming yellow cut
- SANDSTONE-80% White light brown salt and pepper, very fine(lower) to fine(upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, friable, calcareous cement, spotty light brown stain, slow streaming yellow cut
- 5880-5910** SHALE-100% Medium gray (100%), blocky to platy, earthy, silty, firm, moderately to very calcareous, no show
- 5910-40** SHALE-100% Light to medium gray (100%), blocky to platy, earthy, silty, firm, moderately to very calcareous, no show
- 5940-70** SHALE-100% Medium to dark brown (70%) gray (30%), blocky to platy, earthy, trace pyrite , firm, slightly calcareous, slow weak bleeding yellow cut
- 5970-6000** SHALE-100% Medium to dark brown (100%), blocky to platy, earthy, black carbonaceous lens, firm, limy, slow weak bleeding yellow cut
- 6000-30** SHALE-100% Medium to dark brown (100%), blocky to platy, earthy, black carbonaceous lens, firm, limy, milky yellow residual cut

Depth Correction at Trip 63 feet up hole

- 5970-6000** SHALE-100% Medium to dark brown (100%), blocky to platy, earthy, black carbonaceous lens, firm, limy, milky yellow residual cut
- 6000-30** SHALE-100% Light to medium brown (40%) gray brown gray (60%) , blocky to platy, earthy, soft to firm, slightly calcareous, no show
- 6030-60** SHALE-100% Light to medium gray gray brown (80%) brown (20%) , blocky to platy, earthy, soft to firm, slightly calcareous, no show
- 6060-90** SHALE-100% Light to medium gray gray brown (80%) brown (20%) , blocky to platy, earthy, soft to firm, slightly calcareous, no show

- 6090-6120** **SHALE-80%** Light to medium gray gray brown (80%) brown (20%) ,
blocky to platy, earthy, soft to firm, slightly calcareous, no show
- LIMESTONE-20%** Medium to dark gray dark gray brown,
cryptocrystalline to microcrystalline, argillaceous, silty, firm, no show
- 6120-50** **SHALE-100%** Medium to dark gray (60%) dark brown black (40%) ,
blocky to platy, earthy, soft to firm, slightly to very calcareous, slow weak
streaming yellow cut
- 6150-80** **SHALE-100%** Light to medium brown gray brown (80%) gray (20%) ,
blocky to platy, earthy, soft to firm, limy, no show
- 6180-6210** **SHALE-80%** Light to medium gray (70%) light to medium brown (30%) ,
blocky to platy, earthy to sub waxy, trace pyrite, soft to firm, limy, no show
- LIMESTONE-20%** Light to medium gray, cryptocrystalline, argillaceous,
firm, no show
- 6210-40** **SHALE-80%** Medium to dark brown (80%) gray (20%), blocky, earthy,
trace pyrite , firm, limy, slow weak bleeding yellow cut
- LIMESTONE-20%** Light gray light brown, cryptocrystalline, argillaceous,
'firm, no show
- 6240-70** **SHALE-100%** Medium to dark brown (100%), blocky to sub platy,
earthy, black carbonaceous lens , firm, slightly calcareous, slow weak
streaming yellow cut
- 6270-6300** **SHALE-100%** Medium to dark brown (100%), blocky to sub platy,
earthy, black carbonaceous lens , firm, slightly calcareous, slow weak
streaming yellow cut
- 6300-30** **SHALE-100%** Medium to dark brown (100%), blocky to sub platy,
earthy, black carbonaceous lens , firm, slightly calcareous, weak
milky yellow cut

- 6330-60** SHALE-100% Dark brown dark gray brown (100%), blocky to sub platy, earthy, black carbonaceous lens , firm, slightly calcareous, weak milky yellow cut
- 6360-90** SHALE-100% Dark brown dark gray brown black (100%), blocky to platy, earthy, black carbonaceous lens , firm, slightly calcareous, weak milky yellow cut
- 6390-6420** SHALE-100% Dark brown dark gray brown black (100%), blocky to platy, earthy, black carbonaceous lens , firm, calcareous, weak milky yellow cut
- 6420-50** SHALE-100% Dark brown dark gray brown black (100%), blocky to platy, earthy, black carbonaceous lens, firm, calcareous, weak milky yellow cut
- 6450-80** SHALE-80% Dark brown dark gray brown black (100%), blocky to platy, earthy, black carbonaceous lens, firm, limy, slow streaming yellow cut
- LIMESTONE-20% Medium to dark brown, cryptocrystalline, argillaceous, marlstone, soft to firm, slow streaming yellow cut
- 6480-6510** SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, black carbonaceous lens, firm, calcareous, slow streaming yellow cut
- 6510-40** SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, black carbonaceous lens, trace calcite filled fractures, soft to firm, calcareous, slow streaming yellow cut
- 6540-70** SHALE-100% Dark brown dark gray brown black (100%), blocky, earthy, black carbonaceous lens, trace calcite filled fractures, soft to firm, calcareous, slow streaming yellow cut
- 6570-6600** SHALE-100% Dark brown dark gray brown black (100%), blocky, earthy, black carbonaceous lens, soft to firm, calcareous, limy in part, slow streaming yellow cut

- 6600-30** SHALE-100% Medium to dark brown dark gray brown (100%), blocky, earthy, black carbonaceous lens, calcareous, limy, slow streaming yellow cut
- 6630-60** SHALE-100% Medium to dark brown dark gray brown (100%), blocky, earthy, black carbonaceous lens, calcareous, limy, slow streaming yellow cut
- 6660-90** SHALE-100% Medium to dark brown dark gray brown (80%) medium gray (20%), blocky, earthy, black carbonaceous lens, calcareous, limy, slow streaming yellow cut
- 6690-6720** SHALE-100% Light to medium gray (70%) medium to dark brown (30%), blocky to sub platy, earthy to sub waxy, soft to firm, limy, no show
- 6720-50** SHALE-100% Light to medium gray (70%) medium to dark brown (30%), blocky to sub platy, earthy to sub waxy, soft to firm, limy, no show
- 6750-80** SHALE-70% Light to medium gray (80%) medium to dark brown (20%), blocky to sub platy, earthy to sub waxy, soft to firm, limy, no show
- SILTSTONE-20% Light gray tan, arenaceous, argillaceous, firm, dolomitic, no show
- SANDSTONE-10% Tan brown, very fine (lower) grained, sub angular, well sorted, clay matrix, firm, dolomitic cement, no show
- 6780-6810** SHALE-100% Dark brown dark gray brown black (100%), blocky, earthy, black carbonaceous lens, firm, limy, slow streaming yellow cut
- 6810-40** SHALE-100% Medium to dark brown (100%), blocky, earthy, trace calcite filled fractures, soft to firm, calcareous, slow streaming yellow cut
- 6840-70** SHALE-100% Light to medium gray green gray (80%) medium to dark brown (20%), blocky, earthy to sub waxy, firm, calcareous, no show

- 6870-6900** **SHALE-80% Light to medium gray (80%) medium to dark brown (20%), blocky, earthy to sub waxy, firm, calcareous, no show**
- SILTSTONE-20% Light gray white tan, arenaceous, argillaceous, firm, limy, no show**
- 6900-30** **SHALE-80% Light to medium gray (80%) medium to dark brown (20%), blocky, earthy to sub waxy, firm, calcareous, no show**
- SILTSTONE-20% Light gray white tan, arenaceous, argillaceous, firm, limy, no show**
- 6930-60** **SHALE-100% Medium to dark brown (70%) light to medium gray (30%), blocky, earthy, trace calcite filled fractures, soft to firm, limy, slow streaming yellow cut**
- 6960-90** **SHALE-100% Medium to dark brown (60%) light to medium gray (40%), blocky, earthy, trace calcite filled fractures, soft to firm, limy, slow streaming yellow cut**
- 6990-7020** **SHALE-100% Light to medium gray (90%) medium to dark brown (10%), blocky, earthy to sub waxy, firm, limy, no show**
- 7020-50** **SHALE-100% Light to medium gray (100%), blocky, earthy to sub waxy, firm, calcareous, no show**
- 7050-80** **SHALE-70% Light to medium gray (70%) medium to dark brown (30%), blocky, earthy to sub waxy, firm, limy, no show**
- LIMESTONE-30% Medium gray, cryptocrystalline to microcrystalline, chalky in part, argillaceous, marlstone, trace calcite filled fractures, soft to firm, no show**
- 7080-7110** **SHALE-70% Light to medium gray (90%) medium to dark brown (10%), blocky, earthy to sub waxy, firm, limy, no show**
- LIMESTONE-30% Medium gray, cryptocrystalline to microcrystalline, chalky in part, argillaceous, marlstone, trace calcite filled fractures, soft to firm, no show**

- 7110-40** **SHALE-70% Light to medium gray (60%) medium to dark brown (40%), blocky, earthy to sub waxy, firm, limy, no show**
- LIMESTONE-30% Medium gray, cryptocrystalline to microcrystalline, chalky in part, argillaceous, marlstone, trace calcite filled fractures, soft to firm, no show**
- 7140-70** **SHALE-70% Medium to dark brown black (90%) gray (10%), blocky to sub platy, earthy, black carbonaceous lens, soft to firm, limy, no show**
- LIMESTONE-30% Medium gray brown, cryptocrystalline, chalky in part, argillaceous, marlstone, trace calcite filled fractures, soft to firm, no show**
- 7170-7200** **SHALE-70% Light to medium gray (90%) medium to dark brown (10%), blocky, earthy to sub waxy, firm, limy, no show**
- LIMESTONE-30% Light to medium gray, cryptocrystalline, chalky in part, argillaceous, marlstone, trace hairline fractures, soft to firm, no show**
- 7200-30** **SHALE-100% Light to medium gray (90%) medium to dark brown (10%), blocky to sub platy, earthy to sub waxy, soft to firm, limy, no show**
- 7230-60** **SHALE-100% Light to medium gray (90%) medium to dark brown (10%), blocky to sub platy, earthy to sub waxy, soft to firm, limy, no show**
- 7260-90** **SHALE-100% Light to medium gray (90%) medium to dark brown (10%), blocky to sub platy, earthy to sub waxy, soft to firm, limy, no show**
- 7290-7320** **SHALE-100% Light to medium gray (100%), blocky to sub platy, earthy to sub waxy, hairline fractures, soft to firm, limy, no show**
- 7320-50** **SHALE-80% Black dark brown dark gray brown (100%), blocky, carbonaceous, soft to firm, limy in part, milky yellow residual cut**
- LIMESTONE-20% Medium to dark gray, cryptocrystalline, argillaceous, marlstone, firm, no cut**

- 7350-80** SHALE-100% Dark brown black (50%) dark gray (50%), blocky to sub platy, earthy, carbonaceous, hairline fractures, limy, soft to firm milky yellow residual cut
- 7380-7410** SHALE-100% Dark brown black dark gray brown(100%), blocky to sub platy, earthy, carbonaceous, hairline fractures, limy, soft to firm, milky yellow residual cut
- 7410-40** SHALE-100% Dark brown black (100%), blocky to sub platy, earthy, carbonaceous, hairline fractures, limy, milky yellow residual cut
- 7440-70** SHALE-100% Dark brown black (60%) medium gray (40%), blocky to sub platy, earthy, carbonaceous in part, hairline fractures, limy, soft to firm milky yellow residual cut
- 7470-7500** SHALE-100% Light to medium gray (80%) dark brown black (20%), blocky to sub platy, earthy, trace hairline fractures, soft, limy, no cut
- 7500-30** SHALE-90% Light to medium gray (80%) dark brown black (20%), blocky to sub platy, earthy, trace hairline fractures, soft, limy, no cut
- LIMESTONE-10% Light to medium gray, cryptocrystalline, argillaceous, soft to firm, no show
- 7530-60** SHALE-100% Light to medium gray (50%) dark brown black (50%), blocky to sub platy, earthy, carbonaceous in part, trace pyrite, soft, limy, slow milky yellow cut
- 7560-90** SHALE-80% Light to medium gray (50%) dark brown black (50%), blocky to sub platy, earthy, carbonaceous in part, trace pyrite, soft, limy, slow milky yellow cut
- SILTSTONE-20% Light gray, arenaceous, argillaceous, firm, limy, no show

