

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 Morgan State 921-3611CS								
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 NATURAL BUTTES								
4. TYPE OF WELL Gas Well Coalbed Methane Well: NO						5. UNIT or COMMUNITIZATION AGREEMENT NAME								
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6515								
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL julie.jacobson@anadarko.com								
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 22265			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>								
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')								
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						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 checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>								
20. LOCATION OF WELL		FOOTAGES		QTR-QTR		SECTION		TOWNSHIP		RANGE		MERIDIAN		
LOCATION AT SURFACE		2090 FSL 722 FEL		NESE		36		9.0 S		21.0 E		S		
Top of Uppermost Producing Zone		2237 FSL 493 FEL		NESE		36		9.0 S		21.0 E		S		
At Total Depth		2237 FSL 493 FEL		NESE		36		9.0 S		21.0 E		S		
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 493			23. NUMBER OF ACRES IN DRILLING UNIT 639								
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 331			26. PROPOSED DEPTH MD: 10510 TVD: 10496								
27. ELEVATION - GROUND LEVEL 5036			28. BOND NUMBER 22013542			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496								
Hole, Casing, and Cement Information														
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight				
Surf	12.25	8.625	0 - 2580	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8				
							Class G	270	1.15	15.8				
Prod	7.875	4.5	0 - 10510	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength	320	3.38	12.0				
							50/50 Poz	1520	1.31	14.3				
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 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 checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)						<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP								
NAME Danielle Piernot				TITLE Regulatory Analyst				PHONE 720 929-6156						
SIGNATURE				DATE 12/19/2011				EMAIL danielle.piernot@anadarko.com						
API NUMBER ASSIGNED 43047522510000				APPROVAL  Permit Manager										

Kerr-McGee Oil & Gas Onshore. L.P.**MORGAN STATE 921-361CS**

Surface: 2090 FSL / 722 FEL NESE
 BHL: 2237 FSL / 493 FEL NESE

Section 36 T9S R21E

Unitah County, Utah
 Mineral Lease: ML-22265

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2.a **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,334'	
Birds Nest	1,645'	Water
Mahogany	2,128'	Water
Wasatch	4,577'	Gas
Mesaverde	7,231'	Gas
Sego	9,398'	Gas
Castlegate	9,464'	Gas
MN5	9,896'	Gas
TVD =	10,496'	
TD =	10,510'	

- 2.C Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Sego as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. Drilling Fluids Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:**7.a Blackhawk (Part of Mesaverde Formation) Target Formation**

Maximum anticipated bottom hole pressure calculated at 10496' TVD, approximately equals
6,927 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,666 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 9398' TVD, approximately equals
6,015 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,934 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements
associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated
with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

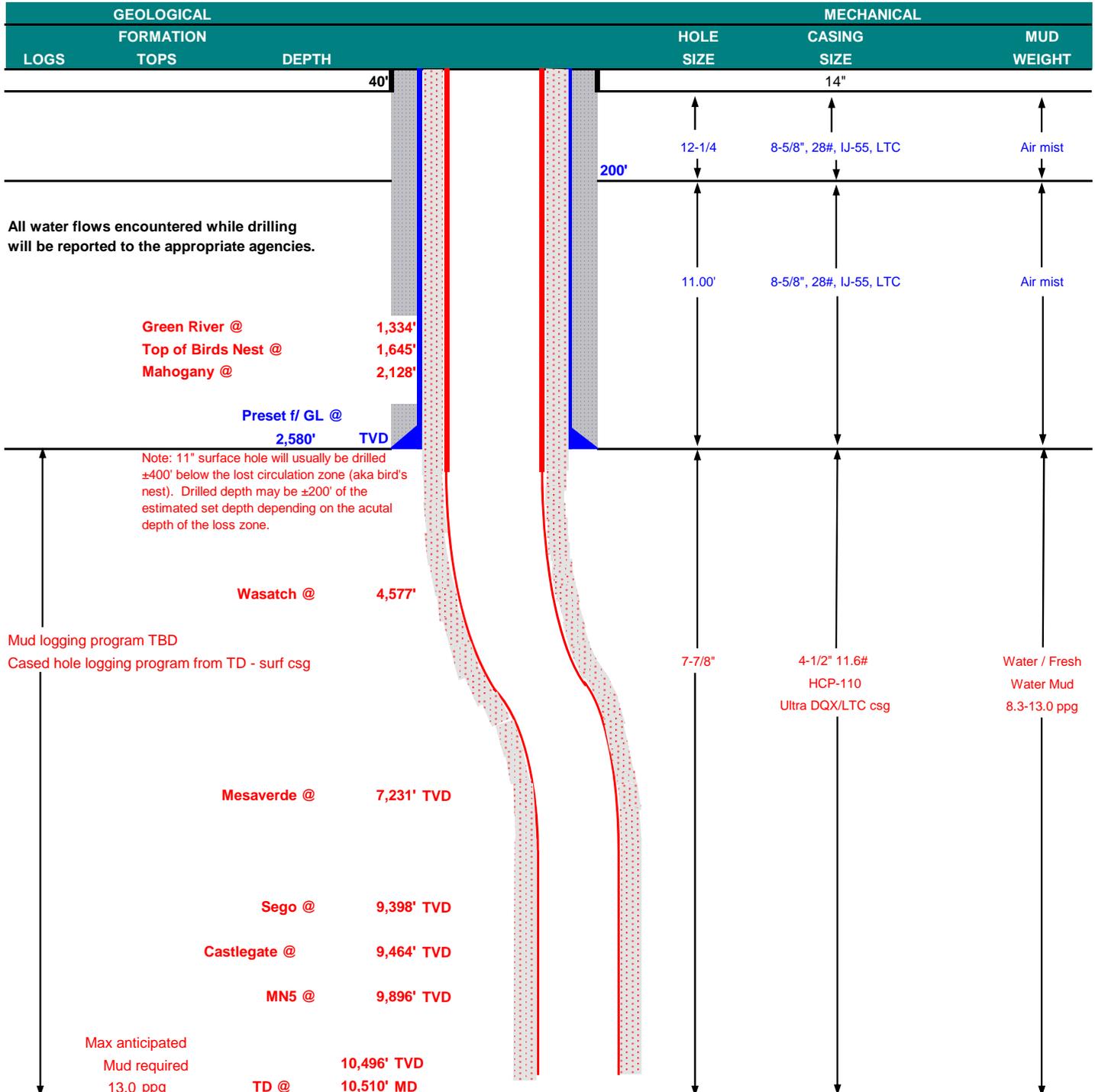
10. **Other Information:**

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program



KERR-McGEE OIL & GAS ONSHORE LP BLACKHAWK DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	December 19, 2011			
WELL NAME	MORGAN STATE 921-361CS		TD	10,496'	TVD	10,510' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	5,035'
SURFACE LOCATION	NESE	2090 FSL	722 FEL	Sec 36	T 9S	R 21E	
	Latitude:	39.991093	Longitude:	-109.49255			NAD 27
BTM HOLE LOCATION	NESE	2237 FSL	493 FEL	Sec 36	T 9S	R 21E	
	Latitude:	39.991484	Longitude:	-109.491734			NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK						
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.						





KERR-McGEE OIL & GAS ONSHORE LP
BLACKHAWK DRILLING PROGRAM

CASING PROGRAM

							DESIGN FACTORS			
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	LTC	DQX
									TENSION	
CONDUCTOR	14"	0-40'					3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,580	28.00	IJ-55	LTC	2.09	1.56	5.50	N/A
PRODUCTION	4-1/2"	0	to 5,000	11.60	HCP-110	DQX	1.19	1.22	279,000	367,174
	4-1/2"	5,000	to 10,510'	11.60	HCP-110	LTC	1.19	1.22	5.45	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80	1.15
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80	1.15
NOTE: If well will circulate water to surface, option 2 will be utilized							
SURFACE	LEAD	2,080'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	190	35%	11.00	3.82
Option 2	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80	1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,070'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00	3.38
	TAIL	6,440'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,520	35%	14.30	1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

DATE:

DRILLING SUPERINTENDENT:

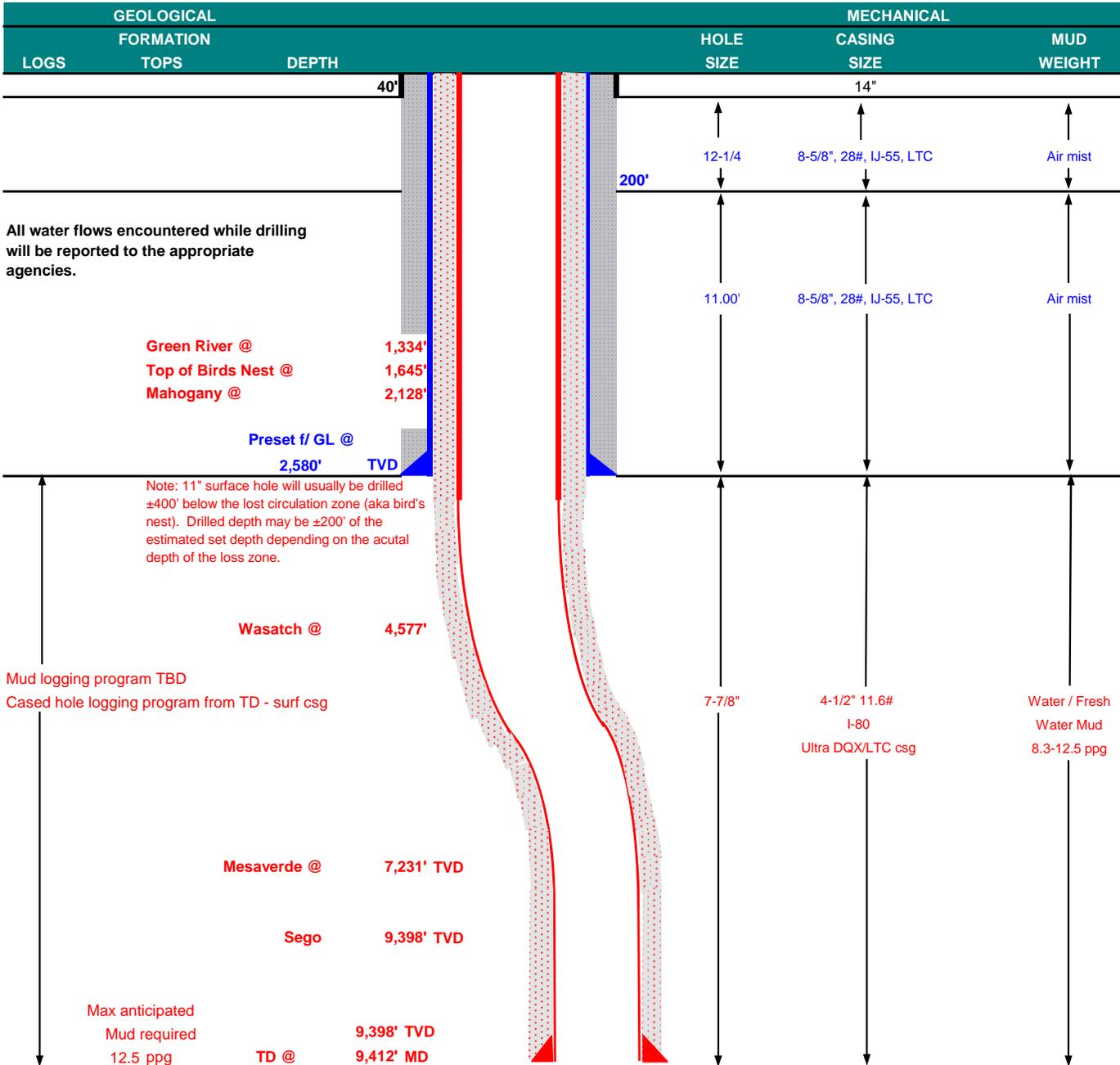
Kenny Gathings / Lovel Young

DATE:



KERR-McGEE OIL & GAS ONSHORE LP WASATCH/MESAVERDE DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP		DATE	December 19, 2011	
WELL NAME	MORGAN STATE 921-361CS		TD	9,398'	TVD 9,412' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	NESE	2090 FSL	722 FEL	Sec 36 T 9S R 21E	FINISHED ELEVATION 5,035'
	Latitude:	39.991093	Longitude:	-109.49255	NAD 27
BTM HOLE LOCATION	NESE	2237 FSL	493 FEL	Sec 36 T 9S R 21E	
	Latitude:	39.991484	Longitude:	-109.491734	NAD 27
OBJECTIVE ZONE(S)	Wasatch/Mesaverde				
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.				





KERR-McGEE OIL & GAS ONSHORE LP

WASATCH/MESAVERDE DRILLING PROGRAM

CASING PROGRAM

							DESIGN FACTORS			
							LTC	DQX		
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION	
CONDUCTOR	14"	0-40'					3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to 2,580	28.00	IJ-55	LTC	2.09	1.56	5.50	N/A
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	7,780	6,350		267,035
							7,780	6,350	223,000	3.02
	4-1/2"	5,000	to 9,412'	11.60	I-80	LTC	1.11	1.04	5.39	

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 psi) 0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

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CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE Option 1	LEAD	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	180	60%	15.80		1.15
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt + 2% CaCl + 0.25 pps flocele	270	0%	15.80		1.15
NOTE: If well will circulate water to surface, option 2 will be utilized								
SURFACE Option 2	LEAD	2,080'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	190	35%	11.00		3.82
	TAIL	500'	Premium cmt + 2% CaCl + 0.25 pps flocele	150	35%	15.80		1.15
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,072'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00		3.38
	TAIL	5,340'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,260	35%	14.30		1.31

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

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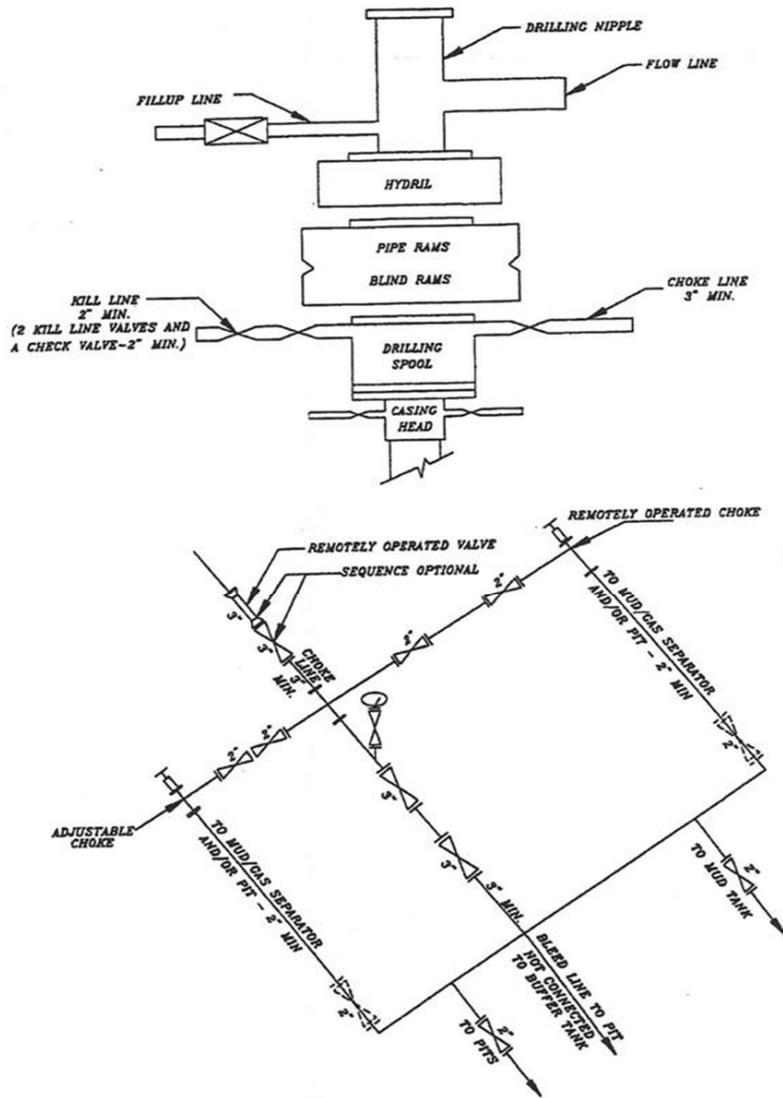
DRILLING ENGINEER: _____
Nick Spence / Danny Showers / Chad Loesel

DATE: _____

DRILLING SUPERINTENDENT: _____
Kenny Gathings / Lovel Young

DATE: _____

EXHIBIT A
MORGAN STATE 921-3611CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

T9S, R21E, S.L.B.&M.

WEST - 80.00 (G.L.O.)

N89°55'26"W - 2639.89' (Meas.) N89°56'39"W - 2639.91' (Meas.)

Found 1977
Brass Cap.
Pile of Stones.

Found 1"
Aluminum Cap on
5/8" Rebar. Pile
of Stones.

Found 1" Aluminum
Cap on 5/8" Rebar,
with a Stone on East
side of Cap.

N00°05'54"E (Basis of Bearings)
2569.93' (Measured)
N0°04'E - 38.96 (G.L.O.)