- 7590-7620** **SHALE-50%** Light to medium gray (50%) dark brown black (50%), blocky to sub platy, earthy, carbonaceous in part, trace pyrite, soft, limy, no show
- SILTSTONE-40%** Light gray, arenaceous, argillaceous, firm, limy, slow milky yellow cut
- SANDSTONE-10%** Gray white, very fine (lower) grained, sub rounded, well sorted, clay matrix, argillaceous, tight, friable, calcareous cement, no show
- 7620-50** **SHALE-50%** Medium to dark gray black (50%) dark brown (50%), blocky to sub platy, earthy, carbonaceous in part, trace pyrite, soft, limy, no show
- SILTSTONE-40%** Light gray, arenaceous, argillaceous, firm, limy, slow milky yellow cut
- SANDSTONE-10%** Gray white, very fine (lower) grained, sub rounded, well sorted, clay matrix, argillaceous, tight, friable, calcareous cement, no show
- 7650-80** **SHALE-100%** Medium to dark gray black (80%) dark brown (20%), blocky to sub platy, earthy, carbonaceous in part, soft, limy, no show
- 7680-7710** **SHALE-100%** Medium to dark gray black (80%) dark brown (20%), blocky to sub platy, earthy, carbonaceous in part, soft, limy, no show
- 7710-40** **SHALE-100%** Medium to dark gray black (80%) dark brown (20%), blocky to sub platy, earthy, carbonaceous in part, silty in part, soft, limy, no show
- 7740-70** **SHALE-100%** Light to medium gray (80%) brown (20%), blocky to platy, earthy, silty in part, soft, limy, no show
- 7770-7800** **SHALE-100%** Light to medium gray (80%) brown (20%), blocky to platy, earthy, silty in part, trace pyrite, soft, limy, no show

- 7800-30** **SHALE-40%** Light to dark gray (100%), blocky to sub platy, earthy to sub waxy, silty in part, firm, calcareous, no show
- SILTSTONE-40%** Gray gray brown, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-20%** White light gray, very fine (lower) grained, sub rounded, well sorted, white clay matrix, friable, tight, calcareous cement, no show
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- 7830-60** **SHALE-40%** Light to dark gray (100%), blocky to sub platy, earthy to sub waxy, silty in part, firm, calcareous, no show
- SILTSTONE-40%** Gray gray brown, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-20%** White light gray, very fine (lower) grained, sub rounded, well sorted, white clay matrix, friable, tight, calcareous cement, no show
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- 7860-90** **SHALE-40%** Light to medium gray (100%), blocky to sub platy, earthy, silty in part, firm, calcareous, no show
- SILTSTONE-40%** Light gray, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-20%** Light gray, very fine (lower) grained, sub rounded, well sorted, white clay matrix, friable, tight, calcareous cement, no show
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- 7890-7920** **SHALE-40%** Light to dark gray (100%), blocky to sub platy, earthy, silty in part, firm, calcareous, no show
- SILTSTONE-40%** Light gray, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-20%** Light gray white, very fine (lower) grained, sub rounded, well sorted, white clay matrix, friable, tight, calcareous cement, no show

- 7920-50** **SHALE-40%** Light to dark gray (100%), blocky to sub platy, earthy, silty in part, firm, calcareous, no show
- SILTSTONE-50%** Light gray, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-10%** Light gray white, very fine (lower) grained, sub rounded, well sorted, white clay matrix, friable, tight, calcareous cement, no show
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- 7950-80** **SHALE-90%** Dark brown black (80%) light to medium gray (20%) blocky, earthy, carbonaceous, soft, limy, slow residual yellow cut
- SILTSTONE-10%** Light gray, arenaceous, argillaceous, friable, calcareous, no show
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- 7980-8010** **SHALE-70%** Dark brown black (70%) light to medium gray (30%) blocky, earthy, carbonaceous, soft, limy, slow residual yellow cut
- SILTSTONE-30%** Light gray, arenaceous, argillaceous, friable, calcareous, no show
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- 8010-40** **SHALE-60%** Light to medium gray (100%) blocky, earthy to sub waxy, silt in part, soft, calcareous, no show
- SILTSTONE-30%** Light to medium gray, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-10%** White light gray, very fine (lower) grained, sub rounded, well sorted, clay matrix, tight, friable, no show
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- 8040-70** **SHALE-70%** Light to medium gray (100%) blocky to sub platy, earthy to sub waxy, silt in part, firm, calcareous, no show
- SILTSTONE-30%** Light to medium gray, arenaceous, argillaceous, friable, calcareous, no show

- 8070-8100** **SHALE-80% Light to medium gray (80%) black (20%) blocky to sub platy, earthy to sub waxy, silt in part, firm, calcareous, no show**
- SILTSTONE-30% Light to medium gray, arenaceous, argillaceous, friable, calcareous, no show**
- 8100-30** **SHALE-80% Light to dark gray (70%) gray brown black (20%) blocky to sub platy, earthy to sub waxy, silt in part, firm, calcareous, no show**
- SILTSTONE-20% Light to medium gray, arenaceous, argillaceous, friable, calcareous, no show**
- 8130-60** **SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**
- 8160-90** **SHALE-100% Dark brown dark gray brown black (80%) light to medium gray, blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**
- 8190-8220** **SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**
- 8220-50** **SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**
- 8250-80** **SHALE-100% Dark brown dark gray brown black (70%) light to medium gray, blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**
- 8280-8310** **SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**
- 8310-40** **SHALE-100% Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut**

- 8340-70** **SHALE-70%** Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut
- LIMESTONE-30%** Dark gray brown black, cryptocrystalline, argillaceous, marlstone, soft, weak yellow residual cut
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- 8370-8400** **SHALE-30%** Dark brown dark gray brown black (100%), blocky to sub platy, earthy, very carbonaceous, soft, limy, slow milky yellow cut
- SILTSTONE-10%** Light gray, arenaceous, argillaceous, firm, limy, no show
- LIMESTONE-60%** Dark gray brown black, cryptocrystalline, argillaceous, marlstone, firm, yellow residual cut
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- 8400-30** **SHALE-40%** Light to medium gray dark gray (100%), blocky, earthy, calcareous, no show
- LIMESTONE-10%** Dark gray brown black, cryptocrystalline, argillaceous, marlstone, soft, weak yellow residual cut
- SANDSTONE-50%** Gray white, very fine (lower) to fine (lower) grained, sub rounded, well sorted, white clay matrix, poor visible porosity, calcareous cement, no show
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- 8430-60** **SHALE-40%** Light to medium gray dark gray (100%), blocky, earthy, calcareous, no show
- SANDSTONE-60%** Gray white, very fine (lower) to fine (lower) grained, sub rounded, well sorted, white clay matrix, poor visible porosity, calcareous cement, no show
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- 8460-90** **SHALE-40%** Light to medium gray dark gray (100%), blocky, earthy, calcareous, no show
- SILTSTONE-20%** Gray, arenaceous, argillaceous, firm, no show
- SANDSTONE-40%** Gray white, very fine (lower) to fine (lower) grained, sub rounded, well sorted, white clay matrix, poor visible porosity, calcareous cement, no show

- 8490-8520** SHALE-40% Dark gray brown dark brown black (90%) light to medium gray (10%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-60% Dark gray brown black, cryptocrystalline, argillaceous, marlstone, soft, weak milky yellow cut
- 8520-50** SHALE-60% Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-40% Dark gray brown black, cryptocrystalline, argillaceous, marlstone, soft, weak milky yellow cut
- 8550-80** SHALE-20% Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-80% Dark gray brown dark brown black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8580-8610** SHALE-20% Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-80% Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8610-40** SHALE-20% Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-80% Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8640-70** SHALE-20% Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-80% Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut

- 8670-8700** **SHALE-40%** Dark gray brown dark brown black (100%), blocky, earthy, carbonaceous, trace hairline fractures, soft, limy, yellow residual cut
- LIMESTONE-80%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8700-30** **SHALE-40%** Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-60%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8730-60** **SHALE-20%** Dark gray brown black(100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-80%** Dark gray brown dark brown black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8760-90** **SHALE-30%** Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-70%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8790-8820** **SHALE-30%** Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-70%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
- 8820-50** **SHALE-30%** Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-70%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut

- 8850-80** **SHALE-20%** Gray brown dark gray (100%), blocky, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-80%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
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- 8880-8900** **SHALE-20%** Dark gray brown dark brown black (100%), blocky to sub platy, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-70%** Dark gray brown dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
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- 8900-30** **SHALE-20%** Dark gray brown dark brown black (100%), blocky to sub platy, earthy, carbonaceous, soft, limy, yellow residual cut
- LIMESTONE-70%** Dark gray brown medium to dark gray black, cryptocrystalline, argillaceous, marlstone, carbonaceous, hairline fractures, soft, weak milky yellow cut
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- 8930-60** **SANDSTONE-70%** Gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, very calcareous cement, no show
- LIMESTONE-30%** Dark gray brown medium to dark gray black, cryptocrystalline, chalky, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut
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- 8960-90** **SANDSTONE-10%** Gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, very calcareous cement, no show
- LIMESTONE-90%** Dark brown dark gray brown black, cryptocrystalline, chalky, argillaceous, marlstone, carbonaceous, soft, weak milky yellow cut

- 8990-9020** **SH-20%** Dark brown dark gray brown black, blocky, earthy, carbonaceous, soft, limy, no show
- SANDSTONE-10%** Gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, very calcareous cement, no show
- LIMESTONE-70%** Dark brown dark gray brown black, cryptocrystalline, chalky, argillaceous, marlstone, carbonaceous, soft, no show
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- 9020-50** **SH-20%** Dark brown dark gray brown black, blocky, earthy, carbonaceous, soft, limy, no show
- SANDSTONE-10%** Gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, very calcareous cement, no show
- LIMESTONE-70%** Dark brown dark gray brown black, cryptocrystalline, chalky, argillaceous, marlstone, carbonaceous, soft, no show
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- 9050-80** **SH-20%** Dark brown dark gray brown black, blocky, earthy, carbonaceous, soft, limy, no show
- SANDSTONE-30%** White salt and pepper, very fine (lower) to fine (lower) grained, sub angular, well sorted, white clay matrix, carbonaceous inclusions, poor visible porosity, very calcareous cement, no show
- LIMESTONE-50%** Dark brown dark gray brown black, cryptocrystalline, chalky, argillaceous, marlstone, carbonaceous, soft, no show
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- 9080-9110** **SH-30%** Dark brown dark gray brown black, blocky, earthy, carbonaceous, soft, limy, no show
- SANDSTONE-10%** Gray white salt and pepper, very fine (lower) to fine (upper) grained, sub angular, moderately sorted, clay matrix, carbonaceous inclusions, poor visible porosity, very calcareous cement, no show
- LIMESTONE-60%** Dark brown dark gray brown black, cryptocrystalline, chalky, argillaceous, marlstone, carbonaceous, soft, no show

- 9110-40** **SHALE-30%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- LIMESTONE-70%** Dark brown dark gray brown, cryptocrystalline, chalky in part, argillaceous, marlstone, soft, no show
- 9140-70** **SHALE-10%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-50%** White light gray, very fine(lower) to fine(lower) grained, sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no visible porosity, no show
- LIMESTONE-40%** Dark brown dark gray brown, cryptocrystalline, chalky in part, argillaceous, marlstone, soft, no show
- 9170-9200** **CLAYSTONE-** Light gray, blocky, chalky, very soft, limy
- SHALE-30%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-30%** White light gray, very fine(lower) to fine(lower) grained, sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no visible porosity, no show
- LIMESTONE-20%** Dark brown dark gray brown, cryptocrystalline, chalky in part, argillaceous, marlstone, soft, no show
- 9200-30** **SHALE-50%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-20%** White light gray, very fine(lower) to fine(lower) grained, sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no visible porosity, no show
- LIMESTONE-30%** Dark brown dark gray brown, cryptocrystalline, argillaceous, trace hairline fractures, soft, no show

- 9230-60** **SHALE-60%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-10%** White light gray, very fine(lower) to fine(lower) grained, sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no visible porosity, no show
- LIMESTONE-30%** Dark brown dark gray brown, cryptocrystalline, argillaceous, trace hairline fractures, soft, no show
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- 9260-90** **SHALE-50%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-20%** White light gray, very fine(lower) to fine(lower) grained, sub rounded, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, no visible porosity, no show
- LIMESTONE-30%** Dark brown dark gray brown, cryptocrystalline, argillaceous, trace hairline fractures, soft, no show
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- 9290-9320** **SHALE-20%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-10%** Dark brown dark gray brown, cryptocrystalline, argillaceous, trace hairline fractures, soft, no show
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- 9320-50** **SHALE-30%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-60%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-10%** Dark brown dark gray brown, cryptocrystalline, argillaceous, trace hairline fractures, soft, no show