MORGAN STATE 921-3611CS (Surface Position)
NAD 83 LATITUDE = 39.991058° (39° 59' 27.810")
LONGITUDE = 109.493236° (109° 29' 35.650")
NAD 27 LATITUDE = 39.991093° (39° 59' 27.936")
LONGITUDE = 109.492550° (109° 29' 33.180")

MORGAN STATE 921-3611CS (Bottom Hole)
NAD 83 LATITUDE = 39.991449° (39° 59' 29.216")
LONGITUDE = 109.492420° (109° 29' 32.711")
NAD 27 LATITUDE = 39.991484° (39° 59' 29.342")
LONGITUDE = 109.491734° (109° 29' 30.242")

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**WELL LOCATION:
MORGAN STATE 921-3611CS**

ELEV. UNGRADED GROUND = 5035.9'

Found 1977
Brass Cap, Steel
Post & Pile of
Stones.

Bottom of Hole
Well Surface
Position

2090'
2237'
493'
722'
20.43 (G.L.O.)
20.43 (G.L.O.)
N00°03'48"E - 2697.12' (Meas.)
N0°02'E - 40.86 (G.L.O.)

Found 1½" Aluminum
Cap on 5/8" Rebar
in Pile of Stones.

N00°03'41"W - 2641.51' (Meas.)
N00°03'E - 79.80 (G.L.O.)
N00°00'34"E - 2612.15' (Meas.)

LOT 4

LOT 3

LOT 2

LOT 1

SW Cor. Sec. 36
C.C.: Found 1977
Brass Cap.

1/4 Cor. Sec. 36:
Found 1977
Brass Cap in
Pile of Stones.

Found 1977
Brass Cap, Set
Stone, Steel Post
& Pile of Stones.

NW. Cor. Sec. 1:
Found 1977
Brass Cap.

S89°06'03"W - 2678.51' (Meas.)
S89°06'W - 40.59 (G.L.O.)

1/4 Cor. Sec. 1:
Found 1977 Brass
Cap in Pile of Stones.

N88°43'26"W - 2691.59' (Meas.)
N88°46'W - 40.78 (G.L.O.)

NOTES:

- ▲ = Section Corners Located
- 1. Well footages are measured at right angles to the Section Lines.
- 2. G.L.O. distances are shown in feet or chains.
1 chain = 66 feet.
- 3. The Bottom of hole bears N58°07'42"E 269.46' from the Surface Position.
- 4. Bearings are based on Global Positioning Satellite observations.
- 5. Basis of elevation is Tri-Sta "Two Water" located in the NW ¼ of Section 1, T10S, R21E, S.L.B.&M. The elevation of this Tri-Sta is shown on the Big Pack Mtn NE 7.5 Min. Quadrangle as being 5238'.



SURVEYOR'S 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.

11-11-11
No. 6028691
JOHN R. LAUGH
PROFESSIONAL LAND SURVEYOR
REGISTRATION No. 6028691
STATE OF UTAH

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD: MORGAN STATE 921-361

**MORGAN STATE 921-3611CS
WELL PLAT**
2237' FSL, 493' FEL (Bottom Hole)
NE ¼ SE ¼ OF SECTION 36, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH.



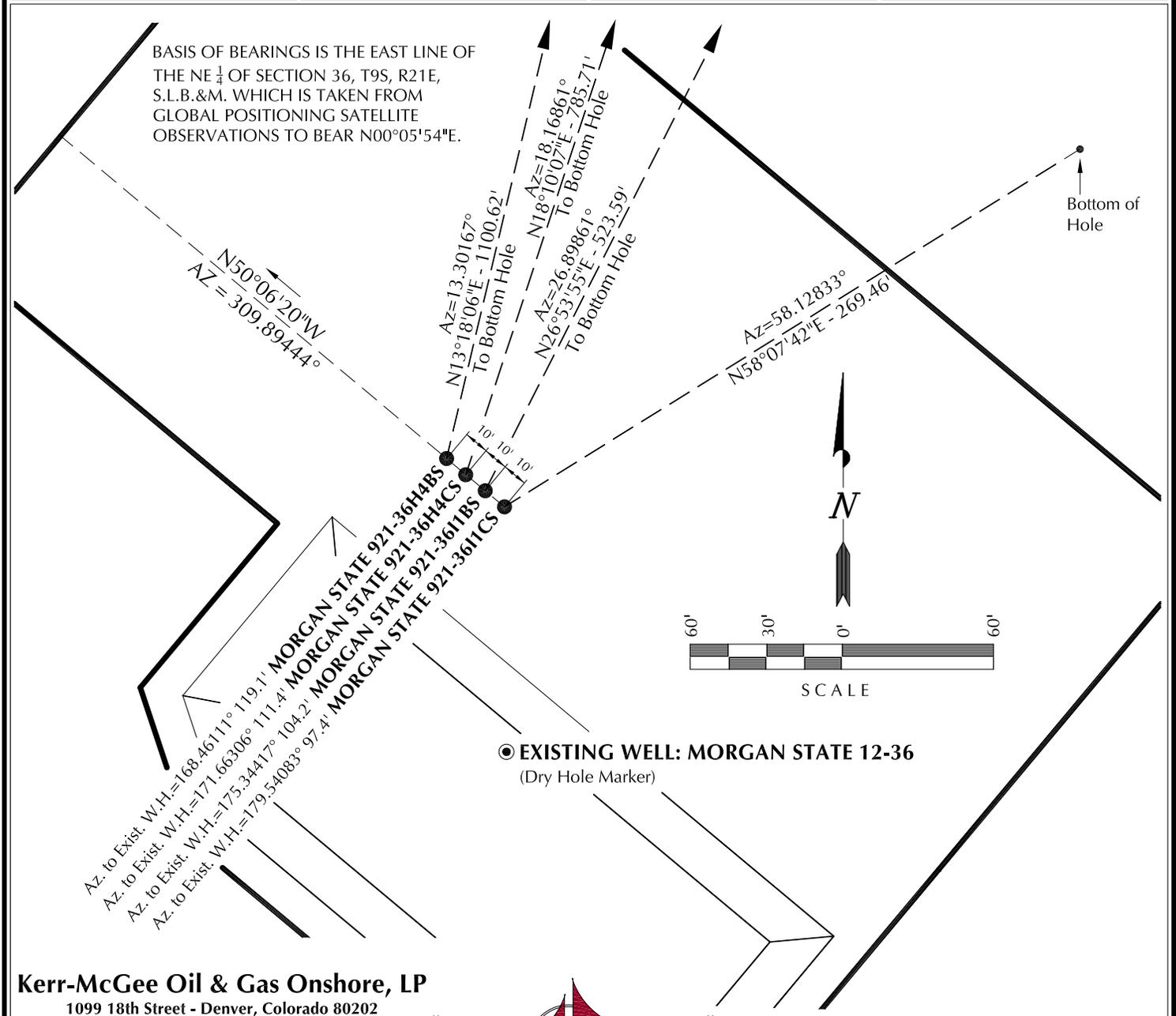
609 CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE (435) 789-1365
ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-20-11	SURVEYED BY: J.W.	SHEET NO: 1
DATE DRAWN: 11-01-11	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'		1 OF 16

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
MORGAN STATE 921-3611CS	39°59'27.810" 39.991058°	109°29'35.650" 109.493236°	39°59'27.936" 39.991093°	109°29'33.180" 109.492550°	2090' FSL 722' FEL	39°59'29.216" 39.991449°	109°29'32.711" 109.492420°	39°59'29.342" 39.991484°	109°29'30.242" 109.491734°	2237' FSL 493' FEL
MORGAN STATE 921-3611BS	39°59'27.873" 39.991076°	109°29'35.748" 109.493263°	39°59'27.999" 39.991111°	109°29'33.279" 109.492577°	2096' FSL 729' FEL	39°59'32.487" 39.992358°	109°29'32.708" 109.492419°	39°59'32.613" 39.992393°	109°29'30.238" 109.491733°	2568' FSL 493' FEL
MORGAN STATE 921-36H4CS	39°59'27.936" 39.991093°	109°29'35.847" 109.493291°	39°59'28.062" 39.991128°	109°29'33.378" 109.492605°	2102' FSL 737' FEL	39°59'35.313" 39.993142°	109°29'32.704" 109.492418°	39°59'35.439" 39.993177°	109°29'30.234" 109.491732°	2402' FSL 493' FEL
MORGAN STATE 921-36H4BS	39°59'28.000" 39.991111°	109°29'35.946" 109.493318°	39°59'28.126" 39.991146°	109°29'33.476" 109.492632°	2108' FSL 745' FEL	39°59'38.583" 39.994051°	109°29'32.698" 109.492416°	39°59'38.709" 39.994086°	109°29'30.228" 109.491730°	2071' FSL 493' FEL
MORGAN STATE 12-36	39°59'26.847" 39.990791°	109°29'35.639" 109.493233°	39°59'26.973" 39.990826°	109°29'33.170" 109.492547°	1992' FSL 721' FEL					

RELATIVE COORDINATES - From Surface Position to Bottom Hole											
WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
MORGAN STATE 921-3611CS	142.3'	228.8'	MORGAN STATE 921-3611BS	466.9'	236.9'	MORGAN STATE 921-36H4CS	746.5'	245.0'	MORGAN STATE 921-36H4BS	1071.1'	253.2'



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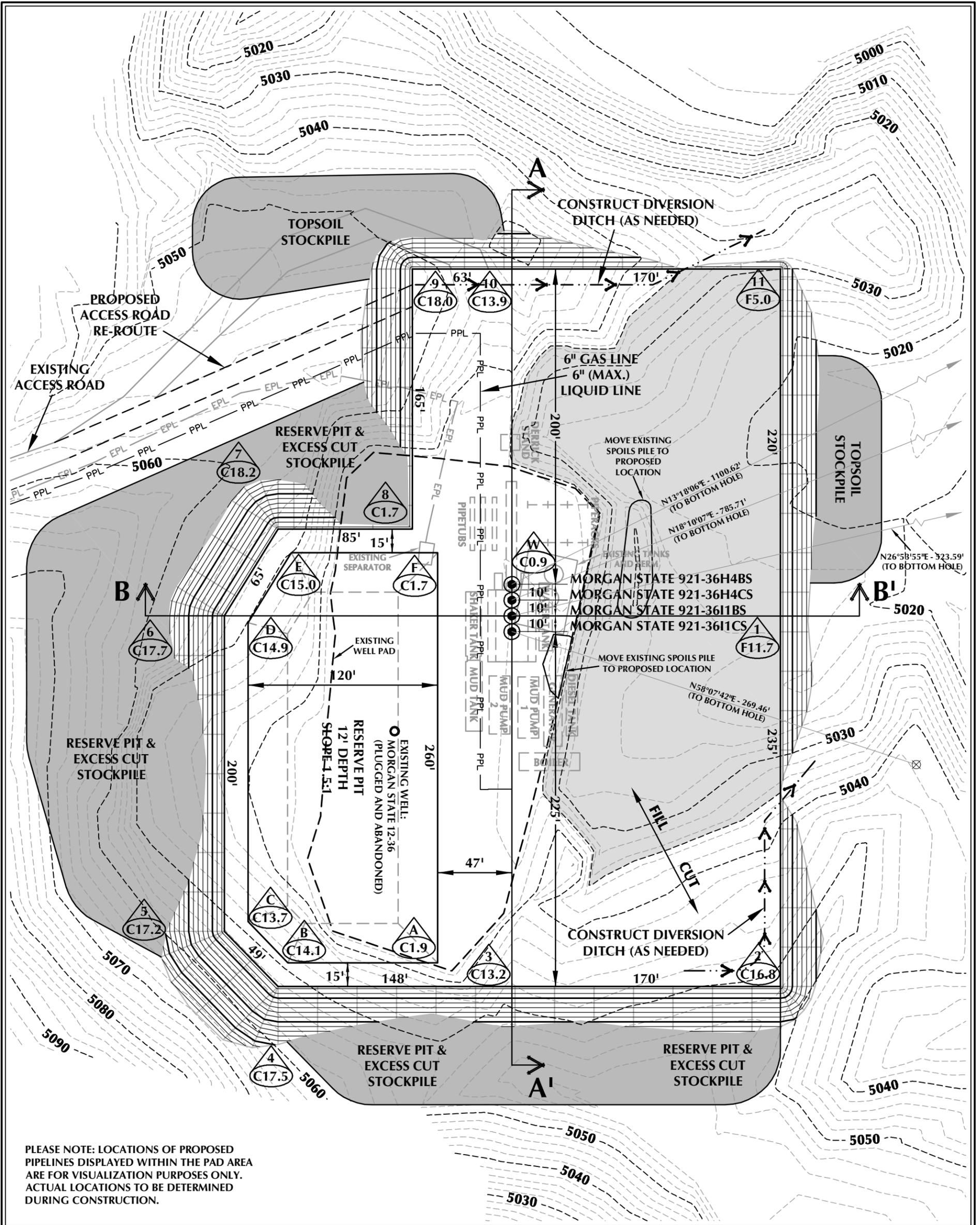
WELL PAD - MORGAN STATE 921-361

**WELL PAD INTERFERENCE PLAT
 WELLS - MORGAN STATE 921-3611BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah.**


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TIMBERLINE (435) 789-1365
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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 9-20-11	SURVEYED BY: J.W.	SHEET NO: 5
DATE DRAWN: 11-01-11	DRAWN BY: T.J.R.	
SCALE: 1" = 60'	Date Last Revised:	5 OF 16



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - MORGAN STATE 921-36I DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5035.9'
 FINISHED GRADE ELEVATION = 5035.0'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 4.00 ACRES
 TOTAL DISTURBANCE AREA = 5.51 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

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WELL PAD - MORGAN STATE 921-36I

WELL PAD - LOCATION LAYOUT
 MORGAN STATE 921-36I1CS,
 MORGAN STATE 921-36I1BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah



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WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 22,071 C.Y.
 TOTAL FILL FOR WELL PAD = 20,145 C.Y.
 TOPSOIL @ 6" DEPTH = 2,458 C.Y.
 EXCESS MATERIAL = 1,926 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT
 +/- 10,730 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD)
 +/- 41,190 BARRELS

WELL PAD LEGEND

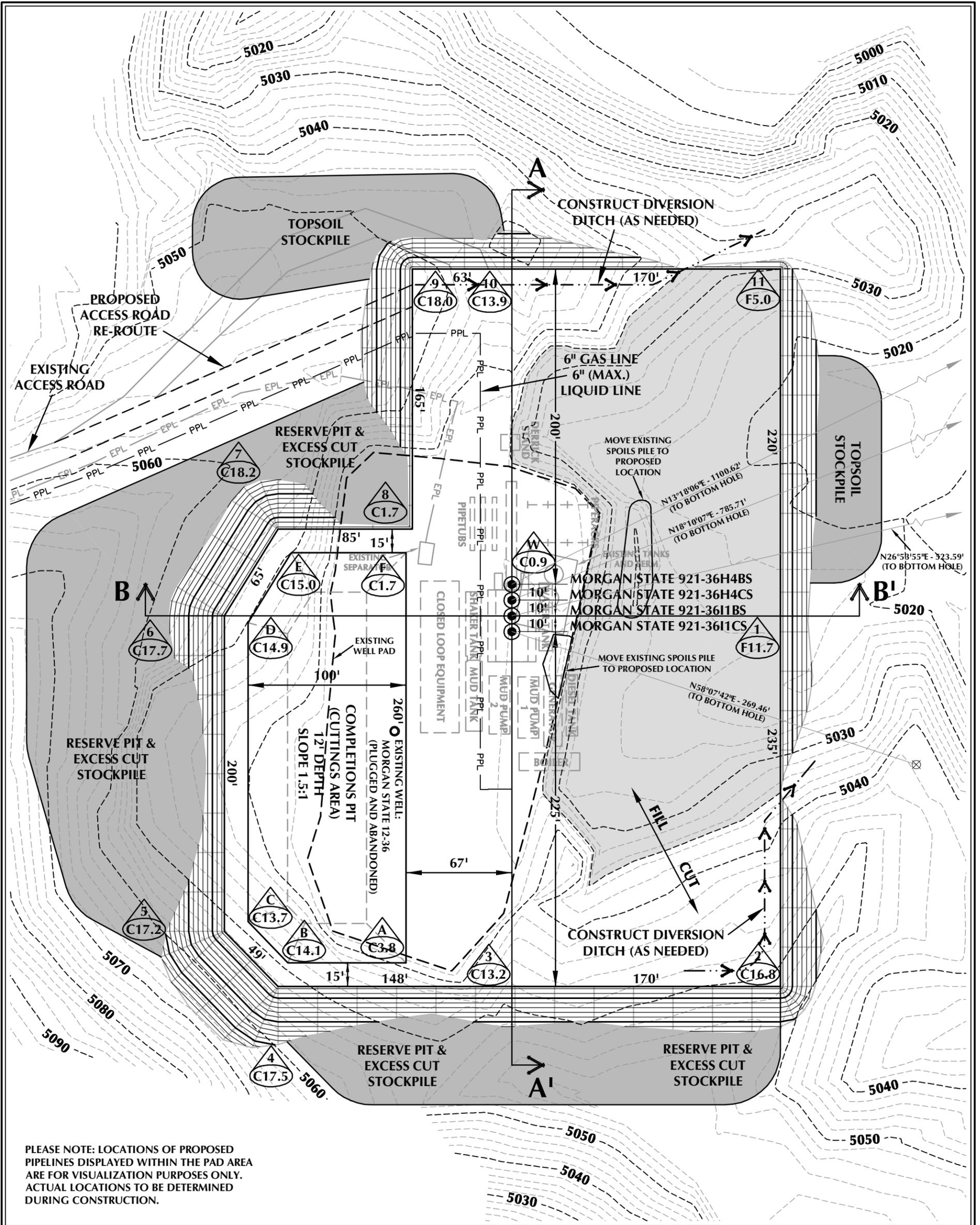
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 11/11/11 SHEET NO: 6 OF 16
 REVISED:

TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

WELL PAD - MORGAN STATE 921-36I (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5035.9'
 FINISHED GRADE ELEVATION = 5035.0'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 4.00 ACRES
 TOTAL DISTURBANCE AREA = 5.51 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

Kerr-McGee Oil & Gas Onshore, LP
 1099 18th Street - Denver, Colorado 80202

WELL PAD - MORGAN STATE 921-36I

WELL PAD - LOCATION LAYOUT
 MORGAN STATE 921-36I1CS,
 MORGAN STATE 921-36I1BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah



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 Phone 307-674-0609
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WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 22,071 C.Y.
 TOTAL FILL FOR WELL PAD = 20,145 C.Y.
 TOPSOIL @ 6" DEPTH = 2,458 C.Y.
 EXCESS MATERIAL = 1,926 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
 +/- 8,580 C.Y.
 COMPLETIONS PIT CAPACITY
 (2' OF FREEBOARD)
 +/- 32,680 BARRELS

WELL PAD LEGEND

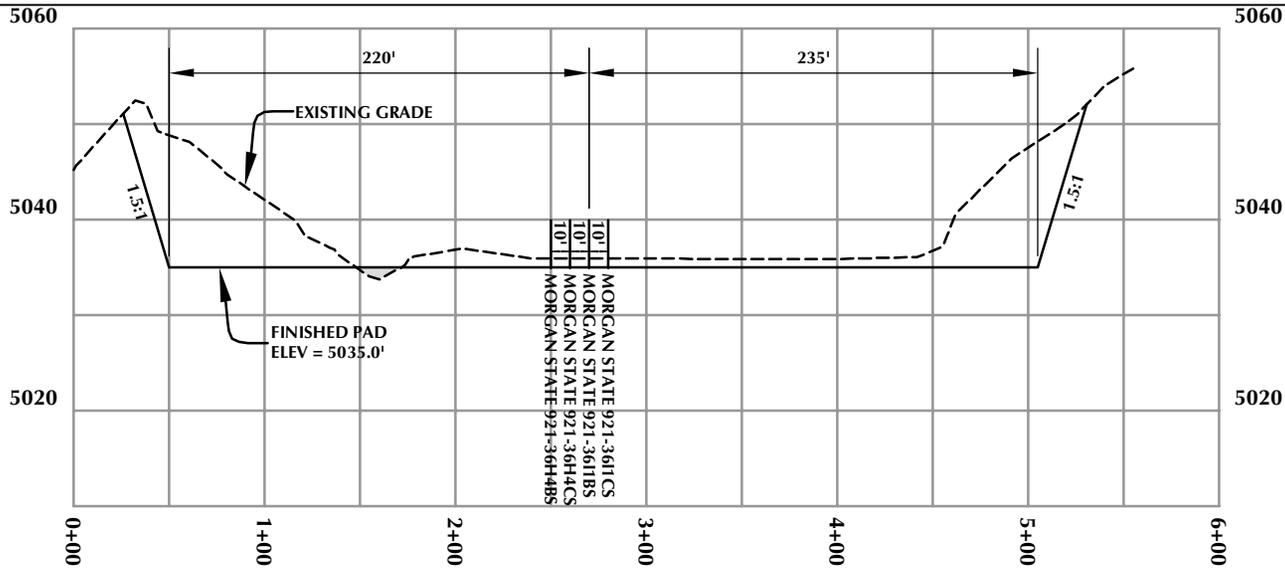
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



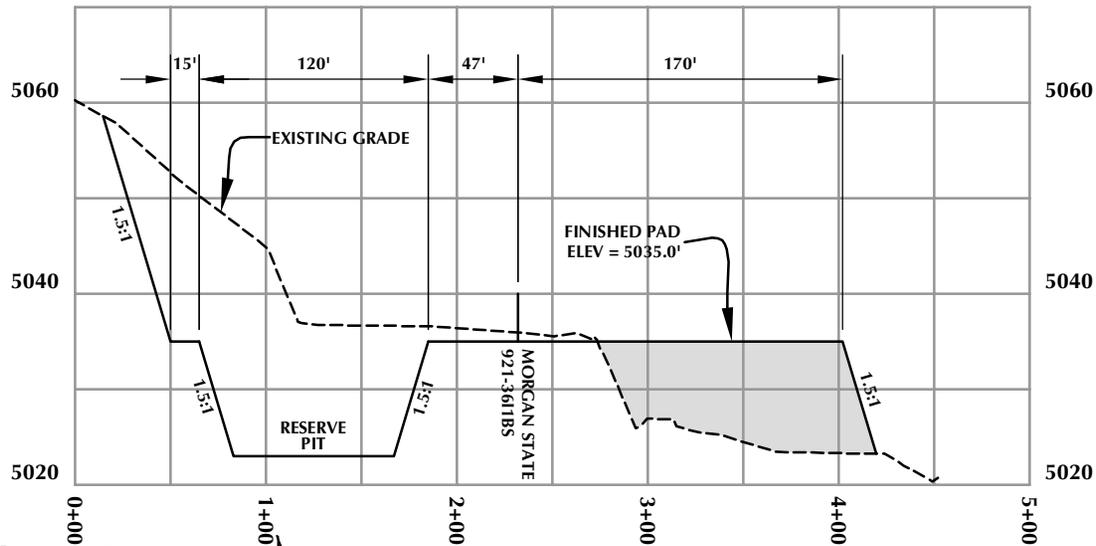
HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 11/15/11 SHEET NO:
 REVISED: **6B** 6B OF 16

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 209 NORTH 300 WEST - VERNAL, UTAH 84078



CROSS SECTION A-A'



CROSS SECTION B-B'

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1099 18th Street - Denver, Colorado 80202

WELL PAD - MORGAN STATE 921-361

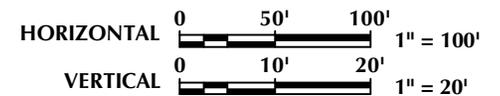
WELL PAD - CROSS SECTIONS
MORGAN STATE 921-361CS,
MORGAN STATE 921-361BS,
MORGAN STATE 921-36H4CS &
MORGAN STATE 921-36H4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH



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ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

(435) 789-1365



Scale: 1"=100'

Date: 11/11/11

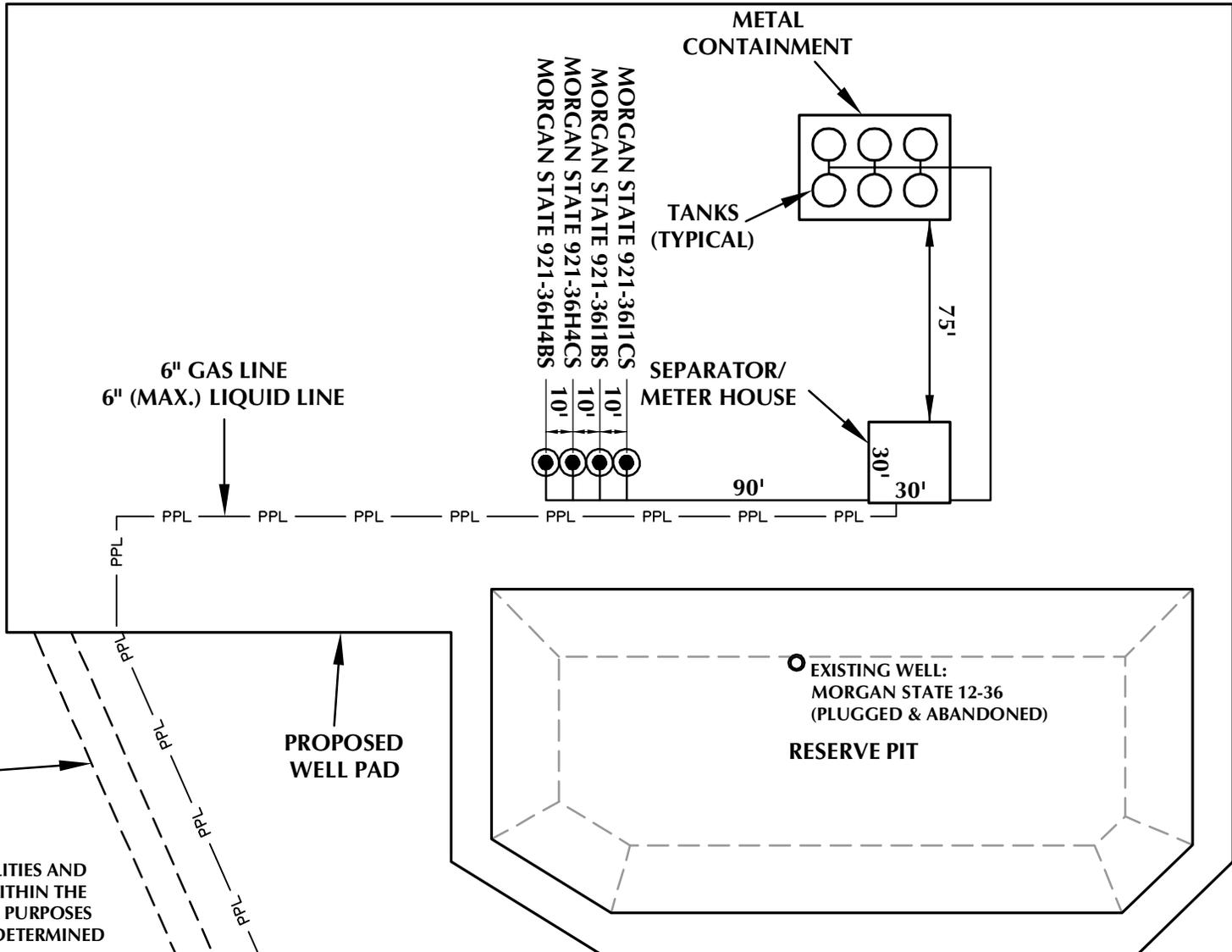
SHEET NO:

REVISED:

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7 OF 16

K:\AMARRO\2011\11\2011_65_NBU_FOCUS_921-36\DWGS\MORGAN STATE 921-36\MORGAN STATE 921-36.dwg, 11/11/2011 10:26:09 AM, gntly



PLEASE NOTE: LOCATIONS OF FACILITIES AND PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

Kerr-McGee Oil & Gas Onshore, LP
1099 18th Street - Denver, Colorado 80202

WELL PAD - MORGAN STATE 921-361

WELL PAD - FACILITIES DIAGRAM
MORGAN STATE 921-3611CS,
MORGAN STATE 921-3611BS,
MORGAN STATE 921-36H4CS &
MORGAN STATE 921-36H4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

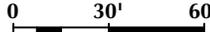


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WELL PAD LEGEND

-  EXISTING WELL LOCATION
-  PROPOSED WELL LOCATION
-  PPL — PROPOSED PIPELINE
-  EPL — EXISTING PIPELINE



HORIZONTAL  1" = 60'

TIMBERLINE (435) 789-1365
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209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale: 1"=60' Date: 11/11/11
REVISED:

SHEET NO:
8 8 OF 16



PHOTO VIEW: FROM PIT CORNER F TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

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 1099 18th Street - Denver, Colorado 80202

WELL PAD - MORGAN STATE 921-36I

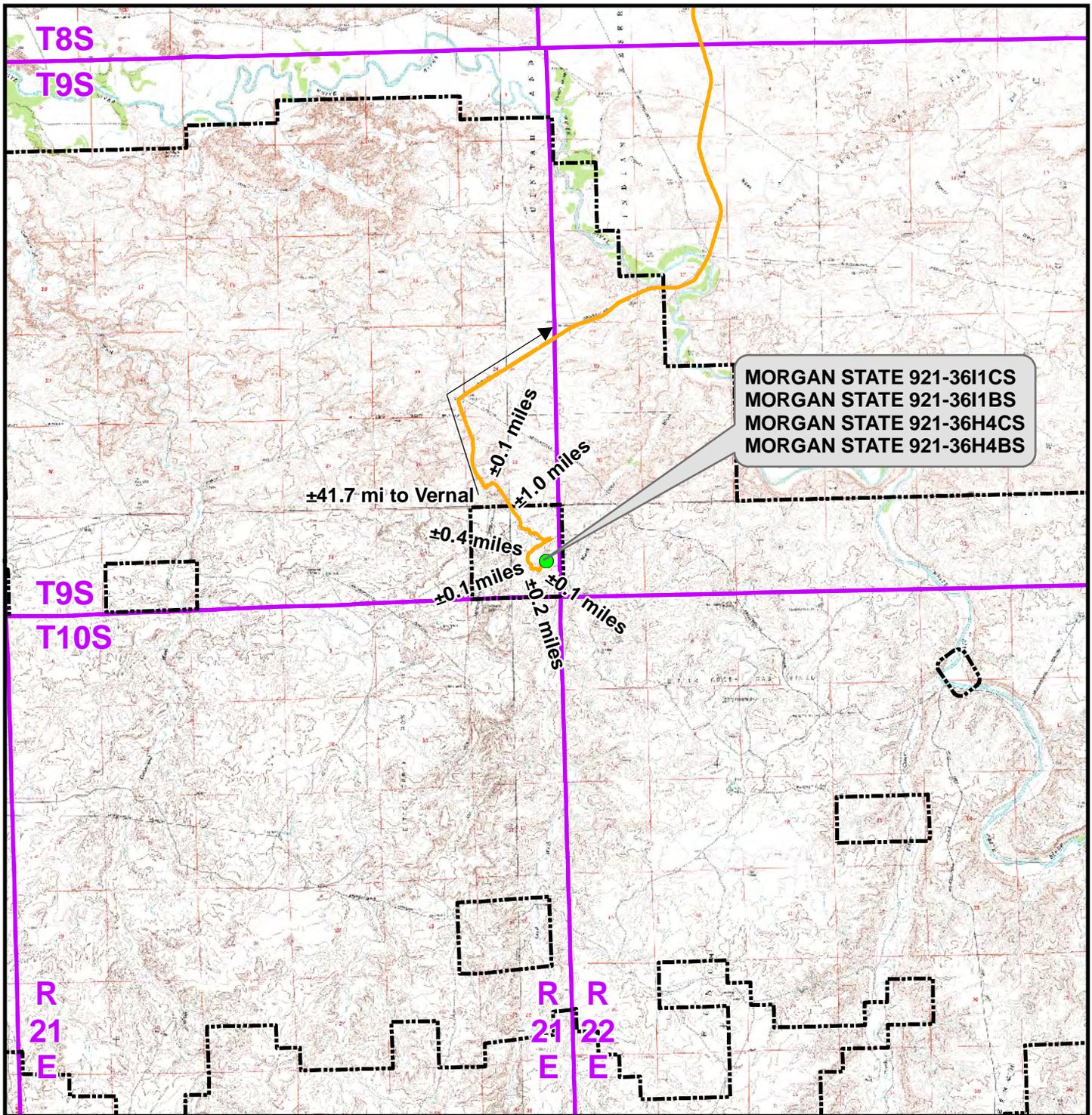
LOCATION PHOTOS
 MORGAN STATE 921-36I1CS,
 MORGAN STATE 921-36I1BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah.