- 9350-80** **SHALE-20%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-10%** Dark brown dark gray brown, cryptocrystalline, argillaceous, trace hairline fractures, soft, no show
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- 9380-9410** **SHALE-20%** Light to medium gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- LIMESTONE-80%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, trace fossils, calcite filled fractures, soft to firm, no show
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- 9410-40** **SHALE-10%** Light to medium gray green gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-50%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-40%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, trace fossils, calcite filled fractures, soft to firm, no show
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- 9440-70** **SHALE-10%** Light to medium gray green gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-10%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-80%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, carbonaceous, soft to firm, no show

- 9470-9500** **SHALE-10%** Light to medium gray green gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-70%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, carbonaceous, soft to firm, no show
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- 9500-30** **SHALE-20%** Light to medium gray green gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-50%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-30%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, carbonaceous, soft to firm, no show
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- 9530-60** **SHALE-10%** Light to medium gray green gray (100%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-20%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, carbonaceous, soft to firm, no show
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- 9560-90** **SHALE-20%** Light to medium gray (80%) red brown purple (20%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-10%** Dark brown dark gray brown black, cryptocrystalline to microcrystalline, argillaceous, carbonaceous, soft to firm, no show

- 9590-9620** **SHALE-30%** Variegated light to medium gray (70%) red brown purple maroon (30%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-70%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 9620-50** **SHALE-40%** Variegated light to medium gray (50%) red brown purple maroon (50%), blocky, sub waxy to earthy, soft, limy, no show
- SILTSTONE- 10%** Red brown, arenaceous, argillaceous, soft, limy
- SANDSTONE-50%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 9650-80** **SHALE-50%** Variegated light to dark gray (50%) red brown green maroon (50%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-50%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 9680-9710** **SHALE-50%** Variegated light to dark gray (50%) red brown green maroon (50%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-40%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-10%** Dark gray brown gray, cryptocrystalline to microcrystalline, argillaceous, trace calcite filled fractures, firm, no show

- 9710-40** **SHALE-30%** Variegated light to dark gray (50%) red brown green maroon (50%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-50%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-20%** Dark gray brown gray, cryptocrystalline to microcrystalline, argillaceous, trace calcite filled fractures, trace fossils, firm, no show
- 9740-70** **SHALE-20%** Variegated light to dark gray (50%) red brown green maroon (50%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-70%** White gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, moderately sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-10%** Dark gray brown gray, cryptocrystalline to microcrystalline, argillaceous, trace calcite filled fractures, firm, no show
- 9770-9800** **CLAYSTONE-10%** White light gray, chalky, very soft, limy
- SHALE-60%** Variegated light to dark gray (80%) red brown green (20%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 9800-30** **SHALE-60%** Variegated light to dark gray (80%) red brown green (20%), blocky, sub waxy to earthy, soft, limy, no show
- SANDSTONE-40%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show

- 9830-60** **SHALE-50%** Variegated red brown purple (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, limy
- SILTSTONE-20%** Red brown brown, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
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- 9860-90** **SHALE-60%** Variegated red brown purple maroon (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, limy
- SILTSTONE-10%** Red brown brown, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
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- 9890-9920** **SHALE-60%** Variegated red brown purple maroon (40%) light to medium gray green gray(60%), blocky, earthy, silty in part, soft, limy
- SANDSTONE-40%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
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- 9920-50** **SHALE-60%** Variegated red brown purple maroon (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, limy
- SILTSTONE-10%** Red brown brown, arenaceous, argillaceous, friable, calcareous, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show

- 9950-80** **SHALE-70%** Variegated red brown maroon (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 9980-10010** **SHALE-80%** Variegated red brown maroon (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 10010-40** **SHALE-80%** Variegated red brown orange (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 10040-70** **SHALE-20%** Variegated red brown orange (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, calcareous
- SILTSTONE-10%** Gray red brown, arenaceous, argillaceous, friable, calcareous
- SANDSTONE-70%** Gray white salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, micaceous, friable, calcareous cement, poor visible porosity, no show
- 10070-10100** **SHALE-20%** Variegated red brown orange (60%) light to medium gray (40%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-70%** Gray white salt and pepper, very fine(lower) to fine(upper) grained, sub angular, well sorted, carbonaceous and chlorite inclusions, white clay matrix, micaceous, friable, calcareous cement, poor visible porosity, no show

- 10100-30** **SHALE-20%** Light to medium gray (80%) red brown (20%), blocky, earthy, silty in part, soft, calcareous
- SILTSTONE-50%** Light gray , arenaceous, argillaceous, friable, calcareous
- SANDSTONE-30%** Gray white salt and pepper, very fine(lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, micaceous, friable, calcareous cement, poor visible porosity, no show
- 10130-60** **SHALE-70%** Light to medium gray (80%) red brown (20%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-30%** Gray white salt and pepper, very fine(lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, micaceous, friable, calcareous cement, poor visible porosity, no show
- 10160-90** **SHALE-20%** Light to medium gray (80%) red brown (20%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-80%** Translucent white light gray salt and pepper, very fine(lower) to medium (lower) grained, sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, , friable, unconsolidated in part, calcareous cement, fair porosity, no show
- 10190-10220** **SHALE-80%** Light to medium gray (40%) red brown maroon brown (60%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to medium (lower) grained, sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, , friable, unconsolidated in part, calcareous cement, fair porosity, no show
- 10220-50** **SHALE-80%** Light to medium gray (70%) red brown maroon brown (30%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to medium (lower) grained, sub angular, moderately sorted, carbonaceous inclusions, white clay matrix, , friable, unconsolidated in part, calcareous cement, fair porosity, no show

- 10250-80** **SHALE-50%** Light to medium gray (80%) red brown maroon brown (20%), blocky, earthy, silty in part, soft, calcareous
- SILTSTONE-10%** Light gray, arenaceous, argillaceous, soft, calc, no show
- SANDSTONE-40%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10280-310** **CLAYSTONE- 10%** Light gray white, chalky, very soft-gummy, limy
- SHALE-60%** Light to medium gray (80%) red brown maroon brown (20%), blocky, earthy, silty in part, soft, calcareous
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10310-40** **SHALE-80%** Light to dark gray (80%) red brown maroon brown (20%), blocky, earthy to sub waxy, soft, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10340-70** **SHALE-90%** Light to dark gray (80%) red brown maroon brown (20%), blocky, earthy to sub waxy, soft, limy
- SANDSTONE-10%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10370-400** **SHALE-80%** Light to medium gray (90%) red brown maroon brown (10%), blocky, earthy to sub waxy, silty in part, soft, calcareous
- SILTSTONE-20%** Light gray, arenaceous, argillaceous, soft, limy, no show

- 10400-30** **SHALE-80%** Light to medium gray (90%) red brown maroon brown (10%), blocky, earthy to sub waxy, silty in part, soft, calcareous
- SILTSTONE-20%** Light gray, arenaceous, argillaceous, soft, limy, no show
-
- 10430-60** **SHALE-60%** Light to medium gray (100%), blocky, earthy to sub waxy, silty in part, soft, limy
- SILTSTONE-20%** Light gray, arenaceous, argillaceous, soft, limy, no show
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
-
- 10460-90** **SHALE-80%** Light to medium gray (100%), blocky, earthy to sub waxy, silty in part, soft, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
-
- 10490-520** **SHALE-70%** Light to medium gray (90%) red brown maroon brown (10%), blocky, earthy to sub waxy, silty in part, soft, limy
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
-
- 10520-50** **SHALE-60%** Light to medium gray (100%), blocky, earthy to sub waxy, silty in part, soft, limy
- SILTSTONE-10%** Light to medium gray, arenaceous, argillaceous, soft, limy, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show

- 10550-80** **CLAYSTONE-10%** Light gray white tan, chalky, very soft, limy
- SHALE-70%** Light to medium gray (90%) red brown maroon brown (10%), blocky, earthy to sub waxy, silty in part, soft, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10580-610** **SHALE-40%** Light to medium gray (90%) red brown maroon brown (10%), blocky, earthy to sub waxy, silty in part, soft, limy
- SANDSTONE-40%** White tan, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-20%** Brown gray brown, microcrystalline, arenaceous, fossiliferous, soft, no show
- 10610-40** **SHALE-70%** Light to medium gray (100%), blocky, earthy to sub waxy, silty in part, soft, limy
- SILTSTONE-30%** Light to medium gray, arenaceous, argillaceous, soft, limy, no show
- 10640-70** **SHALE-60%** Light to medium gray (90%) red brown maroon brown (10%), blocky, earthy to sub waxy, silty in part, soft, limy
- SANDSTONE-20%** White tan, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-20%** Brown gray brown, cryptocrystalline to microcrystalline, arenaceous, fossiliferous, soft, no show

- 10670-700** **SHALE-60%** Light to medium gray (100%), blocky, earthy to sub waxy, silty in part, soft, limy
- SILTSTONE-10%** Light to medium gray, arenaceous, argillaceous, soft, limy, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10700-30** **SHALE-60%** Light to medium gray (100%), blocky, silty in part, firm, limy
- SILTSTONE-30%** Light to medium gray, arenaceous, argillaceous, soft to firm, limy, no show
- SANDSTONE-10%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10730-60** **SHALE-60%** Light to medium gray (100%), blocky, silty in part, firm, limy
- SILTSTONE-10%** Light to medium gray, arenaceous, argillaceous, soft to firm, limy, no show
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10760-90** **SHALE-60%** Light to medium gray (100%), blocky, silty in part, firm, limy
- SANDSTONE-40%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show

- 10790-820** **SHALE-70%** Light to medium gray (100%), blocky, silty in part, firm, limy
- SILTSTONE-10%** Light to medium gray, arenaceous, argillaceous, soft to firm, limy, no show
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
-
- 10820-50** **SHALE-70%** Light to medium gray green gray (100%), blocky, silty in part, firm, limy
- SILTSTONE-10%** Light to medium gray, arenaceous, argillaceous, soft to firm, limy, no show
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
-
- 10850-80** **SHALE-70%** Light to medium gray green gray (100%), blocky, silty in part, firm, limy
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
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- 10880-910** **SHALE-80%** Light to medium gray green gray (100%), blocky, silty in part, firm, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
-
- 10910-40** **SHALE-80%** Light to medium gray green gray (100%), blocky, silty in part, firm, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show

- 10940-70** **SHALE-80%** Light to medium gray green gray (100%), blocky, silty in part, firm, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 10970-11000** **SHALE-80%** Light to medium gray gray brown (100%), blocky, silty in part, firm, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 11000-30** **SHALE-80%** Light to medium gray gray brown (100%), blocky, silty in part, firm, limy
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 11030-60** **SHALE-60%** Light to dark gray gray brown (100%), blocky, silty in part, firm, limy
- SANDSTONE-10%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-20%** Gray brown dark gray, microcrystalline, argillaceous, hairline fractures, firm, no show
- 11060-90** **SHALE-60%** Medium to dark gray black (100%), blocky, silty, carbonaceous in part, firm, limy
- SILTSTONE-20%** Gray brown, arenaceous, argillaceous, soft, limy, no show
- SANDSTONE-20%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show

- 11090-120** **SHALE-50%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-30%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-20%** Gray brown dark gray, microcrystalline, argillaceous, hairline fractures, firm, no show
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- 11120-50** **SHALE-60%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-10%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-30%** Dark brown dark gray, cryptocrystalline to microcrystalline, chalky in part, argillaceous, hairline fractures, soft to firm, no show
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- 11150-80** **SHALE-60%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-10%** White light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- LIMESTONE-30%** Dark brown dark gray, cryptocrystalline to microcrystalline, chalky in part, argillaceous, calcite filled fractures, soft to firm, no show
-
- 11180-210** **SHALE-40%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-50%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- LIMESTONE-10%** Dark brown dark gray, cryptocrystalline to microcrystalline, chalky in part, argillaceous, hairline fractures, soft to firm, no show

- 11210-40** **SHALE-80%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-20%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11240-70** **SHALE-80%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-20%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11270-300** **SHALE-80%** Dark gray dark gray brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-20%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11300-30** **SHALE-80%** Light to medium gray (80%) occasional dark gray brown black(20%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-20%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11330-60** **SHALE-90%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-10%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone

- 11360-90** **SHALE-90%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy,
Trace COAL, black, vitreous, conchoidal fracturing, brittle
- SANDSTONE-10%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11390-420** **SHALE-90%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-10%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11420-50** **SHALE-90%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- LIMESTONE**-Dark gray brown, microcrystalline,, argillaceous, hairline fractures, firm, no show
- SANDSTONE-10%** Light gray salt and pepper, very fine(lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show grading to Siltstone
- 11450-80** **SHALE-80%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-20%** Light gray salt and pepper, very fine(lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, , friable, calcareous cement, poor visible porosity, no show
- 11480-510** **SHALE-80%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-20%** Light gray salt and pepper, very fine (lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show

- 11510-40** **SHALE-70%** Dark gray dark brown black (100%), blocky, earthy, carbonaceous, silty in part, firm, limy
- SANDSTONE-30%** Light gray salt and pepper, very fine(lower) to fine (upper) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 11540-70** **SHALE-60%** Medium to dark gray black (100%), blocky, earthy, carbonaceous in part, silty in part, firm, limy
- SANDSTONE-40%** Light gray white salt and pepper, very fine(lower) to fine (lower) grained, sub angular, well sorted, carbonaceous inclusions, white clay matrix, friable, calcareous cement, poor visible porosity, no show
- 11570-11602** **SHALE-50%** Medium to dark gray black (100%), blocky, earthy, carbonaceous in part, silty in part, firm, limy
- SANDSTONE-50%** White clear salt and pepper, very fine (lower) to medium (lower) grained, sub angular, well sorted, carbonaceous inclusions, unconsolidated in part, occasional white clay matrix, friable, calcareous cement, fair visible porosity, no show

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 14, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5104'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5130'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 3000 Progress: 0 Operations: TIH
NB #2 8 3/4",
Bit #1 drilled 2498' in 43.5 hrs

Mud Ck 9753 Wt 11.8 Vis 39 PV 14 YP 10 PH 8.0 F 6.8 Chl 44000

Survey at 9674 deg 1.5 azm 175.1

Formation:Green River

24 Hr. Lithology: SH, LS, SS, Sltst, Clyst
 Sample Quality: Fair

Smpl @ 9740 90% NO NEW SMPLS

Mud Gas TG Gas 7530 Mud Wt in 11.8 Mud Wt out 11.8 No Flare
Conn Gas na Mud Wt in Mud Wt out No Flare
BG 255 Mud Wt in 11.8 Mud Wt out 11.8...No Flare
FG Mud Wt in Mud Wt out No Flare

SHOW

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 15, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5104'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5130'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 3191 Progress: 191 Operations: Drilling
NB #2 8 3/4", Ulterra, MS1666, PDC, no motor
Bit #1 drilled 2498' in 43.5 hrs

Mud Ck 3000 Wt 9.6 Vis 45 PV 14 YP 13 PH 8.0 F 32.0 Chl 22000

Survey at 3000 deg .3 azm

Formation:Green River

24 Hr. Lithology: SH, SS
 Sample Quality: Fair

Smpl @ 3090 70% SH-lt-m gy mar rdbrn, blk, rthy-sbwxy, sft, non calc 30% SS-wh lt gy s&p, vf(l)gr, sbrnd, w srt, cly mtx, tt, fri, calc cmt, no show

Mud Gas	TG Gas	nil	Mud Wt in	9.6	Mud Wt out	9.6	No	Flare
	Conn Gas	nil	Mud Wt in		Mud Wt out		No	Flare
	BG	25	Mud Wt in	9.6	Mud Wt out	9.6	No	Flare
	FG		Mud Wt in		Mud Wt out		No	Flare

SHOW

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 16, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5104'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5130'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 4191 Progress: 1000 Operations: Drilling
NB #2 8 3/4", Ulterra, MS1666, PDC, no motor
Bit #1 drilled 2498' in 43.5 hrs

Mud Ck 3699 Wt 10.1 Vis 37 PV 8 YP 11 PH 9.8 F 28.4 Chl 36000

Survey at 3824 deg .3 azm 158.5

Formation:Green River

24 Hr. Lithology: SH, SS
 Sample Quality: Fair

Smpl @ 4140 100% SH-gy brn gy (100%), blk, rthy, sft, lmy,no show

Mud Gas	TG Gas	nil	Mud Wt in	Mud Wt out	No	Flare
	Conn Gas	97	Mud Wt in 10.0	Mud Wt out 9.8	No	Flare
	BG	75	Mud Wt in 10.2	Mud Wt out 10.2	No	Flare
	FG	587	Mud Wt in 10.1	Mud Wt out 9.8	No	Flare

SHOW

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 17, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5104'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5130'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 4797 Progress: 606 Operations: Drilling
NB #3 8 3/4", Smith,MSI 1616, PDC, mud motor in at 4674
Bit #2 drilled 1674' in 31 hrs

Mud Ck 4674 Wt 9.8 Vis 47 PV 11 YP 12 PH 8.5 F 14.0 Chl 40000

Survey at 4736 deg 1.6 azm 189.6

Formation:Green River T/ GR 1 @ 3900

24 Hr. Lithology: SH, LS
 Sample Quality: Fair

Smpl @ 4710 100% SH-m-dk brn (100%), blk, rthy,occ shell frags, frm, lmy,blk asph oil in smpl

Mud Gas	TG Gas	na	Mud Wt in	Mud Wt out	No	Flare
	Conn Gas	384	Mud Wt in 10.0	Mud Wt out 9.8	No	Flare
	BG	60	Mud Wt in 10.0	Mud Wt out 9.8	No	Flare
	FG	140	Mud Wt in 10.1	Mud Wt out 9.8	No	Flare

SHOW

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 18, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103' correction
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129' resurveyed -1'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

6:00a.m. Depth 5557 Progress: 760 Operations: Drilling
NB #3 8 3/4", Smith, MSI 1616, PDC, mud motor in at 4674
Bit #2 drilled 1674' in 31 hrs

Mud Ck 5111 Wt 9.9 Vis 38 PV 10 YP 13 PH 8.3 F 8.8 Chl 44000

Survey at 5215 deg 1.8 azm 186.4

Formation: Green River T/ GR 1 @ 3900

24 Hr. Lithology: SH, LS, SLTST

Sample Quality: Fair

Smpl @ 5490 100% SH-m-dk brn (100%), blk-y-sbply, rthy, frm, lmy, sl strmg yel cut

Mud Gas	TG Gas	na	Mud Wt in	Mud Wt out	No	Flare
	Conn Gas	268	Mud Wt in 10.0	Mud Wt out 9.8	No	Flare
	BG	150	Mud Wt in 10.0	Mud Wt out 9.8	No	Flare
	FG	200	Mud Wt in 10.1	Mud Wt out 9.8	No	Flare

SHOW

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

Note : Resurveyed corrected GL and KB 1 foot

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 19, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

6:00a.m. Depth 6034 Progress: 477 Operations: Circ BU for Trip NB #4 8 3/4", Ulterra,MSI, PDC, mud motor in at 5971 Bit #3 drilled 1297' in 35.5 hrs

Mud Ck 5742 Wt 9.8 Vis 34 PV 12 YP 6 PH 8.0 F 8.2 Chl 40000

Survey at 5936 deg 1.8 azm 154.5

Formation:Green River T/ GR 1 @ 3950, GR2 @ 5437 Smith @ 5557, Mahogany Bench @ 5632

24 Hr. Lithology: SH, LS, SS
Sample Quality: Fair

Smpl @ 5970 100% SH-m-dk brn (100%), blk-y-sbply, rthy, frm, lmy, mlky yel resid cut

Mud Gas	TG Gas	na	Mud Wt in	Mud Wt out	No	Flare
	Conn Gas	10.0	Mud Wt in 9.9	Mud Wt out 9.8	No	Flare
	BG	55	Mud Wt in 10.0	Mud Wt out 9.8	No	Flare
	FG	1115	Mud Wt in 9.9	Mud Wt out 9.8	No	Flare

SHOW 1

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith
5754-5766	12	.6-.9-1	1115	no	9.9/ 9.8	frac	Spty gldy el		SH-dk brn dk gybn blk, blk-y-plty., frm, tr calc fld frac, immnd strmg yel cut

NOTE: 63 foot depth correction up hole at Trip 6034 to 5971

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 20, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

6:00a.m. Depth 6468 Progress: 497 Operations: Drilling
NB #4 8 3/4", Ulterra,MSI, PDC, mud motor in at 5971
Bit #3 drilled 1297' in 43 hrs

Mud Ck 5971 Wt 9.9 Vis 34 PV 11 YP 5 PH 8.4 F 6.6 Chl 40000

Survey at 6324 deg 1.5 azm 164.4

Formation:Green River T/ GR 1 @ 3950, GR2 @ 5437 Smith @ 5557, Mahogany Bench @ 5632

24 Hr. Lithology: SH, LS, SS
 Sample Quality: Fair

Smpl @ 5970 100% SH-m-dk brn (70%) m-dk gy(30%), blk-y-sbplty, rthy, frm, lmy, mlky yel resid cut

Mud Gas	TG Gas	435	Mud Wt in	10.0	Mud Wt out	9.9	No	Flare
	Conn Gas	257	Mud Wt in	9.9	Mud Wt out	9.8	No	Flare
	BG	120	Mud Wt in	10.0	Mud Wt out	9.8	No	Flare
	FG		Mud Wt in	9.9	Mud Wt out	9.8	No	Flare

SHOW 1

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

NOTE: 63 foot depth correction up hole at Trip 6034 to 5971

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 21, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

6:00a.m. Depth 7294 Progress: 826 Operations: Drilling

**NB #4 8 3/4", Ulterra,MSI, PDC, mud motor in at 5971
Bit #3 drilled 1297' in 43 hrs**

Mud Ck 6752 Wt 10.0 Vis 38 PV 10 YP 9 PH 8.7 F 6.2 Chl 41000

Survey at 7173 deg 1.8 azm 173.4

Formation:Green River T/ GR 1 @ 3950, GR2 @ 5437 Smith @ 5557, Mahogany Bench @ 5632, DJ Marker @ 5924, DJ1 @ 6224, J Marker @ 6526, H or GR3 @ 6810

24 Hr. Lithology: SH, LS, SS
Sample Quality: Fair

**Smpl @ 7200 70% SH-lt-m gy (90%) m-dk brn (10%), blk-y-sbplty, rthysbwxy, frm, lmy, nocut
LS-30% lt-m gy, crpxln, arg, mrlstn, tr hairline fracs, no show**

Mud Gas	TG Gas	na	Mud Wt in 10.0	Mud Wt out 9.9	No	Flare
	Conn Gas	290	Mud Wt in 10.0	Mud Wt out 10.0	No	Flare
	BG	100	Mud Wt in 10.0	Mud Wt out 10.0	No	Flare
	FG		Mud Wt in 9.9	Mud Wt out 9.8	No	Flare

SHOW 1

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

NOTE: 63 foot depth correction up hole at Trip 6034 to 5971

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 22, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 7294 Progress: 501 Operations: TOH

NB #4 8 3/4", Ulterra,MSI, PDC, mud motor in at 5971
Bit #4 drilled 1824' in 56 hrs

Mud Ck 7451 Wt 10.0 Vis 38 PV 12 YP 10 PH 8.7 F 5.0 Chl 40000

Survey at 7739 deg 2.8 azm 173.9

Formation:Green River T/ GR 1 @ 3950, GR2 @ 5437 Smith @ 5557, Mahogany Bench @ 5632, DJ Marker @ 5924, DJ1 @ 6224, J Marker @ 6526, H or GR3 @ 6798 **HI @ 6964 I @ 7336**

24 Hr. Lithology: SH, LS, SS

Sample Quality: Fair

Smpl @ 7200 100% SH-lt-m gy (90%) m-dk brn (10%), blk-y-sbplty, rthysbwxy, frm, lmy,
 nocut

Mud Gas	TG Gas	na	Mud Wt in 10.0	Mud Wt out 9.9	No	Flare
	Conn Gas	320	Mud Wt in 10.0	Mud Wt out 10.0	No	Flare
	BG	80	Mud Wt in 10.0	Mud Wt out 10.0	No	Flare
	FG		Mud Wt in 9.9	Mud Wt out 9.8	No	Flare

SHOW 1

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 23, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 8655 Progress: 860 Operations: Drilling

NB #5 8 3/4", Reed, E1100-B1, PDC, mud motor in at 7295
Bit #4 drilled 1824' in 56 hrs

Mud Ck 7968 Wt 10.0 Vis 40 PV 12 YP 10 PH 8.7 F 5.0 Chl 40000

Survey at 8396 deg 2.1 azm 174.1

Formation: Green River T/ HI @ 6964 I @ 7336, I @ 7336, K Marker @ 7662, CP 70 Castle Pk @ 8286, CP80 3Finger Lime @ 8364, Bar F @ 8388