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TIMBERLINE (435) 789-1365
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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 9-20-11	PHOTOS TAKEN BY: J.W.	SHEET NO: 9 9 OF 16
DATE DRAWN: 11-01-11	DRAWN BY: T.J.R.	
Date Last Revised:		



MORGAN STATE 921-36I1CS
 MORGAN STATE 921-36I1BS
 MORGAN STATE 921-36H4CS
 MORGAN STATE 921-36H4BS

±41.7 mi to Vernal
 ±0.1 miles
 ±0.4 miles
 ±1.0 miles
 ±0.1 miles
 ±0.2 miles
 ±0.1 miles

Legend

- Proposed Well Location
- Natural Buttes Unit Boundary
- Access Route - Proposed

Distance From Well Pad - MORGAN STATE 921-36I To Unit Boundary: ±722ft

WELL PAD - MORGAN STATE 921-36I

TOPO A
 MORGAN STATE 921-36I1CS,
 MORGAN STATE 921-36I1BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &
 Gas Onshore L.P.**

1099 18th Street
 Denver, Colorado 80202

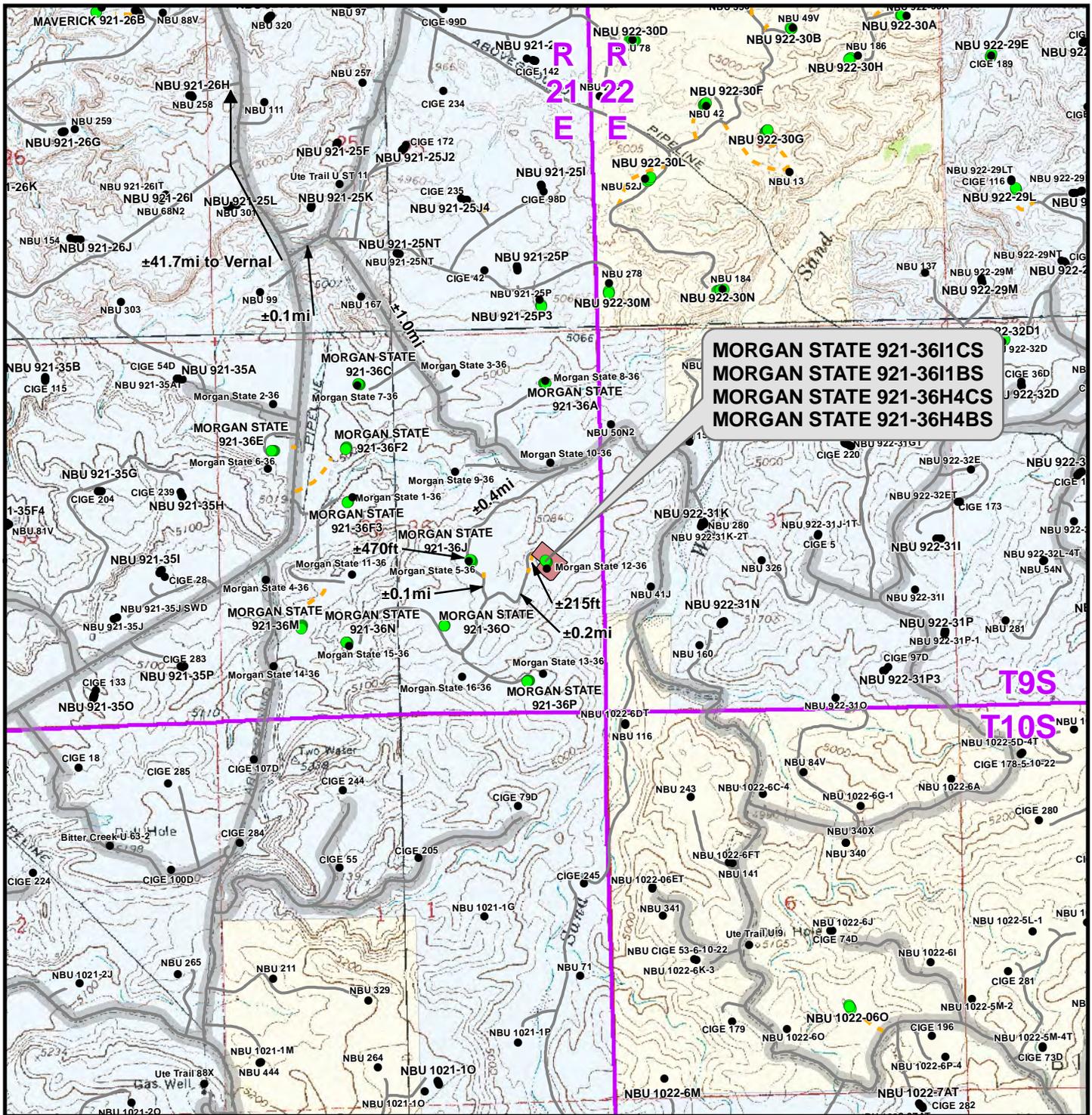


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SCALE: 1:100,000	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 11 Nov 2011	10
REVISED:	DATE:	

10 OF 16



**MORGAN STATE 921-3611CS
MORGAN STATE 921-3611BS
MORGAN STATE 921-36H4CS
MORGAN STATE 921-36H4BS**

Legend

- Well - Proposed
- Well - Existing
- Well Pad
- Road - Proposed
- Road - Existing
- County Road
- Bureau of Land Management
- State
- Indian Reservation
- Private

Total Proposed Road Re-Route Length: ±215ft

WELL PAD - MORGAN STATE 921-361

TOPO B
MORGAN STATE 921-3611CS,
MORGAN STATE 921-3611BS,
MORGAN STATE 921-36H4CS &
MORGAN STATE 921-36H4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., Uintah County, UTAH

**Kerr-McGee Oil &
Gas Onshore L.P.**

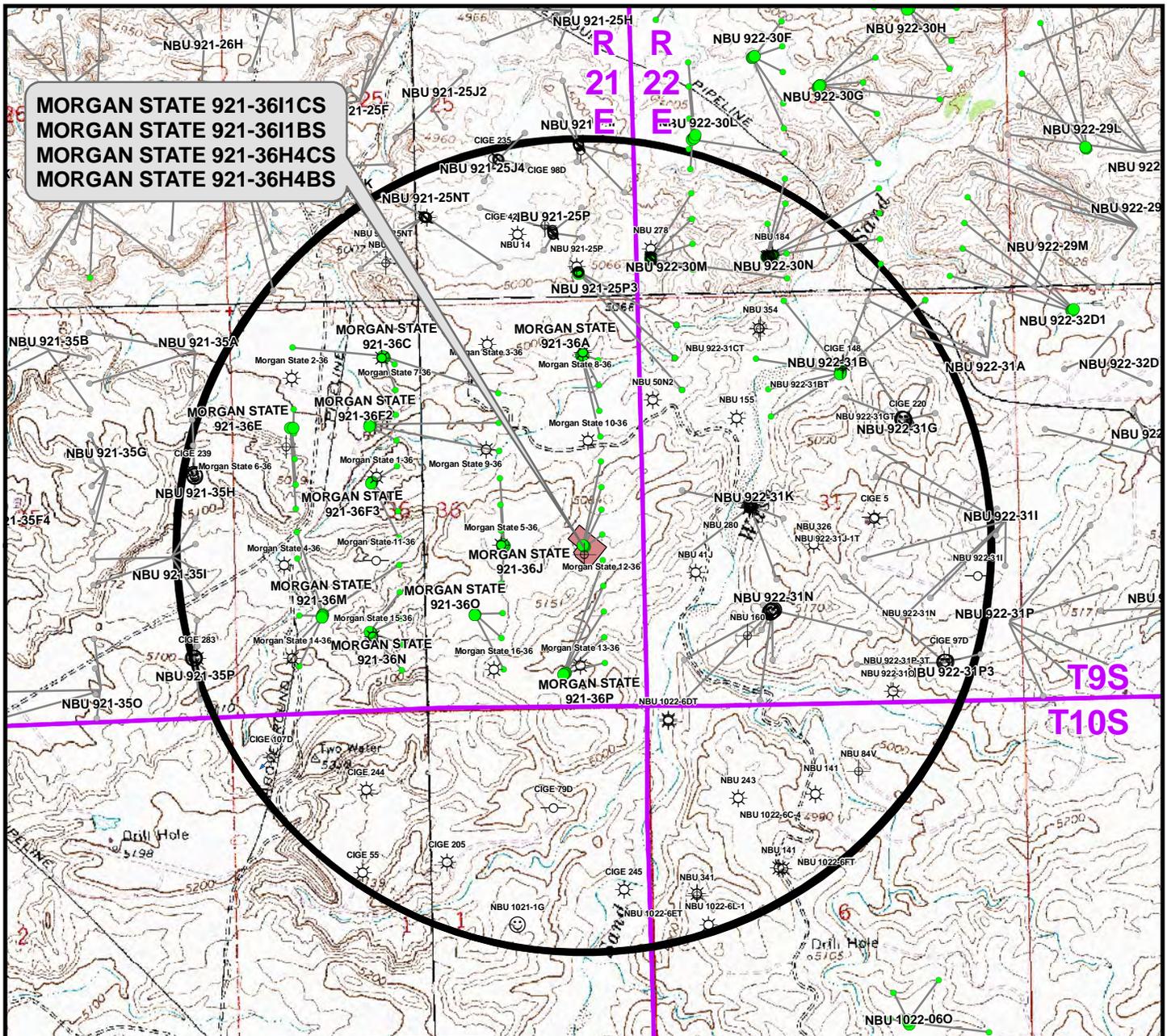
1099 18th Street
Denver, Colorado 80202



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Sheridan, Wyoming 82801
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SCALE: 1" = 2,000ft	NAD83 USP Central	SHEET NO:
DRAWN: TL	DATE: 11 Nov 2011	11
REVISED:	DATE:	



**MORGAN STATE 921-36I1CS
MORGAN STATE 921-36I1BS
MORGAN STATE 921-36H4CS
MORGAN STATE 921-36H4BS**

Well locations derived from Utah Division of Oil, Gas and Mining (UDOGM) (oilgas.ogm.utah.gov). The estimated distances from proposed bore locations to the nearest existing bore locations are based on UDOGM data.

Proposed Well	Nearest Well Bore	Footage
MORGAN STATE 921-36I1CS	Morgan State 12-36	331ft
MORGAN STATE 921-36I1BS	Morgan State 12-36	615ft
MORGAN STATE 921-36H4CS	Morgan State 10-36	628ft
MORGAN STATE 921-36H4BS	Morgan State 10-36	319ft

Legend

- Well - Proposed
- Well Path
- ☀ Producing
- ⊕ Deferred
- Bottom Hole - Proposed
- Well Pad
- ☺ Spudded
- ⊗ Cancelled
- ☀ Active Injector
- ⊕ Plugged & Abandoned
- Bottom Hole - Existing
- ◻ Well - 1 Mile Radius
- APD Approved
- ⊖ Temporarily Abandoned
- ⊗ Location Abandoned
- ⊖ Shut-In
- ⊗ Preliminary Location

WELL PAD - MORGAN STATE 921-36I

TOPO C
MORGAN STATE 921-36I1CS,
MORGAN STATE 921-36I1BS,
MORGAN STATE 921-36H4CS &
MORGAN STATE 921-36H4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &
Gas Onshore L.P.**

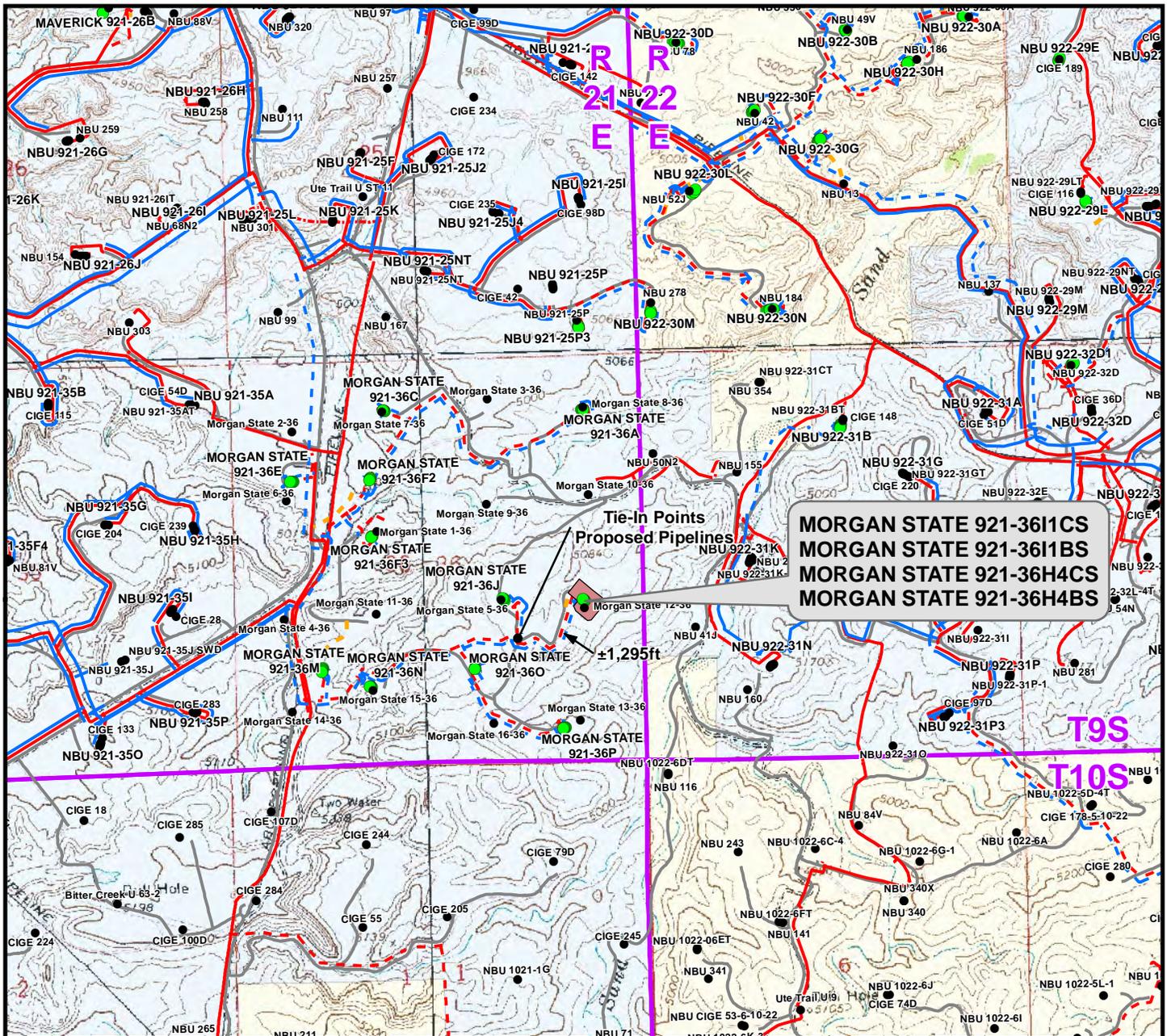
1099 18th Street
Denver, Colorado 80202



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Sheridan, Wyoming 82801
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Fax 307-674-0182

SCALE: 1" = 2,000ft	NAD83 USP Central	12
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	

SHEET NO:
12 OF 16



MORGAN STATE 921-361CS
MORGAN STATE 921-361BS
MORGAN STATE 921-36H4CS
MORGAN STATE 921-36H4BS

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±355ft
Buried 6" (Max.) (Edge of Pad to 36J Intersection)	±1,295ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,650ft

Proposed Gas Pipeline	Length
Buried 6" (Meter House to Edge of Pad)	±355ft
Buried 6" (Edge of Pad to 36J Intersection)	±1,295ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,650ft

Legend	
● Well - Proposed	- - - Gas Pipeline - Proposed
● Well - Existing	- - - Gas Pipeline - To Be Upgraded
■ Well Pad	- - - Gas Pipeline - Existing
- - - Liquid Pipeline - Proposed	- - - Liquid Pipeline - Existing
- - - Road - Proposed	- - - Road - Existing
■ Bureau of Land Management	■ State
■ Indian Reservation	■ Private

WELL PAD - MORGAN STATE 921-361

TOPO D
 MORGAN STATE 921-361CS,
 MORGAN STATE 921-361BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah

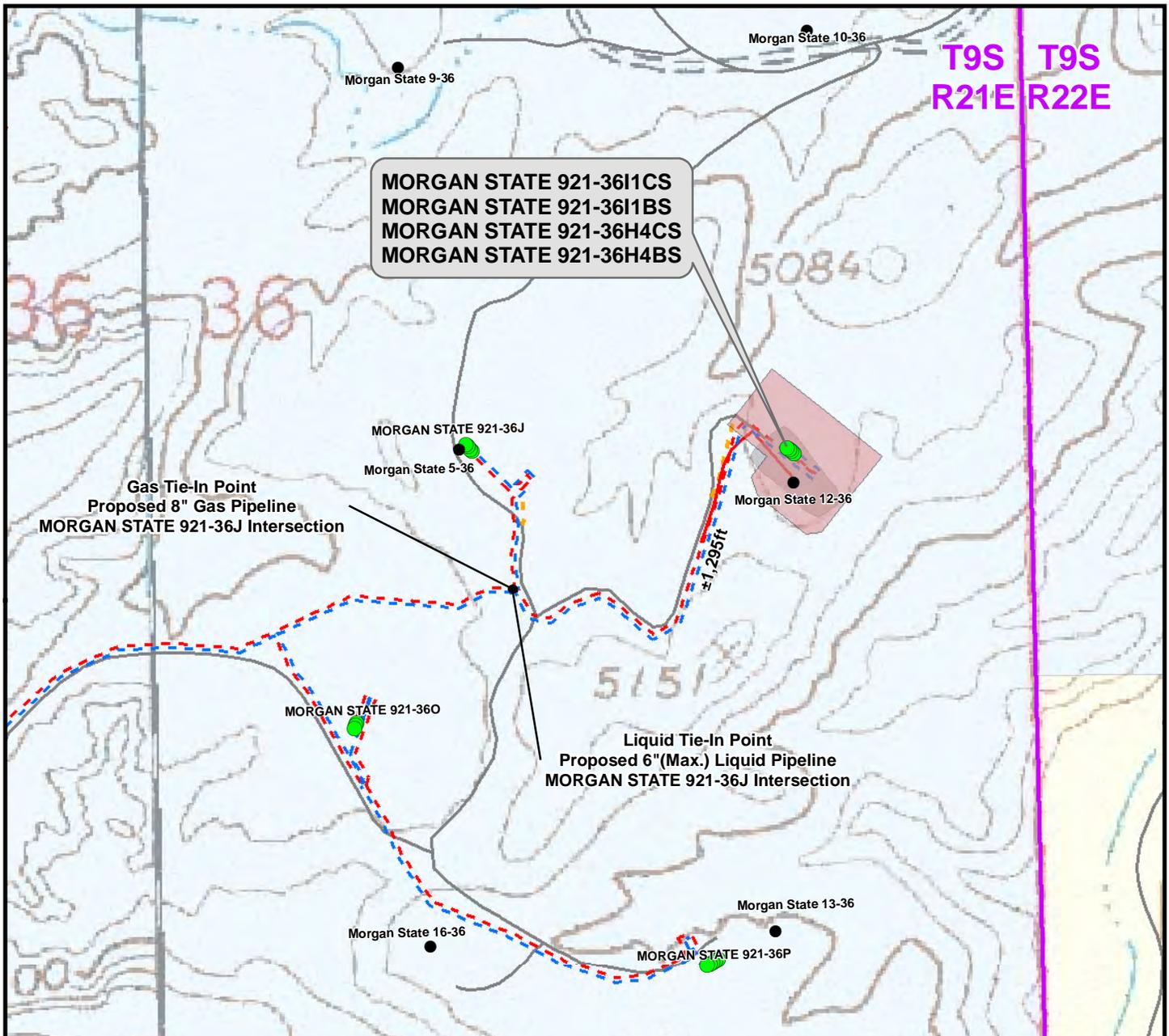
**Kerr-McGee Oil &
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 Denver, Colorado 80202