24 Hr. Lithology: SH, LS, SS
 Sample Quality: Fair

Smpl @ 8460 40% SH-lt-m gy (100%), blk-y-sbply, rthy-sbwxy, frm, lmy, nocut
60% SS-gy wh, vf(1)-f(1) gr, sbrnd, w srt, cly mts, tt, calc cmt, no show

Mud Gas	TG Gas	1517	Mud Wt in	10.1	Mud Wt out	10.0	No	Flare
	Conn Gas	156	Mud Wt in	10.0	Mud Wt out	10.0	No	Flare
	BG	80	Mud Wt in	10.0	Mud Wt out	10.0	No	Flare
	FG	2600	Mud Wt in	10.3	Mud Wt out	10.2	No	Flare

SHOW 2-5

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith
8142-8155	13	1.0-0.4-.7	1035	no	10.1/ 10.1	frac	no	no	SH-dk brn brnn, v carb, sbply, lmy S1 milky yellow cut
8198-8254	56	.38-.58-.7	2676	no	10.1/ 10.0	frac	no	no	SH-dk bn blk,, carb sbblky, S1 strmg yel cut
8298-8303	5	.5-.6-.9	5209	no	10.1/ 10.0	frac	no	no	Sh-dk brn blk, carb, lmy, yellow residual cut
8371-8381	10	.85-.4-.7	2622	no	10.3 /10.2	frac	no	no	LS-dk gybrn blk, crpxln, arg, carb, mrsltn, yel residual cut

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 24, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

6:00a.m. Depth 8900 Progress: 245 Operations: Rigging up Loggers

**NB #5 8 3/4", Reed, E1100-B1, PDC, mud motor in at 7795
 Bit #4 drilled 1105' in 23hrs**

Mud Ck 8900 Wt 10.7 Vis 40 PV 14 YP 11 PH 8.6 F 5.0 Chl 39000

Survey at 8849 deg 2.1 azm 190.0

Formation: Green River T/ HI @ 6964 I @ 7336, I @ 7336, K Marker @ 7662, CP 70 Castle Pk @ 8286, CP80 3Finger Lime @ 8364, Bar F @ 8388, Uteland Butte @ 8508, CP 90 @ 8688

24 Hr. Lithology: SH, LS, SS

Sample Quality: Fair

Smpl @ 8900 20% SH dk gybrn dk brn blk (100%), blk-y-sbplty, rthy, carb, frm, lmy, yel resid cut 80% LS-dk gybrn dk brn blk, crpxln, mrlstn, carb, sft, yel resid cut

Mud Gas	TG Gas	5552	Mud Wt in 10.7	Mud Wt out 10.6	No	Flare
	Conn Gas	156	Mud Wt in 10.5	Mud Wt out 10.5	No	Flare
	BG	80	Mud Wt in 10.5	Mud Wt out 10.5	No	Flare
	FG	5877	Mud Wt in 10.5	Mud Wt out 10.4	No	Flare

SHOW 6-8

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith
8748-8754	6	.27-2.35	1998	No	10.5/ 10.4	frac	no	no	SH w thin SS lens wh, vf(l)gr, cly mtx, tt, no cut
8797-8816	19	.62-1.3	2352	no	10.5/ 10.4	frac	no	no	SH-dk gybrn blk, blk-y, carb, lmy, yel resid cut
8884-8894	10	.93-1.42	5877	no	10.5/1 0.4	frac	no	no	SH-gy blk, blk-y grdg to arg LS yel resid cut

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 25, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

**6:00a.m. Depth 8900 Progress: 0 Operations: Circ Rig up Lay down truck
 NB #5 8 3/4", Reed, E1100-B1, PDC, mud motor in at 7795
 Bit #5 drilled 1105' in 23hrs**

Mud Ck 8900 Wt 10.7 Vis 40 PV 14 YP 11 PH 8.6 F 5.0 Chl 39000

Survey at 8849 deg 2.1 azm 190.0

**Formation: Green River T/ HI @ 6964 I @ 7336, I @ 7336, K Marker @ 7662, CP 70 Castle
 Pk @8286, CP80 3Finger Lime @ 8364, Bar F @ 8388, Uteland Butte @ 8508, CP 90 @
 8688**

24 Hr. Lithology: SH, LS, SS
 Sample Quality: Fair

Smpl @ 8900 20% SH dk gybrn dk brn blk (100%), blkly-sbplty, rthy, carb, frm, lmy, yel resid
 cut 80% LS-dk gybrn dk brn blk, crpxln, mrlstn, carb, sft, yel resid cut

Mud Gas TG Gas 7530 Mud Wt in 10.7 MudWt out 10.6 3 ft Flare
Conn Gas na Mud Wt in 10.5 Mud Wt out 10.5 No Flare
BG 200 Mud Wt in 10.5 Mud Wt out 10.5 No Flare
FG Mud Wt in 10.5 Mud Wt out 10.4 No Flare

SHOW

INTERVAL	Gross	P/Rate	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 26, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Mark Denler

5:00a.m. Depth 8900' Progress: 0' Operations: Running in intermediate casing, Rig up Halliburton to Cement casing.

NB #6 8 3/4" Smith, Mill Tooth, in @8900' total 0' in 0 hrs

Bit #6 drilled 0' in 0 hrs

Mud Ck 8900 Wt 10.7 Vis 40 PV 14 YP 11 PH 8.6 F 5 Chl 39000

Survey at 8849 deg 2.1 azm 190.0

Formation: Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291', CP80 8379', Bar F 8410', Uteland Butte 8509', CP 90 8677'

24 Hr. Lithology:

Sample Quality: good

Smpl @ 8900 SH: lt gy, gy-bk, bk, sub blk, grades to arg ls, sft, calc, sl slty, no spl fluor

Mud Gas	TG Gas		MudWt in 10.7	Mud Wt out 10.6	Flare NO
	Conn Gas	NA	Mud Wt in 10.5	Mud Wt out 10.5	Flare NO
	BG	NA	Mud Wt in 10.5	Mud Wt out 10.5	Flare NO
	FG	NA	Mud Wt in	Mud Wt out	Flare

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 27, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Mark Denler

5:00a.m. Depth 8900' Progress: 0' Operations: Finish cementing casing. Nippling down BOP.

NB #6 8 3/4" Smith, Mill Tooth, in @8900' total 0' in 0 hrs

Bit #6 drilled 1105' in 22.5 hrs

Mud Ck 8900 Wt 10.7 Vis 40 PV 14 YP 11 PH 8.6 F 5 Chl 39000

Survey at 8849 deg 2.1 azm 190.0

Formation: Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291', CP80 8379', Bar F 8410', Uteland Butte 8509', CP 90 8677'

24 Hr. Lithology:

Sample Quality: good

Smpl @ 8900 SH: lt gy, gy-bk, bk, sub blk, grades to arg ls, sft, calc, sl slty, no spl fluor

Mud Gas	TG Gas	4292u	Mud Wt in 10.7	Mud Wt out 10.6	Flare	NO
	Conn Gas	NA	Mud Wt in 10.5	Mud Wt out 10.5	Flare	NO
	BG	NA	Mud Wt in 10.5	Mud Wt out 10.5	Flare	NO FG
	NA		Mud Wt in	Mud Wt out	Flare	

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 28, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Mark Denler

5:00a.m. Depth 8900' Progress: 0' Operations: Test BOP, choke, floor valves and top drive IBOP.

NB #6 8 3/4" Smith, Mill Tooth, in @8900' total 0' in 0 hrs
Bit #6 drilled 0' in 0 hrs

Mud Ck 8900 Wt 10.7 Vis 40 PV 14 YP 11 PH 8.6 F 5 Chl 39000

Survey at 8849 deg 2.1 azm 190.0

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJI Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677'

24 Hr. Lithology:
 Sample Quality: good

Smpl @ 8900 SH: lt gy, gy-bk, bk, sub blk, grades to arg ls, sft, calc, sl slty, no spl fluor

Mud Gas	TG Gas	NA	Mud Wt in 10.7	Mud Wt out 10.6	Flare NO
	Conn Gas	NA	Mud Wt in 10.5	Mud Wt out 10.5	Flare NO
	BG	NA	Mud Wt in 10.5	Mud Wt out 10.5	Flare NO
	FG	NA	Mud Wt in	Mud Wt out	Flare

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 29, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

5:00a.m. Depth 8976' Progress: 76' Operations: Drilling
NB #7 6" Ulterra, MS1665, PDC, no motor in @8900'
Bit #6 drilled 0' in 0 hrs

Mud Ck 8900 Wt 10.7 Vis 36 PV 8 YP 7 PH 8.4 F 7.2 Chl 38000

Survey at 8849 deg 2.1 azm 190.0

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1
 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I
 Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677'

24 Hr. Lithology:SH, LS

Sample Quality: fair

Smpl @ 8910 SH:brn lt brn occ blk, sub blk, rthy, grades to arg ls, sft, lmy, sl slty, no show

Mud Gas	TG Gas	374	Mud Wt in 10.7	Mud Wt out 10.8	Flare NO
	Conn Gas	140	Mud Wt in 10.6	Mud Wt out 10.8	Flare NO
	BG	40	Mud Wt in 10.6	Mud Wt out 10.6	Flare NO
	FG	NA	Mud Wt in	Mud Wt out	Flare NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Jan 30, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

5:00a.m. Depth 9582' Progress: 606' Operations: Drilling
NB #7 6" Ulterra, MS1665, PDC, no motor in @8900'
Bit #6 drilled 0' in 0 hrs

Mud Ck 9120 Wt 10.8 Vis 38 PV 10 YP 10 PH 8.8 F 7.6 Chl 36000

Survey at 9085 deg 2.2 azm 191.7

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1
 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I
 Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677'
 Wasatch 8930

24 Hr. Lithology:SH, LS, SS

Sample Quality: fair

Smpl @ 9530 SH 20% lt-m gy, sbblky, sbwxy-rthy, sft, limy LS 30% dk brn blk, crp-
 miclxn,arg, carb, sft frm, no show SS 50% wh lt gy s&p, vf(l)-f(u) gr, cly mtz, p vis por, calc
 cmt, no show

Mud Gas	TG Gas	NA	Mud Wt in 10.9	Mud Wt out 10.9	Flare	NO
	Conn Gas	1910	Mud Wt in 10.9	Mud Wt out 10.9	Flare	NO
	BG	450-600	Mud Wt in 10.9	Mud Wt out 10.9	Flare	NO FG
	NA	Mud Wt in	Mud Wt out	Flare	NO	

SHOW 9, 10

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith
9001-9013	12	4-2-3	3535	no	10.7/ 10.6	frac	no	no	SH-m-dk gy blk, blk, carb, grdt to arg LS, no cut, vis gas
9340-9354	14	.6-1.55	2621	no	10.7/ 10.6	P vis	no	no	SS-wh lt brn s&p,vf(u) gr, w srt, cly mtz, calc cmt, no show

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Jan 31, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

5:00a.m. Depth 10503' Progress: 921' Operations: Drilling
NB #7 6" Ulterra, MS1665, PDC, no motor in @8900'
Bit #6 drilled 0' in 0 hrs

Mud Ck 10030 Wt 11.35 Vis 40 PV 15 YP 13 PH 8.8 F 5.2 Chl 35000

Survey at 9982 deg 2.5 azm 192.1

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8930 Red Beds 9834

24 Hr. Lithology:SH, LS, SS
 Sample Quality: Good

Smpl @ 10430 SH 80% lt-m gy(90%) rdbrn (10%), sbbkly, sbwxy-rthy, sft, limy SS 20% wh lt gy s&p, vf(l)-f(u) gr, cly mtx, p vis por, calc cmt, no show

Mud Gas	TG Gas	NA	Mud Wt in	Mud Wt out	Flare	NO
	Conn Gas	3290	Mud Wt in 11.7	Mud Wt out 11.6	Flare	NO
	BG	500-800	Mud Wt in 11.9	Mud Wt out 11.8	Flare	NO FG
	NA	Mud Wt in	Mud Wt out	Flare	NO	

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Feb 1, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

5:00a.m. Depth 11200 Progress: 697' Operations: Circ for Bit Trip
NB #7 6" Ulterra, MS1665, PDC, no motor in @8900'
Bit #6 drilled 0' in 0 hrs

Mud Ck 10851 Wt 12.1 Vis 40 PV 15 YP 13 PH 8.6 F 5.0 Chl 35000

Survey at 11121 deg 2.8 azm 187.4

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8930 Red Beds 9834

24 Hr. Lithology:SH, LS, SS
 Sample Quality: Good

Smpl @ 11150-80 SH 60% dk brn dk gybrn blk(100%), blk,y,rthy, carb, sft, limy SS 10% wh lt gy s&p, vf(l)-f(u) gr, cly mtx, p vis por, calc cmt, no show LS-30% dkbrn dk gybrn, crp-micxln, frm, calc fld frags, no show

Mud Gas TG Gas NA Mud Wt in Mud Wt out Flare NO
Conn Gas 4616 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
BG 400-700 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO FG
NA Mud Wt in Mud Wt out Flare NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Feb 2, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

5:00a.m. Depth 11392 Progress: 192' Operations: Drilling
NB #8 6" Ulterra, MS1665, PDC, no motor in @ 11200'
Bit #7 drilled 2300' in 73 hrs

Mud Ck 11200 Wt 12.2 Vis 41 PV 16 YP 14 PH 8.5 F 5.0 Chl 36000

Survey at 11121 deg 2.8 azm 187.4

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8930 Red Beds 9834

24 Hr. Lithology:SH, LS, SS
 Sample Quality: Good

Smpl @ 11360 SH 90% dk brn dk gybrn blk(100%), blk,y,rthy, carb, sft, limy
 SS 10% wh lt gy s&p, vf(l)-f(u) gr, cly mtx, p vis por, calc cmt, no show

Mud Gas TG Gas 4401 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
Conn Gas 3427 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
BG 400-600 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO FG
NA Mud Wt in Mud Wt out Flare NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Feb 3, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

5:00a.m. Depth 11602 TD Progress: 192' Operations: TOH for E Logs
NB #8 6" Ultrerra, MS1665, PDC, no motor in @ 11200'
Bit #8 drilled 402' in 16 ¼ hrs

Mud Ck 11590 Wt 12.2 Vis 41 PV 15 YP 12 PH 8.0 F 6.2 Chl 36000

Survey at 11121 deg 2.8 azm 187.4

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8930 Red Beds 9834

24 Hr. Lithology:SH, LS, SS
 Sample Quality: Good

Smpl @ TD 11602 SH 60% lt-dk gy(100%), blk,y,rthy, carb ip, sft, limy
 SS 40% wh clr s&p, vf(l)-m(l) gr, cly mtx, uncon ip, f vis por, calc cmt, no show

Mud Gas STG Gas 4406 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
Conn Gas 3523 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
BG 300-450 Mud Wt in 12.2 Mud Wt out 12.1 Flare NO FG
NA Mud Wt in Mud Wt out Flare NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Feb 4, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

5:00a.m. Depth 11602 TD Progress: 192' Operations: Run vsp log
NB #8 6" Ulterra, MS1665, PDC, no motor in @ 11200'
Bit #8 drilled 402' in 16 ¼ hrs

Mud Ck 11602 Wt 12.2 Vis 40 PV 15 YP 11 PH 8.0 F 6.8 Chl 40000

Survey at 11121 deg 2.8 azm 187.4

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8970 Red Beds 9832 CP 190 9814 CP 200 9912 CP 210 9950

24 Hr. Lithology:SH, LS, SS
 Sample Quality: Good

Smpl @ TD 11602 SH 60% lt-dk gy(100%), blk, rthy, carb ip, sft, limy
 SS 40% wh clr s&p, vf(l)-m(l) gr, cly mtx, uncon ip, f vis por, calc cmt, no show

Mud Gas	STG Gas	na	Mud Wt in 12.2	Mud Wt out 12.1	Flare
	Conn Gas	na	Mud Wt in 12.2	Mud Wt out 12.1	Flare NO
	BG	na	Mud Wt in 12.2	Mud Wt out 12.1	Flare NO
	FG	NA	Mud Wt in	Mud Wt out	Flare NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc **Date:** Feb 5, 2011
Lease: Yergensen 1-9-3-1 **G.L.** 5103'
Location: SE/NW Sec.9,T3S,R1W **K.B.** 5129'
County/State: Duchesne Co., Utah **Geologist:** Dennis Springer

**5:00a.m. Depth 11602 TD Progress: 0' Operations: Finish logs, run liner
 NB #8 6" Ulterra, MS1665, PDC, no motor in @ 11200'
 Bit #8 drilled 402' in 16 ¼ hrs**

Mud Ck 11602 Wt 12.2 Vis 40 PV 15 YP 11 PH 8.0 F 6.8 Chl 40000

Survey at 11121 deg 2.8 azm 187.4

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8970 Red Beds 9832 CP 190 9814 CP 200 9912 CP 210 9950

24 Hr. Lithology:na
 Sample Quality: Good

Smpl @ TD 11602 SH 60% lt-dk gy(100%), blk,y,rthy, carb ip, sft, limy
 SS 40% wh clr s&p, vf(l)-m(l) gr, cly mtx, uncon ip, f vis por, calc cmt, no show

Mud Gas TG Gas 6500 Mud Wt in 12.2 Mud Wt out 12.1 Flare 4 ft
Conn Gas na Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
BG na Mud Wt in 12.2 Mud Wt out 12.1 Flare NO
FG NA Mud Wt in Mud Wt out Flare NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

MORNING GEOLOGIC REPORT

Company: Harvest (US) Holdings, Inc	Date: Feb 6, 2011
Lease: Yergensen 1-9-3-1	G.L.: 5103'
Location: SE/NW Sec.9,T3S,R1W	K.B.: 5129'
County/State: Duchesne Co., Utah	Geologist: Dennis Springer

5:00a.m. Depth 11602 TD Progress: 0' Operations: Cemented liner, rigging down NB #8 6" Ulterra, MS1665, PDC, no motor in @ 11200' Bit #8 drilled 402' in 16 ¼ hrs

Mud Ck 11602 Wt 12.2 Vis 40 PV 16 YP 10 PH 8.0 F 6.6 Chl 40000

Survey at 11121 deg 2.8 azm 187.4

Formation:Green River :Sample Tops GR2 @ 5340', Smith @ 5522', Mahogany Bench @ 5627', DJ1 Marker @5963', J Marker (Garden Gulch) 6207', J Marker @ 6519, H Marker 6808', HI Marker @ 6988', I Marker @7367', K Marker 7703', CP 70 8291',CP80 8379',Bar F 8410',Uteland Butte 8509', CP 90 8677' Wasatch 8970 Red Beds 9832 CP 190 9814 CP 200 9912 CP 210 9950

24 Hr. Lithology:na
Sample Quality: Good

Smpl @ TD 11602 SH 60% lt-dk gy(100%), blk, rthy, carb ip, sft, limy
SS 40% wh clr s&p, vf(l)-m(l) gr, cly mtx, uncon ip, f vis por, calc cmt, no show

Mud Gas	TG Gas	na	Mud Wt in 12.2	Mud Wt out 12.1	Flare	NO
	Conn Gas	na	Mud Wt in 12.2	Mud Wt out 12.1	Flare	NO
	BG	150	Mud Wt in 12.2	Mud Wt out 12.1	Flare	NO
	FG	NA	Mud Wt in	Mud Wt out	Flare	NO

SHOW

INTERVAL	Gross	P/Rate (min/ft)	Peak	Flare	MW In/Out	Porosity	Flor	Stain	Lith

Note no TG replace agitator motor

GAS SHOWS DATA RECORD

Yergensen 1-9-3-1

Show	DEPTH (feet)		Gas	Total Gas	C1 (ppm)	C2 (ppm)	C3 (ppm)	C4 (ppm)	C1/C2	C1/C3	C1/C4	Formation	Comments
1	5691	5703	PEAK	1115	85082	23996	775	2	3	131	77323	GR	SH-dk brn dkgybrn, blk, rthy, lmy, sl strmg yel cut
			BG	98	7759	1893	183	1					
			NET	1017	77323	22103	592	1					
2	8142	8155	PEAK	1035	79695	18630	4140	1	4	19	71816	GR	SH-dk brn dkgybrn, blk, rthy,carb, lmy, weak milky yel cut
			BG	102	7879	1842	409	0					
			NET	933	71816	16788	3731	1					
3	8198	8254	PEAK	2616	185226	69584	6807	3971	3	26	40	GR	SH-dk brn blk, carb, sbbkly, lmy, sl strmg yel cut
			BG	350	27228	6953	834	1					
			NET	2266	157998	62631	5973	3970					
4	8298	8303	PEAK	5208	373212	134781	12866	7505	3	29	45	GR	SH-dk brn blk, carb, sbbkly, lmy, yel resid cut
			BG	457	32793	11843	1130	1					
			NET	4751	340419	122938	11736	7504					
5	8371	8381	PEAK	2621	177900	67864	13843	2584	3	12	63	GR	LS-dk gybrn blk, crpxln, arg, carb, mrlstn, yel resid cut
			BG	201	14809	4963	418	1					
			NET	2420	163091	62901	13425	2583					
6	8748	8754	PEAK	2004	140218	51855	5825	2550	3	25	69	GR	SH w v thin SS len, wh, vf(l)gr, w srt, tt, calc cmt, no show
			BG	512	21710	5284	1098	822					
			NET	1492	118508	46571	4727	1728					
7	8797	8816	PEAK	2325	119809	61541	8422	4414	3	18	32	GR	SH-dk gybrn blk, blk, rthy, carb, lmy, yel resid cut
			BG	828	2511	15503	1741	762					
			NET	1497	117298	46038	6681	3652					
8	8884	8894	PEAK	5890	179032	114960	24349	8048	1	8	31	GR	SH-gy blk, sbbkly, grd to arg LS, yel res cut
			BG	440	34454	16043	6205	3379					
			NET	5450	144578	98917	18144	4669					
9	9001	9013	PEAK	3535	259138	100390	22524	6366	3	11	40	Wasatch	SH-dk gy blk, blk, sft, lmy, no cut, vis gas from blk SH
			BG	246	3985	1314	146	27					
			NET	3289	255153	99076	22378	6339					
10	9340	9354	PEAK	2621	171090	69565	13457	7988	2	12	18	Wasatch	SS-wh occ lt brn, vf(l)-f(u) gr, sbang, w srt, cly mt, calc, p vis por, no show
			BG	430	32488	8376	1696	466					
			NET	2191	138602	61189	11761	7522					

Show 1 5691-5703'

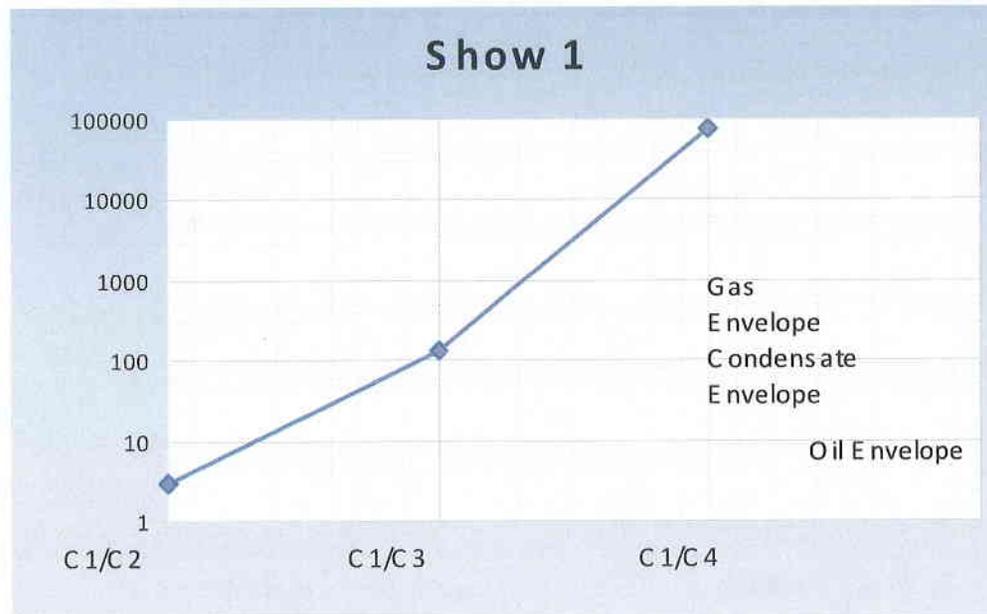


Figure 1.1 Show 1

Show 2 8142-8155'