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SCALE: 1" = 2,000ft	NAD83 USP Central	13 13 OF 16
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	



T9S T9S
R21E R22E

MORGAN STATE 921-361CS
MORGAN STATE 921-361BS
MORGAN STATE 921-36H4CS
MORGAN STATE 921-36H4BS

Gas Tie-In Point
Proposed 8" Gas Pipeline
MORGAN STATE 921-36J Intersection

Liquid Tie-In Point
Proposed 6"(Max.) Liquid Pipeline
MORGAN STATE 921-36J Intersection

±1,295ft

Proposed Liquid Pipeline	Length
----- Buried 6" (Max.) (Meter House to Edge of Pad)	±355ft
----- Buried 6" (Max.) (Edge of Pad to 36J Intersection)	±1,295ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±1,650ft

Proposed Gas Pipeline	Length
----- Buried 6" (Meter House to Edge of Pad)	±355ft
----- Buried 6" (Edge of Pad to 36J Intersection)	±1,295ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±1,650ft

Legend

- Well - Proposed ■ Well Pad - Proposed - - - Gas Pipeline - Proposed - - - Liquid Pipeline - Proposed — Road - Existing ■ Bureau of Land Management
- Well - Existing ■ Well Pad - Existing - - - Gas Pipeline - To Be Upgraded — Liquid Pipeline - Existing — Road - Proposed ■ Indian Reservation
- Gas Pipeline - Existing — State
- Private

WELL PAD - MORGAN STATE 921-36I

TOPO D2 (PAD & PIPELINE DETAIL)
MORGAN STATE 921-361CS,
MORGAN STATE 921-361BS,
MORGAN STATE 921-36H4CS &
MORGAN STATE 921-36H4BS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &
Gas Onshore L.P.**

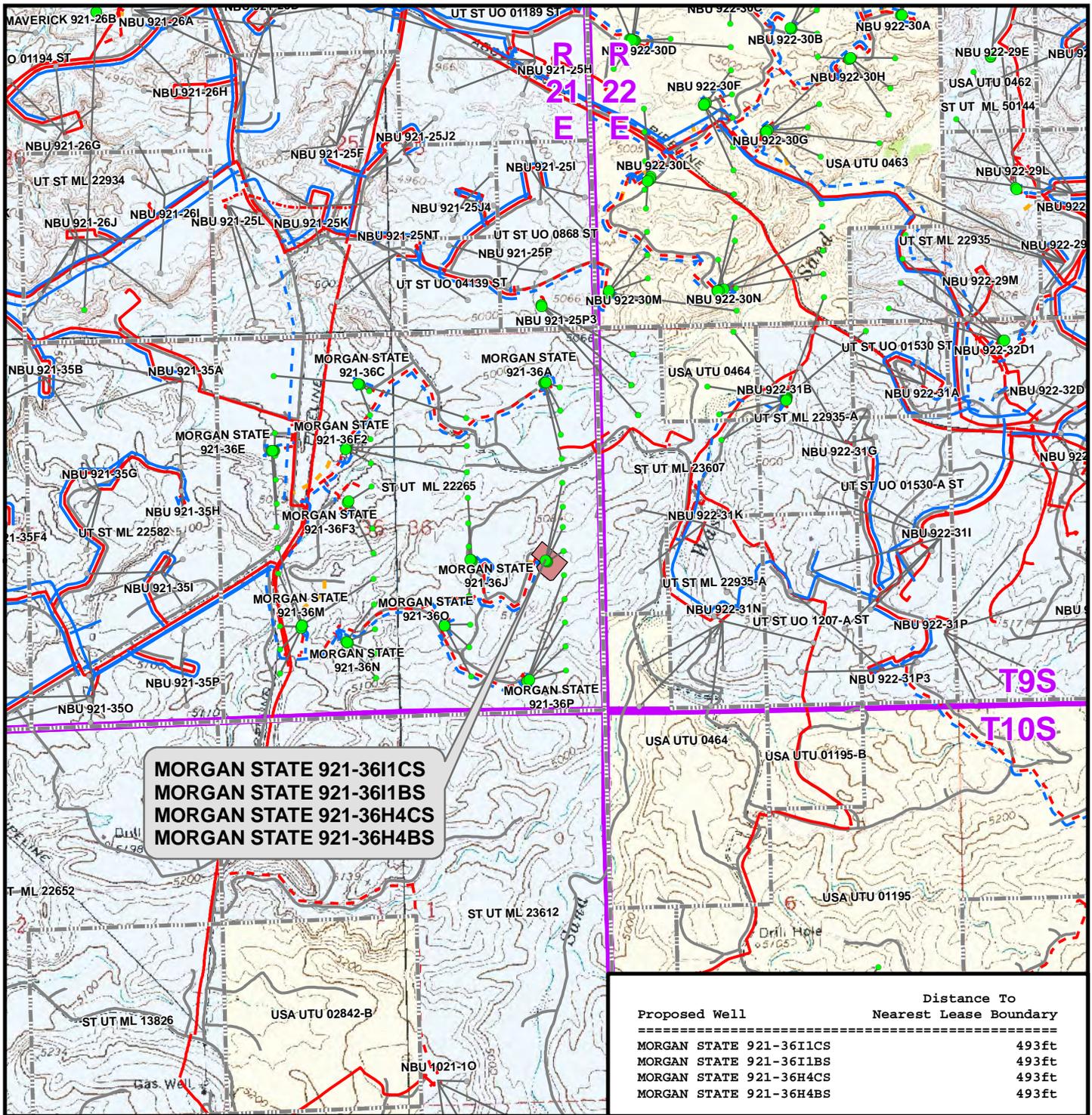
1099 18th Street
Denver, Colorado 80202



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2155 North Main Street
Sheridan, Wyoming 82801
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Fax 307-674-0182



SCALE: 1" = 500ft	NAD83 USP Central	14 14 OF 16
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	



MORGAN STATE 921-36I1CS
MORGAN STATE 921-36I1BS
MORGAN STATE 921-36H4CS
MORGAN STATE 921-36H4BS

Proposed Well	Distance To Nearest Lease Boundary
MORGAN STATE 921-36I1CS	493ft
MORGAN STATE 921-36I1BS	493ft
MORGAN STATE 921-36H4CS	493ft
MORGAN STATE 921-36H4BS	493ft

Legend

- Well - Proposed (Green dot)
- Bottom Hole - Proposed (Grey dot)
- Bottom Hole - Existing (Black dot)
- Well Path (Black line)
- Well Pad (Red shaded area)
- Lease Boundary (Black dashed line)
- Gas Pipeline - Proposed (Red dashed line)
- Gas Pipeline - To Be Upgraded (Red dotted line)
- Gas Pipeline - Existing (Red solid line)
- Liquid Pipeline - Proposed (Blue dashed line)
- Liquid Pipeline - Existing (Blue solid line)
- Road - Proposed (Yellow dashed line)
- Road - Existing (Grey solid line)
- Bureau of Land Management (Yellow shaded area)
- Indian Reservation (Red shaded area)
- State (Blue shaded area)
- Private (White shaded area)

WELL PAD - MORGAN STATE 921-36I

TOPO E
 MORGAN STATE 921-36I1CS,
 MORGAN STATE 921-36I1BS,
 MORGAN STATE 921-36H4CS &
 MORGAN STATE 921-36H4BS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah

Kerr-McGee Oil & Gas Onshore L.P.

1099 18th Street
 Denver, Colorado 80202

CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
 Phone 307-674-0609
 Fax 307-674-0182

609

SCALE: 1" = 2,000ft
 DRAWN: TL
 REVISED:

NAD83 USP Central
 DATE: 11 Nov 2011
 DATE:

SHEET NO:
15
 15 OF 16

Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – MORGAN STATE 921-36I
WELLS – MORGAN STATE 921-36I1CS, MORGAN STATE 921-36I1BS,
MORGAN STATE 921-36H4CS & MORGAN STATE 921-36H4BS
Section 36, T9S, R21E, S.L.B.&M.

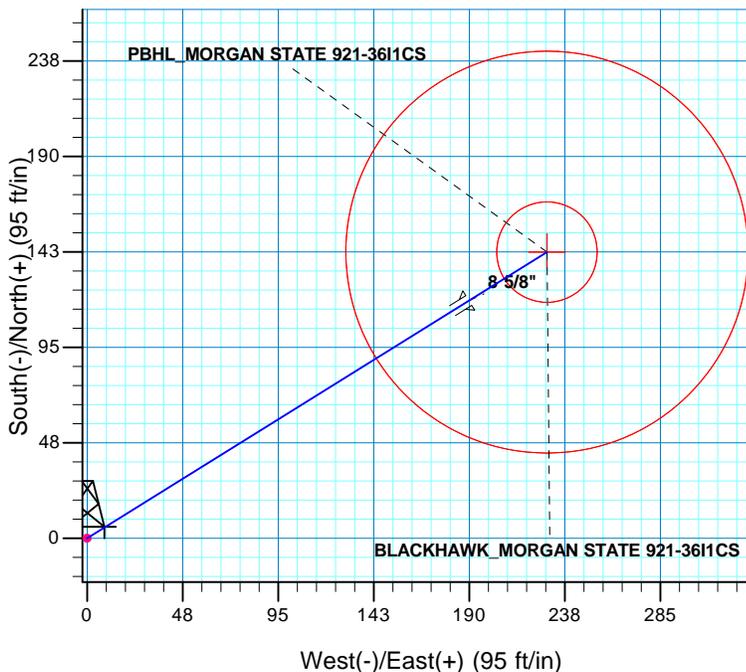
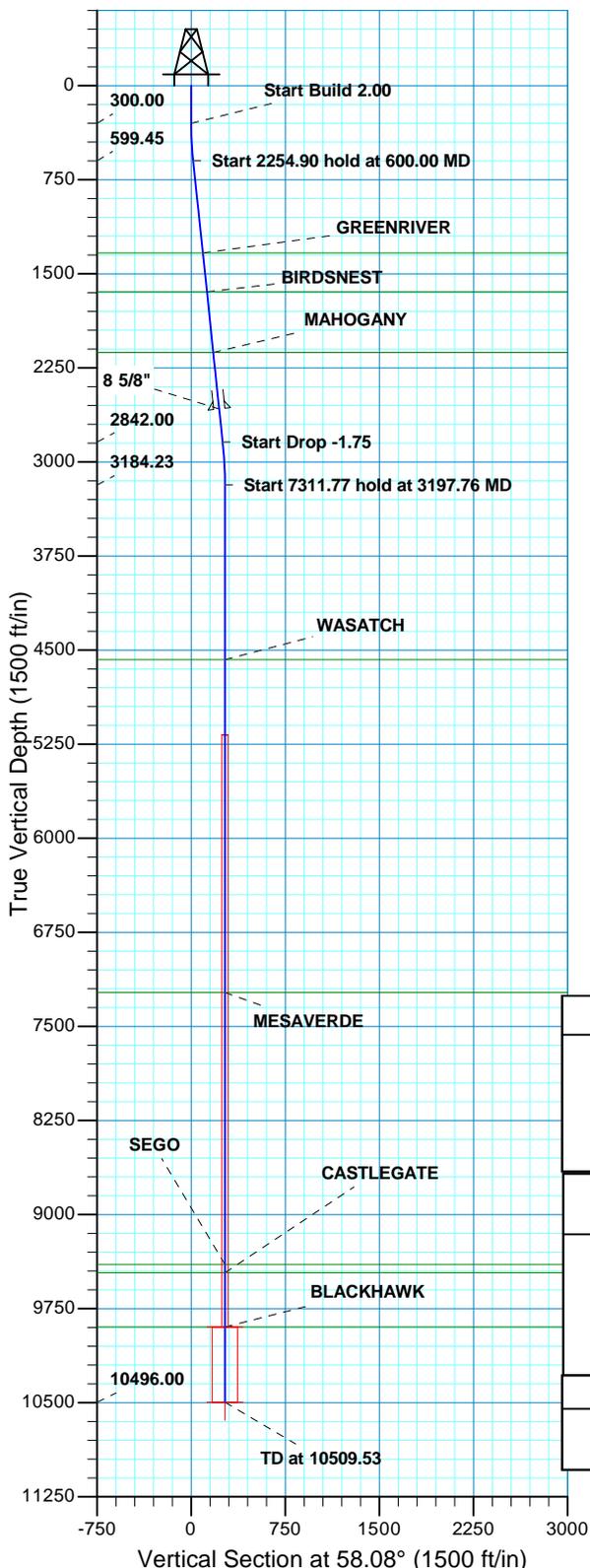
From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.2 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 1.0 miles to a service road to the southwest. Exit right and proceed in a southwesterly direction approximately 0.4 miles to the proposed MORGAN STATE 921-36J well pad. Proceed in a southeasterly direction approximately 470 feet through the proposed MORGAN STATE 921-36J well pad to a second service road to the south. Proceed in a southerly direction along the second service road approximately 0.1 miles to a third service road to the northeast. Exit left and proceed in a northeasterly direction along the third service road approximately 0.2 miles to the proposed access road to the northeast. Follow road flags in a northeasterly direction approximately 215 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 43.6 miles in a southerly direction.

WELL DETAILS: MORGAN STATE 921-361CS								
GL 5035 & KB 4 @ 5039.00ft (ASSUMED)								
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude			
0.00	0.00	14526371.20	2062653.99	39° 59' 27.935 N	109° 29' 33.180 W			
DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BLACKHAWK	9896.00	142.41	228.60	14526517.46	2062880.15	39° 59' 29.342 N	109° 29' 30.242 W	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10496.00	142.41	228.60	14526517.46	2062880.15	39° 59' 29.342 N	109° 29' 30.242 W	Circle (Radius: 100.00)
- plan hits target center								

Azimuths to True North
Magnetic North: 11.01°

Magnetic Field
Strength: 52278.4snT
Dip Angle: 65.85°
Date: 2011/12/02
Model: IGRF2010



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
600.00	6.00	58.08	599.45	8.30	13.32	2.00	58.08	15.69	
2854.90	6.00	58.08	2842.00	132.92	213.38	0.00	0.00	251.40	
3197.76	0.00	0.00	3184.23	142.41	228.60	1.75	180.00	269.33	
10509.53	0.00	0.00	10496.00	142.41	228.60	0.00	0.00	269.33	PBHL_MORGAN STATE 921-361CS
PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N					FORMATION TOP DETAILS				
Geodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 36 T9S R21E System Datum: Mean Sea Level					TVDPath	MDPath	Formation		
					1334.00	1338.59	GREENRIVER		
					1645.00	1651.31	BIRDSNEST		
					2128.00	2136.97	MAHOGANY		
					4577.00	4590.53	WASATCH		
					7231.00	7244.53	MESAVERDE		
9398.00	9411.53	SEGO							
9464.00	9477.53	CASTLEGATE							
9896.00	9909.53	BLACKHAWK							
CASING DETAILS									
TVD	MD	Name	Size						
2578.00	2589.45	8 5/8"	8.625						



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

MORGAN STATE 921-36I

MORGAN STATE 921-36I1CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

02 December, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-3611CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Site:	MORGAN STATE 921-361	North Reference:	True
Well:	MORGAN STATE 921-3611CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	MORGAN STATE 921-361, SECTION 36 T9S R21E				
Site Position:	Northing:	14,526,390.12 usft	Latitude:	39° 59' 28.126 N	
From:	Lat/Long	Easting:	2,062,630.69 usft	Longitude:	109° 29' 33.475 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.97 °

Well	MORGAN STATE 921-3611CS, 2090 FSL 722 FEL					
Well Position	+N/-S	-19.30 ft	Northing:	14,526,371.21 usft	Latitude:	39° 59' 27.935 N
	+E/-W	22.97 ft	Easting:	2,062,653.98 usft	Longitude:	109° 29' 33.180 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,035.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/12/02	11.01	65.85	52,278

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	58.08

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	6.00	58.08	599.45	8.30	13.32	2.00	2.00	0.00	58.08	
2,854.90	6.00	58.08	2,842.00	132.92	213.38	0.00	0.00	0.00	0.00	
3,197.76	0.00	0.00	3,184.23	142.41	228.60	1.75	-1.75	0.00	180.00	
10,509.53	0.00	0.00	10,496.00	142.41	228.60	0.00	0.00	0.00	0.00	PBHL_MORGAN ST/



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-361CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Site:	MORGAN STATE 921-361	North Reference:	True
Well:	MORGAN STATE 921-361CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00										
400.00	2.00	58.08	399.98	0.92	1.48	1.75	2.00	2.00	2.00	0.00
500.00	4.00	58.08	499.84	3.69	5.92	6.98	2.00	2.00	2.00	0.00
600.00	6.00	58.08	599.45	8.30	13.32	15.69	2.00	2.00	2.00	0.00
Start 2254.90 hold at 600.00 MD										
700.00	6.00	58.08	698.90	13.82	22.19	26.15	0.00	0.00	0.00	0.00
800.00	6.00	58.08	798.36	19.35	31.06	36.60	0.00	0.00	0.00	0.00
900.00	6.00	58.08	897.81	24.88	39.94	47.05	0.00	0.00	0.00	0.00
1,000.00	6.00	58.08	997.26	30.41	48.81	57.51	0.00	0.00	0.00	0.00
1,100.00	6.00	58.08	1,096.71	35.93	57.68	67.96	0.00	0.00	0.00	0.00
1,200.00	6.00	58.08	1,196.17	41.46	66.55	78.41	0.00	0.00	0.00	0.00
1,300.00	6.00	58.08	1,295.62	46.99	75.43	88.86	0.00	0.00	0.00	0.00
1,338.59	6.00	58.08	1,334.00	49.12	78.85	92.90	0.00	0.00	0.00	0.00
GREENRIVER										
1,400.00	6.00	58.08	1,395.07	52.51	84.30	99.32	0.00	0.00	0.00	0.00
1,500.00	6.00	58.08	1,494.52	58.04	93.17	109.77	0.00	0.00	0.00	0.00
1,600.00	6.00	58.08	1,593.97	63.57	102.04	120.22	0.00	0.00	0.00	0.00
1,651.31	6.00	58.08	1,645.00	66.40	106.59	125.59	0.00	0.00	0.00	0.00
BIRDSNEST										
1,700.00	6.00	58.08	1,693.43	69.09	110.91	130.67	0.00	0.00	0.00	0.00
1,800.00	6.00	58.08	1,792.88	74.62	119.79	141.13	0.00	0.00	0.00	0.00
1,900.00	6.00	58.08	1,892.33	80.15	128.66	151.58	0.00	0.00	0.00	0.00
2,000.00	6.00	58.08	1,991.78	85.67	137.53	162.03	0.00	0.00	0.00	0.00
2,100.00	6.00	58.08	2,091.23	91.20	146.40	172.49	0.00	0.00	0.00	0.00
2,136.97	6.00	58.08	2,128.00	93.24	149.68	176.35	0.00	0.00	0.00	0.00
MAHOGANY										
2,200.00	6.00	58.08	2,190.69	96.73	155.28	182.94	0.00	0.00	0.00	0.00
2,300.00	6.00	58.08	2,290.14	102.25	164.15	193.39	0.00	0.00	0.00	0.00
2,400.00	6.00	58.08	2,389.59	107.78	173.02	203.84	0.00	0.00	0.00	0.00
2,500.00	6.00	58.08	2,489.04	113.31	181.89	214.30	0.00	0.00	0.00	0.00
2,589.45	6.00	58.08	2,578.00	118.25	189.83	223.65	0.00	0.00	0.00	0.00
8 5/8"										
2,600.00	6.00	58.08	2,588.50	118.83	190.76	224.75	0.00	0.00	0.00	0.00
2,700.00	6.00	58.08	2,687.95	124.36	199.64	235.20	0.00	0.00	0.00	0.00
2,800.00	6.00	58.08	2,787.40	129.89	208.51	245.66	0.00	0.00	0.00	0.00
2,854.90	6.00	58.08	2,842.00	132.92	213.38	251.40	0.00	0.00	0.00	0.00
Start Drop -1.75										
2,900.00	5.21	58.08	2,886.88	135.25	217.12	255.80	1.75	-1.75	0.00	0.00
3,000.00	3.46	58.08	2,986.59	139.25	223.54	263.36	1.75	-1.75	0.00	0.00
3,100.00	1.71	58.08	3,086.49	141.63	227.36	267.87	1.75	-1.75	0.00	0.00
3,197.76	0.00	0.00	3,184.23	142.41	228.60	269.33	1.75	-1.75	0.00	0.00
Start 7311.77 hold at 3197.76 MD										
3,200.00	0.00	0.00	3,186.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,286.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,386.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,486.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,586.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,686.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,786.47	142.41	228.60	269.33	0.00	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-361CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Site:	MORGAN STATE 921-361	North Reference:	True
Well:	MORGAN STATE 921-361CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	0.00	0.00	3,886.47	142.41	228.60	269.33	0.00	0.00	0.00
4,000.00	0.00	0.00	3,986.47	142.41	228.60	269.33	0.00	0.00	0.00
4,100.00	0.00	0.00	4,086.47	142.41	228.60	269.33	0.00	0.00	0.00
4,200.00	0.00	0.00	4,186.47	142.41	228.60	269.33	0.00	0.00	0.00
4,300.00	0.00	0.00	4,286.47	142.41	228.60	269.33	0.00	0.00	0.00
4,400.00	0.00	0.00	4,386.47	142.41	228.60	269.33	0.00	0.00	0.00
4,500.00	0.00	0.00	4,486.47	142.41	228.60	269.33	0.00	0.00	0.00
4,590.53	0.00	0.00	4,577.00	142.41	228.60	269.33	0.00	0.00	0.00
WASATCH									
4,600.00	0.00	0.00	4,586.47	142.41	228.60	269.33	0.00	0.00	0.00
4,700.00	0.00	0.00	4,686.47	142.41	228.60	269.33	0.00	0.00	0.00
4,800.00	0.00	0.00	4,786.47	142.41	228.60	269.33	0.00	0.00	0.00
4,900.00	0.00	0.00	4,886.47	142.41	228.60	269.33	0.00	0.00	0.00
5,000.00	0.00	0.00	4,986.47	142.41	228.60	269.33	0.00	0.00	0.00
5,100.00	0.00	0.00	5,086.47	142.41	228.60	269.33	0.00	0.00	0.00
5,200.00	0.00	0.00	5,186.47	142.41	228.60	269.33	0.00	0.00	0.00
5,300.00	0.00	0.00	5,286.47	142.41	228.60	269.33	0.00	0.00	0.00
5,400.00	0.00	0.00	5,386.47	142.41	228.60	269.33	0.00	0.00	0.00
5,500.00	0.00	0.00	5,486.47	142.41	228.60	269.33	0.00	0.00	0.00
5,600.00	0.00	0.00	5,586.47	142.41	228.60	269.33	0.00	0.00	0.00
5,700.00	0.00	0.00	5,686.47	142.41	228.60	269.33	0.00	0.00	0.00
5,800.00	0.00	0.00	5,786.47	142.41	228.60	269.33	0.00	0.00	0.00
5,900.00	0.00	0.00	5,886.47	142.41	228.60	269.33	0.00	0.00	0.00
6,000.00	0.00	0.00	5,986.47	142.41	228.60	269.33	0.00	0.00	0.00
6,100.00	0.00	0.00	6,086.47	142.41	228.60	269.33	0.00	0.00	0.00
6,200.00	0.00	0.00	6,186.47	142.41	228.60	269.33	0.00	0.00	0.00
6,300.00	0.00	0.00	6,286.47	142.41	228.60	269.33	0.00	0.00	0.00
6,400.00	0.00	0.00	6,386.47	142.41	228.60	269.33	0.00	0.00	0.00
6,500.00	0.00	0.00	6,486.47	142.41	228.60	269.33	0.00	0.00	0.00
6,600.00	0.00	0.00	6,586.47	142.41	228.60	269.33	0.00	0.00	0.00
6,700.00	0.00	0.00	6,686.47	142.41	228.60	269.33	0.00	0.00	0.00
6,800.00	0.00	0.00	6,786.47	142.41	228.60	269.33	0.00	0.00	0.00
6,900.00	0.00	0.00	6,886.47	142.41	228.60	269.33	0.00	0.00	0.00
7,000.00	0.00	0.00	6,986.47	142.41	228.60	269.33	0.00	0.00	0.00
7,100.00	0.00	0.00	7,086.47	142.41	228.60	269.33	0.00	0.00	0.00
7,200.00	0.00	0.00	7,186.47	142.41	228.60	269.33	0.00	0.00	0.00
7,244.53	0.00	0.00	7,231.00	142.41	228.60	269.33	0.00	0.00	0.00
MESAVERDE									
7,300.00	0.00	0.00	7,286.47	142.41	228.60	269.33	0.00	0.00	0.00
7,400.00	0.00	0.00	7,386.47	142.41	228.60	269.33	0.00	0.00	0.00
7,500.00	0.00	0.00	7,486.47	142.41	228.60	269.33	0.00	0.00	0.00
7,600.00	0.00	0.00	7,586.47	142.41	228.60	269.33	0.00	0.00	0.00
7,700.00	0.00	0.00	7,686.47	142.41	228.60	269.33	0.00	0.00	0.00
7,800.00	0.00	0.00	7,786.47	142.41	228.60	269.33	0.00	0.00	0.00
7,900.00	0.00	0.00	7,886.47	142.41	228.60	269.33	0.00	0.00	0.00
8,000.00	0.00	0.00	7,986.47	142.41	228.60	269.33	0.00	0.00	0.00
8,100.00	0.00	0.00	8,086.47	142.41	228.60	269.33	0.00	0.00	0.00
8,200.00	0.00	0.00	8,186.47	142.41	228.60	269.33	0.00	0.00	0.00
8,300.00	0.00	0.00	8,286.47	142.41	228.60	269.33	0.00	0.00	0.00
8,400.00	0.00	0.00	8,386.47	142.41	228.60	269.33	0.00	0.00	0.00
8,500.00	0.00	0.00	8,486.47	142.41	228.60	269.33	0.00	0.00	0.00
8,600.00	0.00	0.00	8,586.47	142.41	228.60	269.33	0.00	0.00	0.00
8,700.00	0.00	0.00	8,686.47	142.41	228.60	269.33	0.00	0.00	0.00
8,800.00	0.00	0.00	8,786.47	142.41	228.60	269.33	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-361CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Site:	MORGAN STATE 921-361	North Reference:	True
Well:	MORGAN STATE 921-361CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,900.00	0.00	0.00	8,886.47	142.41	228.60	269.33	0.00	0.00	0.00
9,000.00	0.00	0.00	8,986.47	142.41	228.60	269.33	0.00	0.00	0.00
9,100.00	0.00	0.00	9,086.47	142.41	228.60	269.33	0.00	0.00	0.00
9,200.00	0.00	0.00	9,186.47	142.41	228.60	269.33	0.00	0.00	0.00
9,300.00	0.00	0.00	9,286.47	142.41	228.60	269.33	0.00	0.00	0.00
9,400.00	0.00	0.00	9,386.47	142.41	228.60	269.33	0.00	0.00	0.00
9,411.53	0.00	0.00	9,398.00	142.41	228.60	269.33	0.00	0.00	0.00
SEGO									
9,477.53	0.00	0.00	9,464.00	142.41	228.60	269.33	0.00	0.00	0.00
CASTLEGATE									
9,500.00	0.00	0.00	9,486.47	142.41	228.60	269.33	0.00	0.00	0.00
9,600.00	0.00	0.00	9,586.47	142.41	228.60	269.33	0.00	0.00	0.00
9,700.00	0.00	0.00	9,686.47	142.41	228.60	269.33	0.00	0.00	0.00
9,800.00	0.00	0.00	9,786.47	142.41	228.60	269.33	0.00	0.00	0.00
9,900.00	0.00	0.00	9,886.47	142.41	228.60	269.33	0.00	0.00	0.00
9,909.53	0.00	0.00	9,896.00	142.41	228.60	269.33	0.00	0.00	0.00
BLACKHAWK - BLACKHAWK_MORGAN STATE 921-361CS									
10,000.00	0.00	0.00	9,986.47	142.41	228.60	269.33	0.00	0.00	0.00
10,100.00	0.00	0.00	10,086.47	142.41	228.60	269.33	0.00	0.00	0.00
10,200.00	0.00	0.00	10,186.47	142.41	228.60	269.33	0.00	0.00	0.00
10,300.00	0.00	0.00	10,286.47	142.41	228.60	269.33	0.00	0.00	0.00
10,400.00	0.00	0.00	10,386.47	142.41	228.60	269.33	0.00	0.00	0.00
10,500.00	0.00	0.00	10,486.47	142.41	228.60	269.33	0.00	0.00	0.00
10,509.53	0.00	0.00	10,496.00	142.41	228.60	269.33	0.00	0.00	0.00
PBHL_MORGAN STATE 921-361CS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BLACKHAWK_MORGAI - hit/miss target - Shape	0.00	0.00	9,896.00	142.41	228.60	14,526,517.46	2,062,880.14	39° 59' 29.342 N	109° 29' 30.242 W
PBHL_MORGAN STATI - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,496.00	142.41	228.60	14,526,517.46	2,062,880.14	39° 59' 29.342 N	109° 29' 30.242 W

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,589.45	2,578.00	8 5/8"	8.625	11.000	



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-361CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5035 & KB 4 @ 5039.00ft (ASSUMED)
Site:	MORGAN STATE 921-361	North Reference:	True
Well:	MORGAN STATE 921-361CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,338.59	1,334.00	GREENRIVER			
1,651.31	1,645.00	BIRDSNEST			
2,136.97	2,128.00	MAHOGANY			
4,590.53	4,577.00	WASATCH			
7,244.53	7,231.00	MESAVERDE			
9,411.53	9,398.00	SEGO			
9,477.53	9,464.00	CASTLEGATE			
9,909.53	9,896.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
300.00	300.00	0.00	0.00	Start Build 2.00	
600.00	599.45	8.30	13.32	Start 2254.90 hold at 600.00 MD	
2,854.90	2,842.00	132.92	213.38	Start Drop -1.75	
3,197.76	3,184.23	142.41	228.60	Start 7311.77 hold at 3197.76 MD	
10,509.53	10,496.00	142.41	228.60	TD at 10509.53	

MORGAN STATE 921-36H4BS

Surface:	2108 FSL / 745 FEL	NESE	Lot
BHL:	2071 FNL / 493 FEL	SENE	Lot

MORGAN STATE 921-36H4CS

Surface:	2102 FSL / 737 FEL	NESE	Lot
BHL:	2402 FNL / 493 FEL	SENE	Lot

MORGAN STATE 921-36I1BS

Surface:	2096 FSL / 729 FEL	NESE	Lot
BHL:	2568 FSL / 493 FEL	NESE	Lot

MORGAN STATE 921-36I1CS

Surface:	2090 FSL / 722 FEL	NESE	Lot
BHL:	2237 FSL / 493 FEL	NESE	Lot

Pad: MORGAN STATE 921-36I PAD

Section 36 T9S R21E
Mineral Lease: ML-22265

Uintah County, Utah
Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. Existing Roads:

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

Approximately $\pm 215'$ (0.04 miles) of proposed road re-route is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the Morgan State 12-36. The Morgan State 12-36 well location is a plugged and abandoned well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of December 5, 2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Gathering Facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 1,650'$ and the individual segments are broken up as follows:

- ±355' (0.1 miles) –New 6" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±1,295' (0.2 miles) –New 6" buried gas pipeline from the edge of pad to the 921-36J intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±1,650' and the individual segments are broken up as follows:

- ±355' (0.1 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±1,295' (0.2 miles) –New 6" buried liquid pipeline from the edge of pad to the 921-36J intersection. Please refer to Topo D2 - Pad and Pipeline Detail.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
 Ace Oilfield in Sec. 2 T6S R20E
 MC&MC in Sec. 12 T6S R19E
 Pipeline Facility in Sec. 36 T9S R20E
 Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
 Bonanza Evaporation Pond in Sec. 2 T10S R23E
 Ouray #1 SWD in Sec. 1 T9S R21E
 NBU 159 SWD in Sec. 35 T9S R21E
 CIGE 112D SWD in Sec. 19 T9S R21E
 CIGE 114 SWD in Sec. 34 T9S R21E
 NBU 921-34K SWD in Sec. 34 T9S R21E
 NBU 921-33F SWD in Sec. 33 T9S R21E
 NBU 921-34L SWD in Sec. 34 T9S R21E

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions, or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum

trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be release into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as the hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods. (e.g. solidification)

Any additional pits necessary for subsequent operations, such as temporary flare pits, or workover pits, will contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of the work.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/

completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

L. Other Information:

None

M. Lessee's or Operators' Representative & Certification:

Danielle Piernot
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.