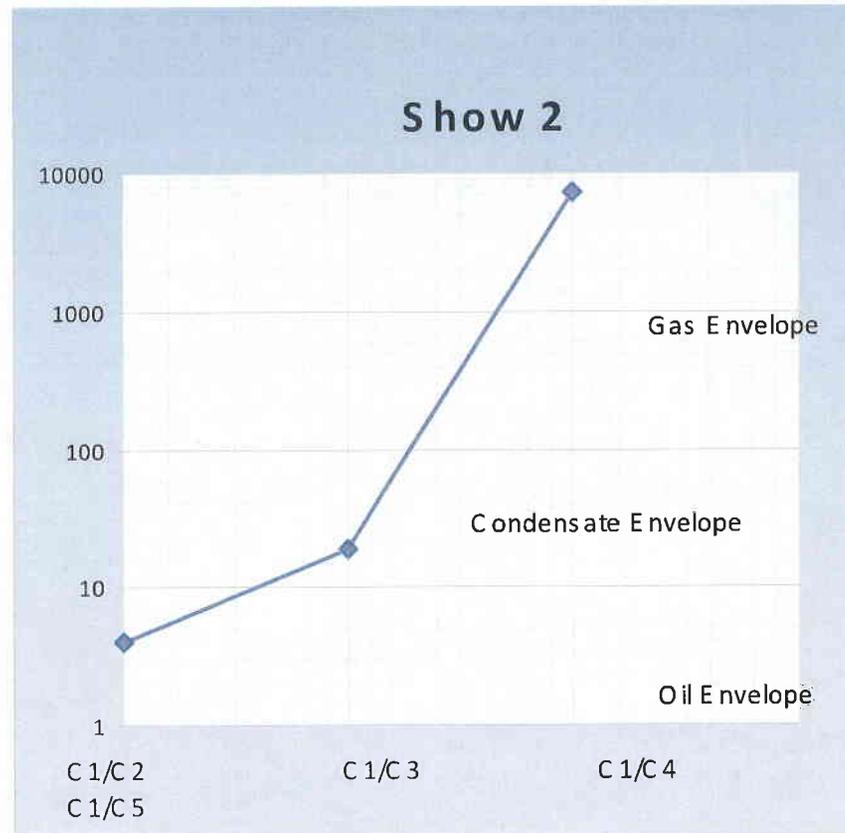


Figure 1.2 Show 2

Show 3 8198-8254'

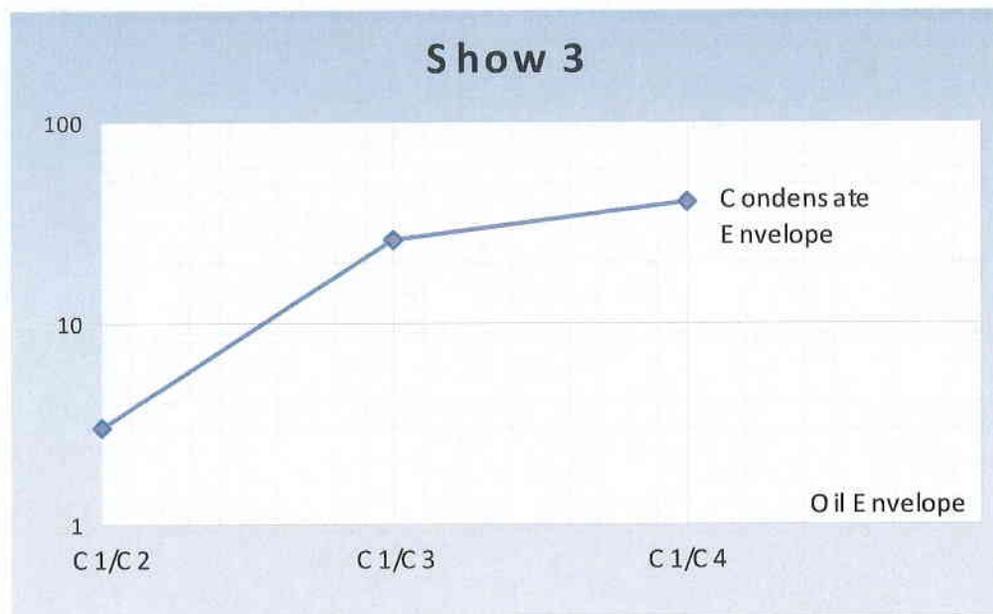


Figure 1.3 Show 3

Show 4 8298-8303'

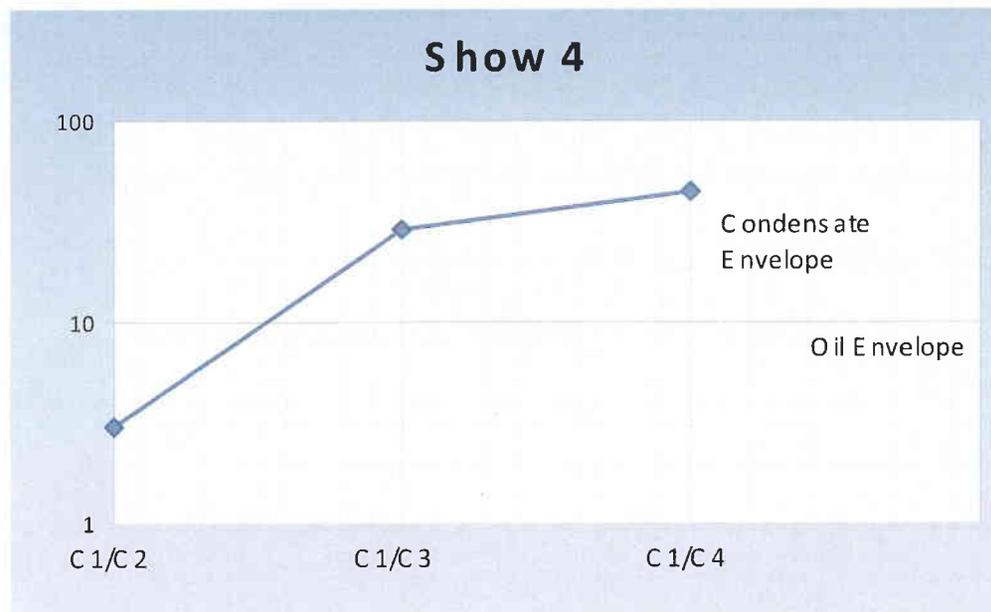


Figure 1.4 Show 4

Show 5 8371-8381'

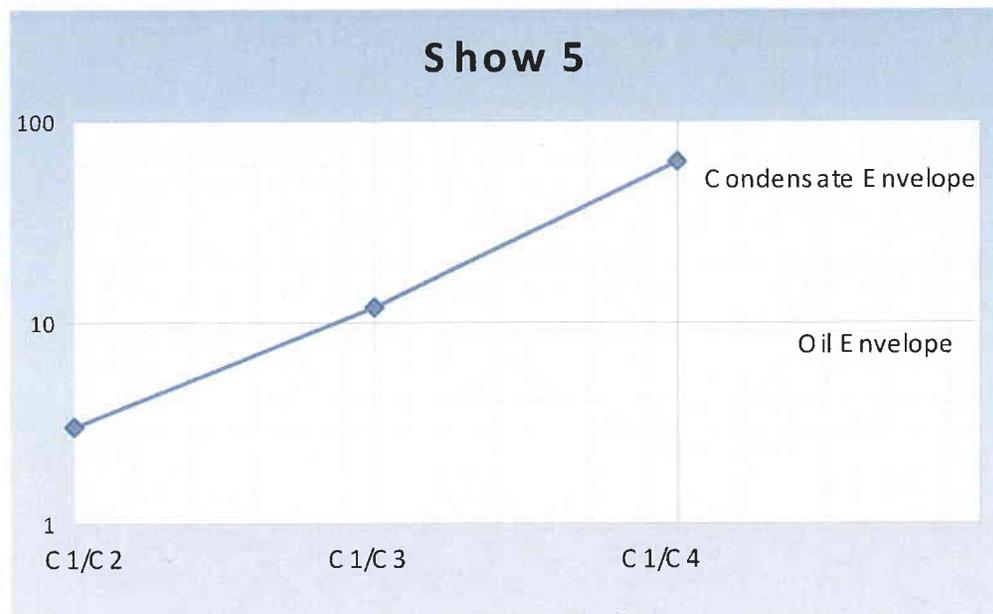


Figure 1.5 Show 5

Show 6 8748-8754

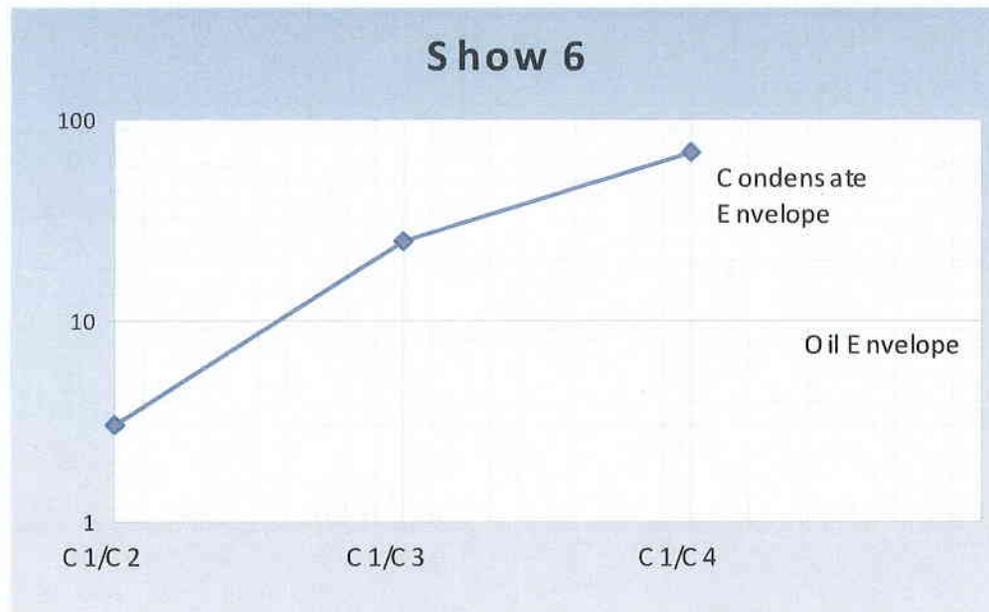


Figure 1.6 Show 6

Show 7 8797-8816'

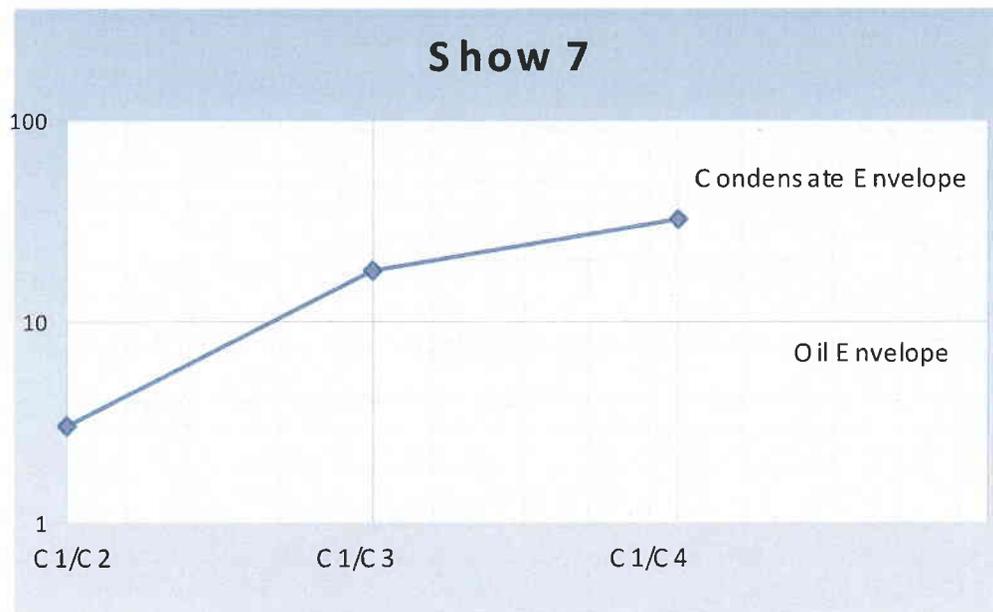


Figure 1.7 Show 7

Show 8 8884-8894'