Danielle Piernot

December 19, 2011

Date



Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
DENVER, CO 80217-3779

December 14, 2011

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
Morgan State 921-3611CS
T9S-R21E
Section 36: NESE (Surface), NESE (Bottom Hole)
Surface: 2090' FSL, 722' FEL
Bottom Hole: 2237' FSL, 493' FEL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

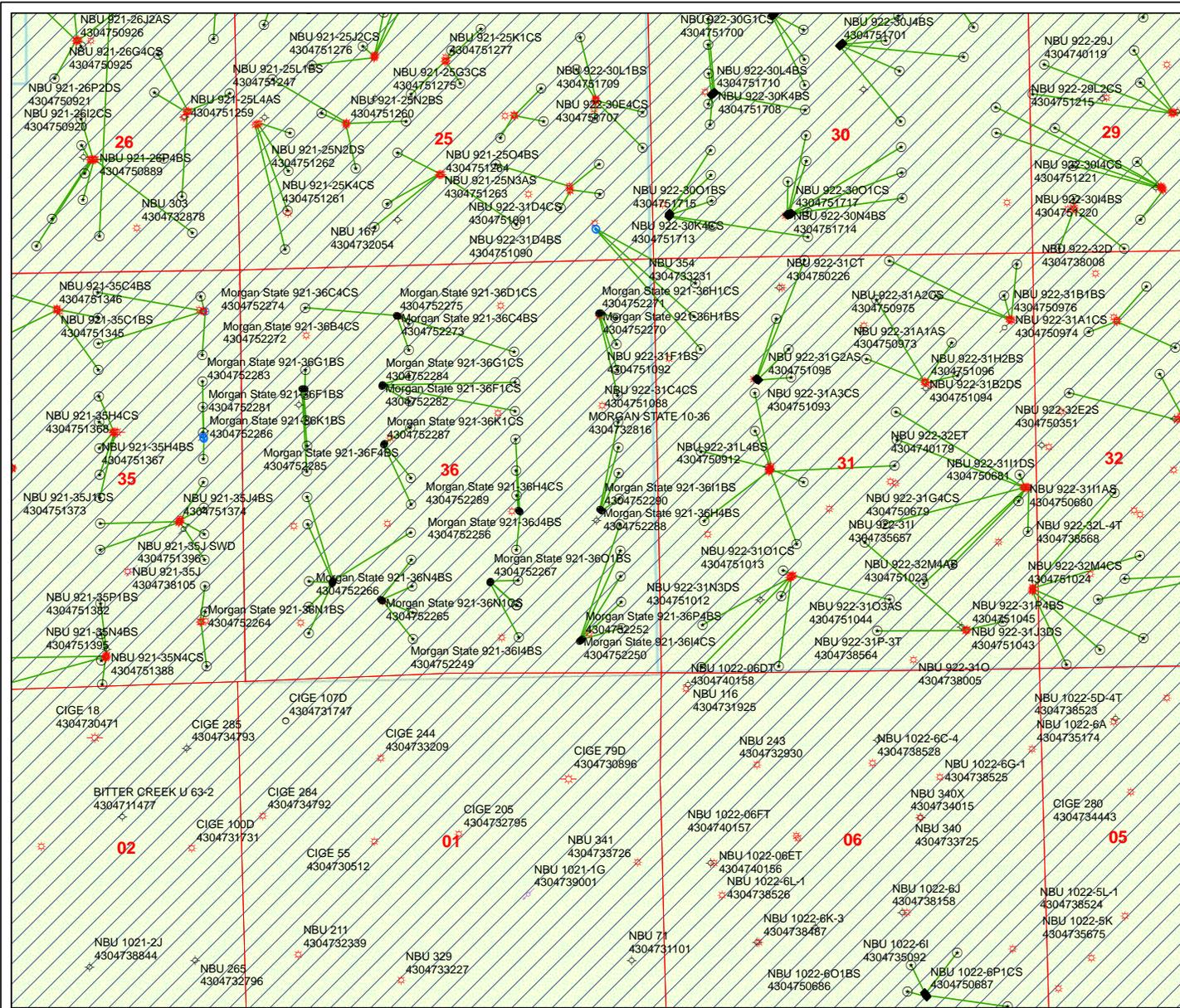
KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

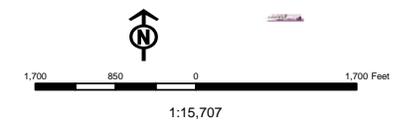
Joe Matney
Sr. Staff Landman

API Number: 4304752251
Well Name: Morgan State 921-3611CS
Township T0.9 Range R2.1 Section 36
Meridian: SLBM
 Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:
 Map Produced by Diana Mason



Units STATUS	Wells Query Status
ACTIVE	APD - Approved Permit
EXPLORATORY	DRL - Spudded (Drilling Commenced)
GAS STORAGE	GIW - Gas Injection
NF PP OIL	GS - Gas Storage
PP OIL	LA - Location Abandoned
NF SECONDARY	LOC - New Location
PI OIL	OPS - Operation Suspended
PP GAS	PA - Plugged Abandoned
PP GEOTHERM	PGW - Producing Gas Well
PP OIL	POW - Producing Oil Well
SECONDARY	RET - Returned APD
TERMINATED	SGW - Shut-in Gas Well
Unknown	SOW - Shut-in Oil Well
ABANDONED	TA - Temp. Abandoned
ACTIVE	TW - Test Well
COMBINED	WDW - Water Disposal
INACTIVE	WWI - Water Injection Well
STORAGE	WSW - Water Supply Well
TERMINATED	



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-3611CS 4			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2569	10496		
Previous Shoe Setting Depth (TVD)	0	2569		
Max Mud Weight (ppg)	8.3	13.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	10690		
Operators Max Anticipated Pressure (psi)	6927	12.7		

Calculations	Surf String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	1113		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	805	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	548	NO	Reasonable depth in area
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	548	NO	
Required Casing/BOPE Test Pressure=		2373	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient	

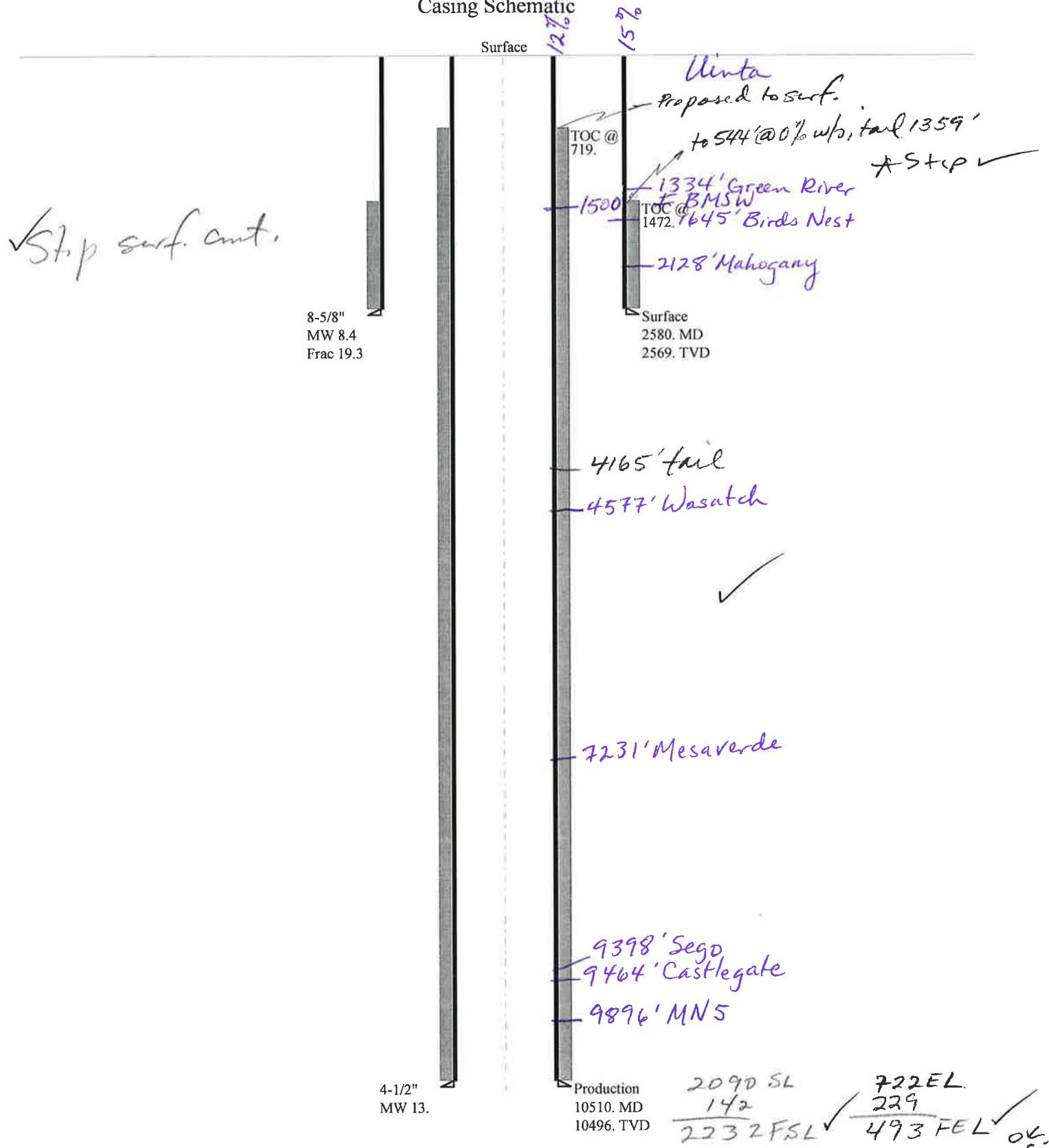
Calculations	Prod String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	7095		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5835	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4786	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5351	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2569	psi *Assumes 1psi/ft frac gradient	

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

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

43047522510000 Morgan State 921-36I1CS

Casing Schematic



NE SE Sec 36-9S-21E

Well name:	43047522510000 Morgan State 921-361CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-52251
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 8.400 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: 110 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 1,472 ft

Burst

Max anticipated surface pressure: 2,260 psi
 Internal gradient: 0.120 psi/ft
 Calculated BHP 2,569 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: 2,260 ft

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 223 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 6 °

Re subsequent strings:

Next setting depth: 10,496 ft
 Next mud weight: 13.000 ppg
 Next setting BHP: 7,089 psi
 Fracture mud wt: 19.250 ppg
 Fracture depth: 2,569 ft
 Injection pressure: 2,569 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	2580	8.625	28.00	I-55	LT&C	2569	2580	7.892	102168
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	1121	1880	1.677	2569	3390	1.32	71.9	348	4.84 J

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

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

Date: February 23, 2012
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2569 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

Well name:	43047522510000 Morgan State 921-361CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-52251
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 13.000 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: 221 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 719 ft

Burst

Max anticipated surface pressure: 4,779 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 7,089 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)

Directional Info - Build & Drop

Kick-off point 300 ft
 Departure at shoe: 269 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Tension is based on air weight.
 Neutral point: 8,470 ft

Estimated cost: 158,547 (\$)

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 (\$)
2	5000	4.5	11.60	HCP-110	DQX	4986	5000	3.875	132000
1	5510	4.5	11.60	HCP-110	LT&C	10496	10510	3.875	26547

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
2	3108	8135	2.617	5876	10690	1.82	121.8	367.2	3.02 B
1	6543	8650	1.322	7089	10690	1.51	63.9	279	4.37 J

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

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

Date: February 23, 2012
 Salt Lake City, Utah

Remarks:

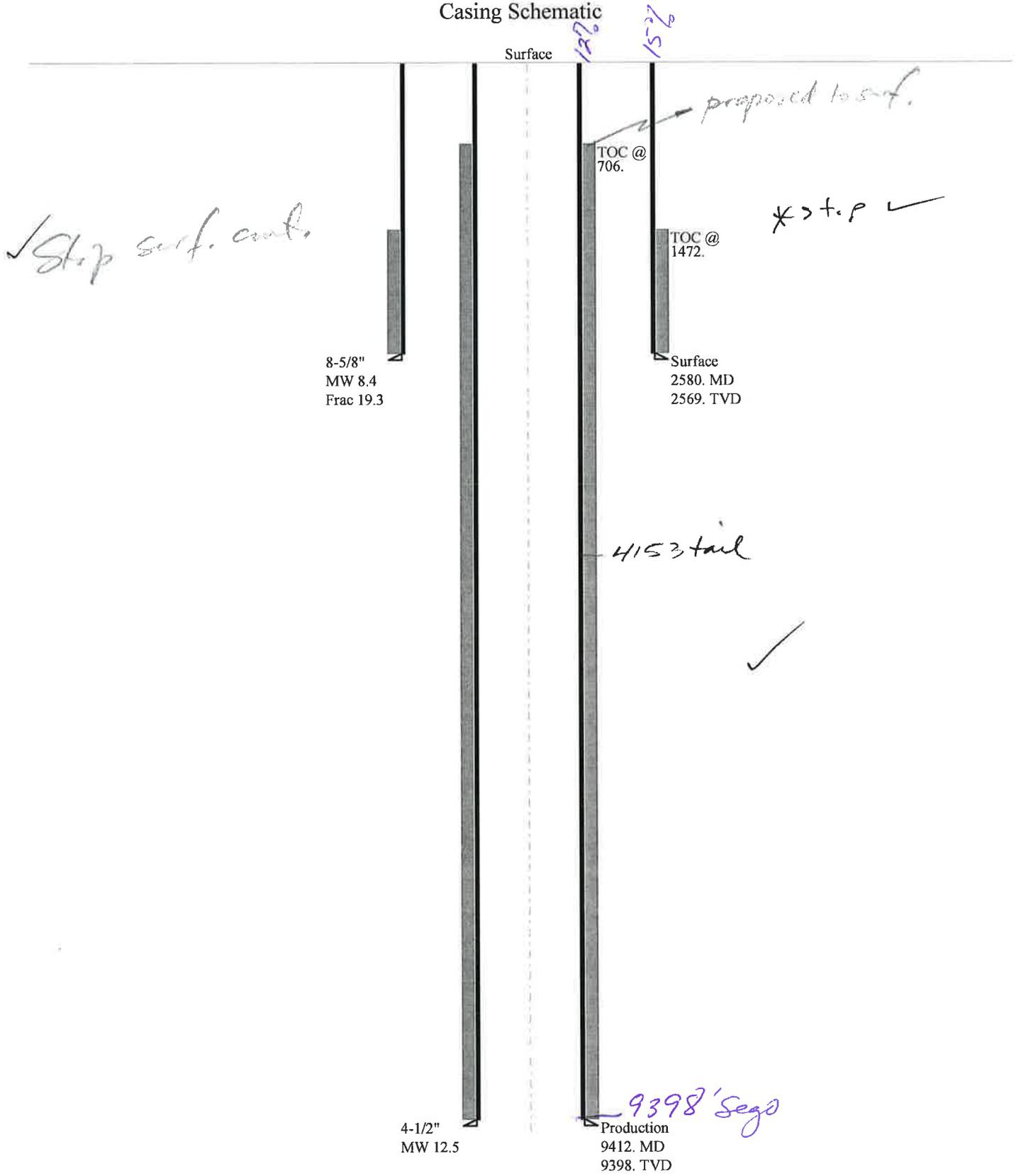
Collapse is based on a vertical depth of 10496 ft, a mud weight of 13 ppg. An internal gradient of .052 psi/ft was used for collapse from TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047522510000 Morgan State 921-3611CS

Casing Schematic



Well name:	43047522510000 Morgan State 921-361CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-52251
Location:	UINTAH	COUNTY	

Design parameters:**Collapse**

Mud weight: 8.400 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: 110 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,472 ft

Burst

Max anticipated surface pressure: 2,260 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,569 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: 2,260 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 223 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 6 °

Re subsequent strings:

Next setting depth: 9,398 ft
Next mud weight: 12.500 ppg
Next setting BHP: 6,103 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,569 ft
Injection pressure: 2,569 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	2580	8.625	28.00	I-55	LT&C	2569	2580	7.892	102168
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	1121	1880	1.677	2569	3390	1.32	71.9	348	4.84 J

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

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

Date: February 23, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2569 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

Well name:	43047522510000 Morgan State 921-361CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-52251
Location:	UINTAH	COUNTY	

Design parameters:**Collapse**

Mud weight: 12.500 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: 206 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 706 ft

Burst

Max anticipated surface pressure: 4,035 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 6,103 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)

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 269 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Tension is based on air weight.
Neutral point: 7,656 ft

Estimated cost: 190,238 (\$)

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 (\$)
2	5000	4.5	11.60	I-80	DQX	4986	5000	3.875	132000
1	4412	4.5	11.60	I-80	LT&C	9398	9412	3.875	58238

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
2	2979	5924	1.989	5132	7780	1.52	109	267	2.45 J
1	5615	6360	1.133	6103	7780	1.27	51.2	212	4.14 J

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

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

Date: February 23, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9398 ft, a mud weight of 12.5 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.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

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

From: Jim Davis
To: APD APPROVAL
CC: Danielle Piernot; Julie Jacobson
Date: 4/2/2012 1:51 PM
Subject: Morgan State 921-36A Morgan State 921-36I pad wells

The following wells have been approved by SITLA including arch and paleo clearance.

Morgan State 921-36A4BS (4304752268)
Morgan State 921-36A4CS (4304752269)
Morgan State 921-36H1BS (4304752270)
Morgan State 921-36H1CS (4304752271)
Morgan State 921-36I1CS (4304752251)
Morgan State 921-36H4BS (4304752288)
Morgan State 921-36H4CS (4304752289)
Morgan State 921-36I1BS (4304752290)

Thanks.
-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov
Phone: (801) 538-5156

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name Morgan State 921-3611CS
API Number 43047522510000 **APD No** 5079 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 NESE **Sec** 36 **Tw** 9.0S **Rng** 21.0E 2090 FSL 722 FEL
GPS Coord (UTM) 628632 4427855 **Surface Owner**

Participants

Sheila Wopsock, Charles Chase, Danielle Piernot, Doyle Holmes, (Anadarko). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). Alex Hansen (DWR). Chris Jensen and David Hackford, (DOGGM).

Regional/Local Setting & Topography

This site is on an existing location, and very little new construction will be necessary.

This location is within the Natural Buttes Unit but this section is not part of the Natural Buttes Unit. It is approximately 14 road miles southeast of Ouray, Utah. The general area is at the head of a long unnamed wash east of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles to the north. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws that drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sandstone bedrock cliffs along the rims.