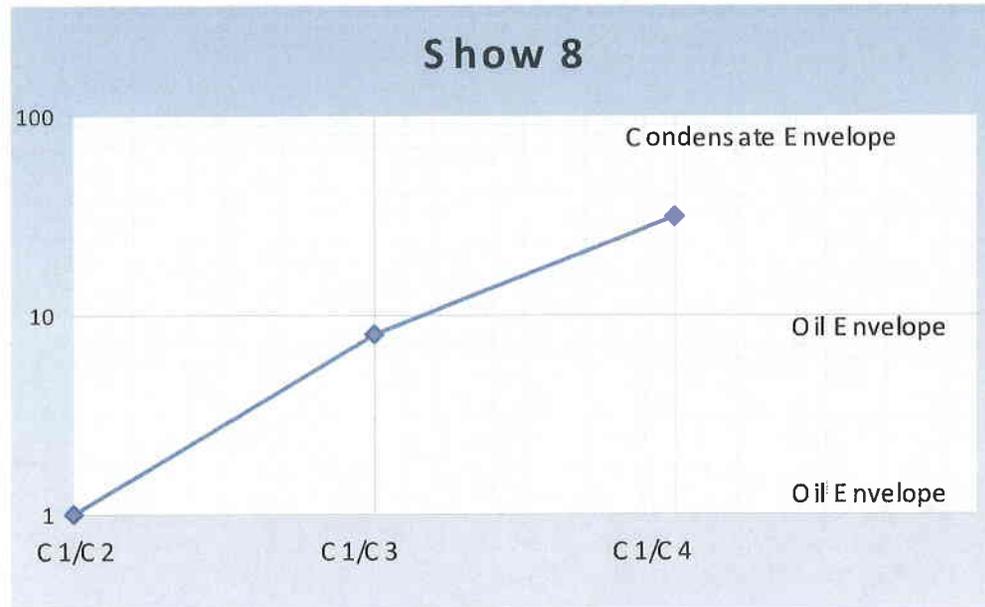


Figure 1.8 Show 8

Show 9 9001-9013'

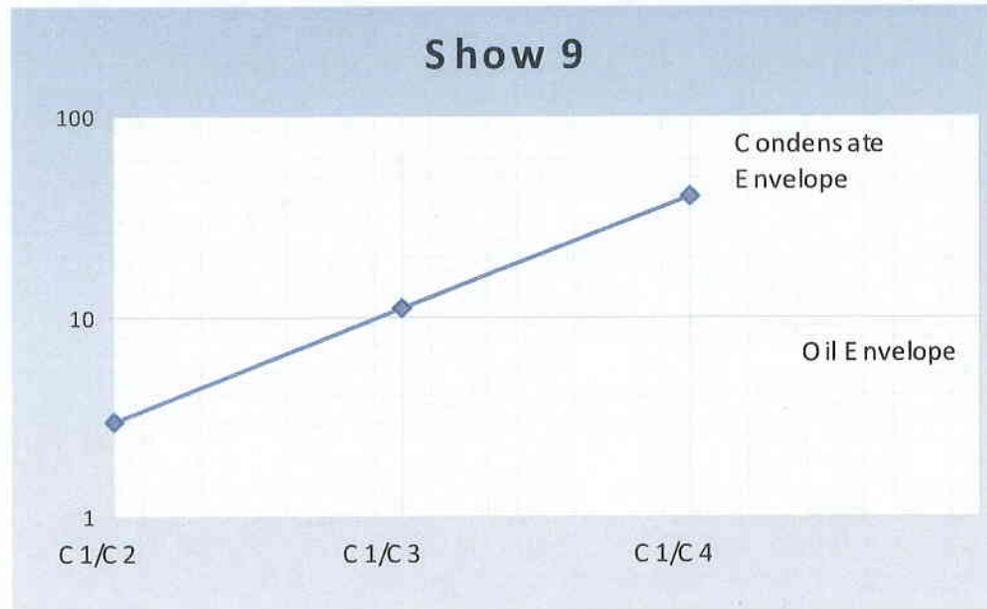


Figure 1.9 Show 9

Show 10 9340-9354'

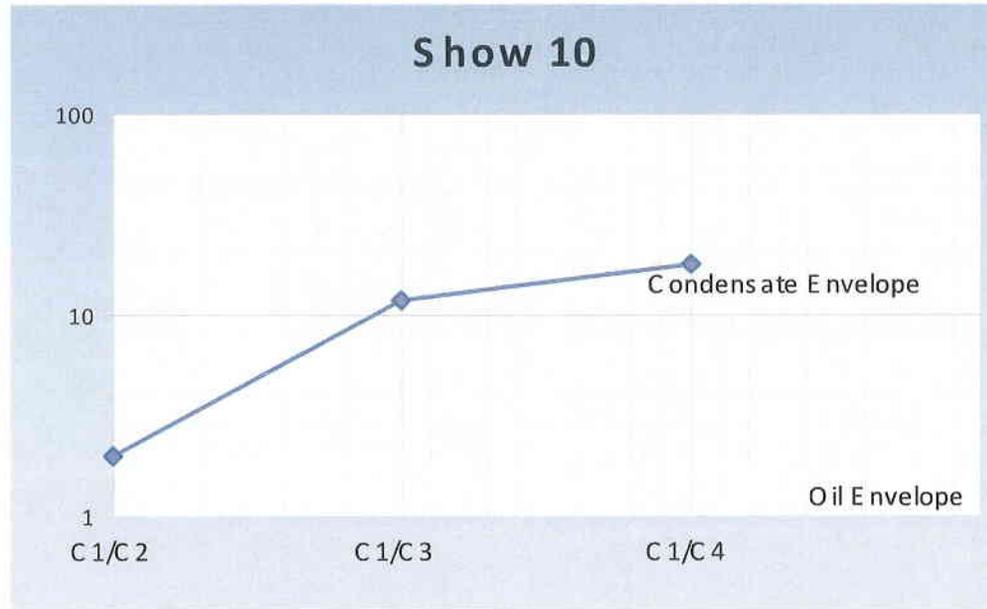


Figure 2.0 Show 10

Division of Oil, Gas and Mining
OPERATOR CHANGE WORKSHEET

ROUTING
 I. CDW

X - Change of Operator (Well Sold)

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective

5/17/2011

FROM: (Old Operator): N3520-Harvest (US) Holdings, Inc 1177 Enclave Parkway, Suite 300 Houston, TX 77077 Phone: 1 (281) 899-5700	TO: (New Operator): N2695-Newfield Production Company 1001 17th St, Suite 2000 Denver, CO 80202 Phone: 1 (303) 893-0102
---	--

CA No.

Unit:

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE 10 ATTACHED SUNDRIES								

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on 6/22/2011
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 6/22/2011
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 3/22/2011
- a. Is the new operator registered in the State of Utah: yes Business Number: 755627-0143
- b. If **NO**, the operator was contacted on:
- a. (R649-9-2) Waste Management Plan has been received on: IN PLACE
- b. Inspections of LA PA state/fee well sites complete or n/a
- c. Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM n/a BIA n/a
- Federal and Indian Units:**
 The BLM or BIA has approved the successor of unit operator for wells listed on: n/a
- Federal and Indian Communization Agreements ("CA"):**
 The BLM or BIA has approved the operator for all wells listed within a CA on: n/a
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: n/a

DATA ENTRY:

- Changes entered in the **Oil and Gas Database** on: 6/30/2011
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 6/30/2011
- Bond information entered in RBDMS on: 6/30/2011
- Fee/State wells attached to bond in RBDMS on: 6/30/2011
- Injection Projects to new operator in RBDMS on: n/a
- Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

- Federal well(s) covered by Bond Number: WY000483
- a. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number B001834
- b. The **FORMER** operator has requested a release of liability from their bond (n/a
 The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

- (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: 7/12/2011

COMMENTS:

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

FORM 9

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.

1. TYPE OF WELL		5. LEASE DESIGNATION AND SERIAL NUMBER:	
OIL WELL <input checked="" type="checkbox"/>	GAS WELL <input type="checkbox"/>	OTHER _____	FEE
2. NAME OF OPERATOR:		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
NEWFIELD PRODUCTION COMPANY <i>N2695</i>		N/A	
3. ADDRESS OF OPERATOR:		7. UNIT or CA AGREEMENT NAME:	
1001 17TH ST, SUITE 2000	CITY: DENVER	STATE: CO	ZIP: 80202
4. LOCATION OF WELL		8. WELL NAME and NUMBER:	
FOOTAGES AT SURFACE: 1842 FNL & 1667 FWL		YERGENSEN #1-9-3-1	
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENW 9 3S 1W		9. API NUMBER:	
COUNTY: DUCHESNE		4301350427	
STATE: UTAH		10. FIELD AND POOL, OR WILDCAT:	
		WILDCAT	

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

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
Approximate date work will start:	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<u>5/17/2011</u>	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
Date of work completion:	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

Effective 05/17/2011, Newfield Production Company will take over operations of the referenced well.

The previous owner/operator was:

Harvest (US) Holdings, Inc.
1177 Enclave Parkway
Houston, TX 77077

Effective 05/17/2011, Newfield Production Company is responsible under the terms and conditions of the leases for operations conducted on the leases lands or a portion thereof under BLM Bond No. RLB0010466 B001834

Print Name: Harvest (US) Holdings, Inc. *N3520*
Patrick R. Oenbring Title: President and CEO

Seller Signature: *Patrick R Oenbring* Date: 05/17/2011

NAME (PLEASE PRINT) KELLY DONOHOUE TITLE RM LAND MANAGER
SIGNATURE *Kelly Donohoue* DATE 5/17/2011

(This space for State use only)

APPROVED 6/13/2011

(5/2000) *Earlene Russell*
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED
JUN 22 2011
DIV. OF OIL, GAS & MINING

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

FORM 6

C

ENTITY ACTION FORM

Operator: Harvest (US) Holdings, Inc. Operator Account Number: N 3520
 Address: 1177 Enclave Parkway
city Houston
state TX zip 77077 Phone Number: (281) 899-5722

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4301350427	Yergensen #1-9-3-1		SENW	9	03S	01W	Duchesne
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
<i>KE</i>	17883	<i>17883</i>	11/30/2010		<i>3/16/11</i>		
Comments: The well was spud utilizing Leon Ross Construction at 0900 hrs. The referenced well was completed as <u>GR-WS</u> effective 03-16-2011 <i>6/22/11</i>							

CONFIDENTIAL

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments:							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Don Hamilton

Name (Please Print)

Don Hamilton

Signature

Agent for Harvest

12/7/2010

Title

Date

(5/2000)

RECEIVED

JUN 06 2011

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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.		5. LEASE DESIGNATION AND SERIAL NUMBER: Fee
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL Oil Well		7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: NEWFIELD PRODUCTION COMPANY		8. WELL NAME and NUMBER: YERGENSEN 1-9-3-1
3. ADDRESS OF OPERATOR: 1001 17th Street, Suite 2000 , Denver, CO, 80202		9. API NUMBER: 43013504270000
PHONE NUMBER: 303 382-4443 Ext		9. FIELD and POOL or WILDCAT: NORTH MYTON BENCH
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1842 FNL 1667 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SENW Section: 09 Township: 03.0S Range: 01.0W 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		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 9/7/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: <input type="text" value="Site Facility/Site Security"/>

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

SEE ATTACHED REVISED SITE FACILITY DIAGRAM

**Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
January 28, 2013**

NAME (PLEASE PRINT) Jill L Loyle	PHONE NUMBER 303 383-4135	TITLE Regulatory Technician
SIGNATURE N/A	DATE 1/25/2013	

NEWFIELD PRODUCTION COMPANY

YERGENSEN 1-9-3-1
SEC.9 T3S R1W
DUCHESENE COUNTY, UTAH



NOT TO SCALE

Cut Slope

Cut Slope

Cut Slope

LEGEND

- FENCE
- - - BERM
- ABOVEGROUND PIPING
- UNDERGROUND PIPING (LOCATION APPROXIMATE)
- MH METER HOUSE
- ← DIRECTION OF FLOW
- bbbl BARREL(S)
- LL LOAD LINE
- WELL HEAD
- BJ BELT JACK
- P PUMP
- PIPING CONDUIT

Cut Slope

Cut Slope

Entry



BJ
Corrosion Inhibitor
130-gal

Building

Water/Oil
200 bbl

Oil
400 bbl

Oil
400 bbl

Water
400 bbl

Pit Tank
400 bbl

Xylene
6-bbl

Glycol
500-gal

100 bbl
Heater Treater

MH

Diesel
24-bbl

Generator

Unnamed Irrigation Ditch
500 ft

ALL UNDERGROUND PIPING IS FOR
PROCESS FLOW DEMONSTRATION ONLY