Four new directional wells will be drilled from this location which currently has one well, the Morgan State 12-36. This well has been PA'd.

Surface Use Plan

Current Surface Use

Grazing
Wildlfe Habitat
Existing Well Pad

**New Road
Miles**

0.04

Well Pad

Width 354 Length 455

Src Const Material

Onsite

Surface Formation

UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

Soil Type and Characteristics

Rocky sandy clay loam.

Erosion Issues Y

If diversion is not maintained around west side of location, erosion could become a serious problem.

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? Y

West side of location

Berm Required? N

Erosion Sedimentation Control Required? N

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

Reserve Pit

Site-Specific Factors		Site Ranking
Distance to Groundwater (feet)	>200	0
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
Final Score		35 1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut on the south corner of the location.

Dimensions are 260' x 100' x 12' deep with two feet of freeboard. Kerr McGee has agreed to line this pit with a 30 mil synthetic liner and a layer of felt sub-liner.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

Other Observations / Comments

API Well Number: 43047522510000

David Hackford
Evaluator

1/11/2012
Date / Time

RECEIVED: April 10, 2012

Application for Permit to Drill Statement of Basis

Utah Division of Oil, Gas and Mining

4/10/2012

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
5079	43047522510000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	Morgan State 921-36I1CS		Unit		
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	NESE 36 9S 21E S 2090 FSL 722 FEL GPS Coord (UTM) 628648E 4427851N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,580' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,500'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 36. The well is listed as 2,640 feet deep and used for drilling water. 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. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill
APD Evaluator

2/8/2012
Date / Time

Surface Statement of Basis

The general area is in the central portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is six miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43.6 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads.

Four wells will be directionally drilled from this location. They are the Morgan State 921-36I1CS, Morgan State 921-36I1BS, Morgan State 921-36H4CS and the Morgan State 921-36H4BS. The existing location currently has one well. This well is the Morgan State 12-36, and this well has been PA'd. A drainage ditch will be necessary around the west side of the location. The pad as modified should be stable and sufficient for five wells, and is the best site for a location in the immediate area.

New construction will consist of approximately 100 feet on the south, 100 feet on the west, 75 feet on the north, and 75 feet on the east side of the existing location.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Alex Hansen with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding

RECEIVED: April 10, 2012

mixes to be used.

David Hackford
Onsite Evaluator

1/11/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the south side of the location.
Surface	Drainages adjacent to the proposed pad shall be diverted around the location.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/19/2011

API NO. ASSIGNED: 43047522510000

WELL NAME: Morgan State 921-3611CS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: NESE 36 090S 210E

Permit Tech Review:

SURFACE: 2090 FSL 0722 FEL

Engineering Review:

BOTTOM: 2237 FSL 0493 FEL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99105

LONGITUDE: -109.49310

UTM SURF EASTINGS: 628648.00

NORTHINGS: 4427851.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22265

PROPOSED PRODUCING FORMATION(S): BLACKHAWK

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

- PLAT
- Bond: STATE/FEE - 22013542
- Potash
- Oil Shale 190-5
- Oil Shale 190-3
- Oil Shale 190-13
- Water Permit: 43-8496
- RDCC Review:
- Fee Surface Agreement
- Intent to Commingle

Commingling Approved

LOCATION AND SITING:

- R649-2-3.
- Unit:
- R649-3-2. General
- R649-3-3. Exception
- Drilling Unit
- Board Cause No: Cause 173-24
- Effective Date: 10/5/2009
- Siting: 460' Fr Exterior Lease Boundary
- R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 3 - Commingling - ddoucet
 5 - Statement of Basis - bhll
 15 - Directional - dmason
 17 - Oil Shale 190-5(b) - dmason
 25 - Surface Casing - hmacdonald



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: Morgan State 921-36I1CS
API Well Number: 43047522510000
Lease Number: ML 22265
Surface Owner: STATE
Approval Date: 4/10/2012

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

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 173-24. The expected producing formation or pool is the BLACKHAWK 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

Commingle:

In accordance with Board Cause No. 173-24, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

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).

Surface casing shall be cemented to the surface.

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27

pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

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 <http://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:

A handwritten signature in black ink, appearing to read "J. Rogers", written in a cursive style.

For John Rogers
Associate Director, Oil & Gas

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
 Submitted By J. Scharnowske Phone Number 720.929.6029
 Well Name/Number MORGAN STATE 921-3611CS
 Qtr/Qtr NESE Section 36 Township 9S Range 21E
 Lease Serial Number ML 22265
 API Number 4304752251

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

Date/Time 07/26/2012 13:00 HRS AM PM

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

- Surface Casing
 Intermediate Casing
 Production Casing
 Liner
 Other

Date/Time 08/08/2012 08:00 HRS AM PM

BOPE

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

RECEIVED

JUL 25 2012

DIV. OF OIL, GAS & MINING

Date/Time _____ AM PM

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: Morgan State 921-361CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522510000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: MORGAN STATE LATERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: UINTAH 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 checked="" type="checkbox"/> SPUD REPORT Date of Spud: 7/26/2012	<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 type="checkbox"/> OTHER	OTHER: <input style="width: 100px;" type="text"/>

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

MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'.
 RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CEMENT WITH 28 SACKS READY MIX. SPUD WELL LOCATION ON JULY 26, 2012 AT 09:30 HRS.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 August 02, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 8/2/2012	

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

FORM 6

ENTITY ACTION FORM

Operator: KERR MCGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
 Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6304

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752251	Morgan State 921-36I1CS		NESE	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	18670	7/26/2012			8/20/2012	
Comments: MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON 7/26/2012 AT 09:30 HRS. <i>MVRD BHL: nese</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752290	Morgan State 921-36I1BS		NESE	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	18671	7/26/2012			8/20/2012	
Comments: MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON 7/26/2012 AT 11:30 HRS. <i>MVRD BHL: nese</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752289	Morgan State 921-36H4CS		NESE	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	18672	7/26/2012			8/20/2012	
Comments: MIRU TRIPLE A BUCKET RIG. SPUD WELL LOCATION ON 7/26/2012 AT 13:00 HRS. <i>MVRD BHL: Sene</i>							

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)

JAIME SCHARNOWSKE

Name (Please Print)

Jaime Scharnowske

Signature

REGULATORY ANALYST

8/2/2012

Title

Date

RECEIVED

AUG 06 2012

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: ML 22265
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: MORGAN STATE 921-361CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522510000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MORGAN STATE LATERAL BUTTES COUNTY: UINTAH 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: 9/26/2012	<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: 100px;" type="text"/>

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

FINISHED DRILLING TO 9405' ON 09/25/2012. CEMENTED PRODUCTION CASING. RELEASED H&P 318 RIG ON 09/26/2012. DETAILS OF CASING AND CEMENT WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 September 28, 2012**

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/27/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265	
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
7. UNIT or CA AGREEMENT NAME:	
8. WELL NAME and NUMBER: MORGAN STATE 921-361CS	
9. API NUMBER: 43047522510000	
9. FIELD and POOL or WILDCAT: MATHEW BUTTES	
COUNTY: UINTAH	
STATE: UTAH	

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 Gas Well
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779
PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S

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

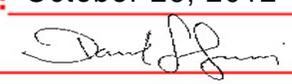
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 8/24/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<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 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="Drill Cutting Options"/>

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

The operator proposes drill cutting options for the Morgan State 921-36I Pad which includes: Morgan State 921-3611CS, Morgan State 921-3611BS, Morgan State 921-36H4CS, and Morgan State 921-36H4BS. Please see attached. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: October 26, 2012

By: 

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 8/24/2012	



The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Sundry Conditions of Approval Well Number 43047522510000

Cuttings are to be stored on location and used for future reclamation. Transport of cuttings to a commercial landfarm is not allowed. This is a one- time approval for the four Morgan State wells based on the analytical results for the cuttings.

As part of Kerr-McGee's (KMG) on-going efforts to minimize surface impacts and reduce pad sizes in the Greater Natural Buttes, KMG is pursuing additional alternatives to more efficiently manage drilling and completion operations. As drilling operations progress further towards closed loop operations, larger pad locations and utilizing pits becomes less of a need.

Two additional options KMG would like to implement for managing drill cuttings, are hauling drill cuttings to an approved Utah Department of Oil, Gas and Mining Commercial Landfarm Disposal Facility, and incorporation of drill cuttings into the pad location during interim reclamation practices. In order to accomplish this all cuttings will be either be stock piled on location for use during interim reclamation or they will be stored in above ground containers prior to transport to an approved Utah Department of Oil, Gas and Mining Commercial Landfarm Disposal Facility.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
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 Gas Well		8. WELL NAME and NUMBER: MORGAN STATE 921-361CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		9. API NUMBER: 43047522510000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511	9. FIELD and POOL or WILDCAT: MATERIAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S		COUNTY: UINTAH
		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"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 11/5/2012	<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 type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
No Activity for the month of October 2012. Well TD at 9,405.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY November 05, 2012		
NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A		DATE 11/5/2012

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: MORGAN STATE 921-361CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522510000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511 9. FIELD and POOL or WILDCAT: MORGAN STATE BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: UINTAH 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: 12/3/2012	<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: 100px;" type="text"/>

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

No Activity for the month of November 2012. Well TD at 9,405.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 December 04, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 12/3/2012	

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: ML 22265
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: MORGAN STATE 921-361CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522510000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MORGAN STATE BUTTES COUNTY: UINTAH 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: 1/3/2013	<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: 100px;" type="text"/>

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

Started completing the well. Well TD at 9,405

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 January 07, 2013**

NAME (PLEASE PRINT) Laura Abrams	PHONE NUMBER 720 929-6356	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 1/3/2013	

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: ML 22265
	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: MORGAN STATE 921-361CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522510000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	PHONE NUMBER: 720 929-6511
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MATERIAL BUTTES COUNTY: UINTAH 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: 1/30/2013	<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 checked="" 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: 100px;" type="text"/>

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

The subject well was placed on production on 01/30/2013. The Chronological Well History will be submitted with the well completion report.

Accepted by the
Utah Division of
Oil, Gas and Mining
FOR RECORD ONLY
 February 11, 2013

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 2/4/2013	

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: ML 22265
1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME: 7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: MORGAN STATE 921-361CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522510000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2090 FSL 0722 FEL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NESE Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MORGAN STATE BUTTES COUNTY: UINTAH 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: 2/4/2013	<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: 100px;" type="text"/>

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

Well was completed, finishing well completion report. Well TD at 9,405

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 February 13, 2013**

NAME (PLEASE PRINT) Laura Abrams	PHONE NUMBER 720 929-6356	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 2/4/2013	

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

RECEIVED
MAR 05 2013
DIV. OF OIL, GAS & MINING

AMENDED REPORT FORM 8
(highlight changes)

5. LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME

8. WELL NAME and NUMBER:
MORGAN STATE 921-3611CS

9. API NUMBER:
4304752251

10 FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
NESE 36 9S 21E S

12. COUNTY
UINTAH

13. STATE
UTAH

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL GAS WELL DRY OTHER _____

b. TYPE OF WORK:
NEW WELL HORIZ. LATS. DEEP-EN RE-ENTRY DIFF. RESVR. OTHER _____

2. NAME OF OPERATOR:
KERR MCGEE OIL & GAS ONSHORE, L.P.

3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217
PHONE NUMBER: (720) 929-6000

4. LOCATION OF WELL (FOOTAGES)
AT SURFACE: NESE 2090 FSL 722 FEL S36,T9S,R21E
AT TOP PRODUCING INTERVAL REPORTED BELOW: NESE 2244 FSL 506 FEL S36,T9S,R21E
AT TOTAL DEPTH: NESE 2229 FSL 487 FEL S36,T9S,R21E

14. DATE SPURRED: 7/26/2012
15. DATE T.D. REACHED: 9/25/2012
16. DATE COMPLETED: 1/30/2013
ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL): 5059 RKB
18. TOTAL DEPTH: MD 9,405 TVD 9,392
19. PLUG BACK T.D.: MD 9,343 TVD 9,330
20. IF MULTIPLE COMPLETIONS, HOW MANY? *

21. DEPTH BRIDGE MD PLUG SET: TVD
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each)
CBL/GR/CCL/TEMP-GR/CBL
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
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,639		950		0	
7 7/8"	4 1/2" I-80	11.6#	0	9,390		1,625		100	

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 3/8"	8,705							

26. PRODUCING INTERVALS

FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)
(A) WASATCH	5,983	7,226		
(B) MESAVERDE	7,265	9,238		
(C)				
(D)				

27. PERFORATION RECORD

INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS
5,983 7,226	0.36	81	Open <input checked="" type="checkbox"/> Squeezed <input type="checkbox"/>
7,265 9,238	0.36	174	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
5983-9238	PUMP 10,817 BBLs SLICK H2O & 248,125 LBS 30/50 OTTAWA SAND 11 STAGES

29. ENCLOSED ATTACHMENTS:

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

30. WELL STATUS:

PROD

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 1/30/2013		TEST DATE: 2/16/2013		HOURS TESTED: 24		TEST PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2,069	WATER - BBL: 0	PROD. METHOD: FLOWING
CHOKE SIZE: 26/64	TBG. PRESS. 550	CSG. PRESS. 1,800	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL - BBL: 0	GAS - MCF: 2,069	WATER - BBL: 0	INTERVAL STATUS: PROD

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, Vented, 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)
				GREEN RIVER	1,361
				BIRD'S NEST	1,634
				MAHOGANY	2,169
				WASATCH	4,624
				MESAVERDE	7,260

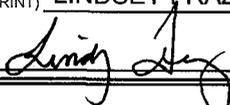
35. ADDITIONAL REMARKS (include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/8" bit. The remainder of surface hole was drilled with an 11" bit. A top down cement job using 410 sx cement was performed on 12/10/2012 to get cement to surface. DQX csg was run from surface to 4994'; LTC csg was run from 4994' to 9390'. Attached is the chronological well history, perforation report & final survey.

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

NAME (PLEASE PRINT) LINDSEY FRAZIER

TITLE REGULATORY ANALYST

SIGNATURE 

DATE 2/27/2013

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
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 7/19/2012

End Date: 9/26/2012

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/2/2012	16:00 - 0:00	8.00	MIRU	01	A	P		3.5 MILE RIG MOVE / MOVE CAMPS, RIG AND PRO PETRO TRAILERS, STALLION HAD 2 SEMI-TRUCKS, 3 PICK UPS, 5 HANDS, PRO PETRO HAD 4 SEMI-TRUCKS AND 1 RIG. 5 HANDS. SET MATTING BOARD, DOG HOUSE AND CUT CONDUCTOR. SERVICE RIG. WAIT ON DAYLIGHT.
8/3/2012	0:00 - 6:00	6.00	MIRU	01	A	P		WAIT ON DAYLIGHT
	6:00 - 10:30	4.50	MIRU	01	B	P		JD FIELD SERVICE 5 SEMI-TRUCKS, 5 HANDS / MOVE NOV CLOSED LOOP SYSTEM / AND CEMENT WATER TANKS/ RELEASE TRUCKS @ 10:30
	10:30 - 14:30	4.00	MIRU	01	B	P		M.S. 921-361CS (WELL 1 OF 4) INSTALL DIVERTOR HEAD AND BLUEY LINE. RIG UP NOV. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PUMP. PRIME PUMP. INSPECT RIG. SAFETY MEETING
	14:30 - 15:00	0.50	DRLSUR	06	A	P		PICK UP #1 BHA
	15:00 - 16:00	1.00	DRLSUR	02	D	P		DRL F/44' - T/210' (166' @ 166' ROP) W.O.B. 5 -15K RPM 45 POWERHEAD UP/DWN/ROT 22/20/22 PSI ON/OFF 500/300 M.W. 8.4# VIS 27 396 GPM PUMP RATE NOV - ONLINE
	16:00 - 18:00	2.00	DRLSUR	06	A	P		TOOH WITH #1 BHA / TIH WITH #2 BHA
	18:00 - 0:00	6.00	DRLSUR	02	D	P		DRL F/210' - T/1250' (1040'@ 173.3' ROP) W.O.B. 18 - 20K RPM 45 POWERHEAD 67 MUD MOTOR UP/DWN/ROT 68/52/61 7K DRAG PSI ON/OFF 1200/840 M.W.8.4# VIS 27 397 GPM PUMP RATE / NO AIR TORQUE ON/OFF 3000/2400 NOV-ONLINE 1' HIGH 1' RIGHT OF LINE SLID 92' / 8%
8/4/2012	0:00 - 4:00	4.00	DRLSUR	02	D	P		DRL F/1250' - T/1700' (450'@ 112.5' ROP) W.O.B. 18 - 20K RPM 45 POWERHEAD 67 MUD MOTOR UP/DWN/ROT 72/61/66 6K DRAG PSI ON/OFF 1350/950 M.W. 8.4# VIS 27 TORQUE ON/OFF 3000/2400 397 GPM PUMP RATE / NO AIR NOV ON-LINE 3' HIGH 1' LEFT OF TARGET
	4:00 - 9:00	5.00	DRLSUR	02	D	P		DRL F/1700' - T/2150' (450'@ 90' ROP)
	9:00 - 10:00	1.00	DRLSUR	08	B	Z		***CHANGE OUT SWABS ON MUD PUMP

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 7/19/2012

End Date: 9/26/2012

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	10:00 - 12:00	2.00	DRLSUR	02	D	P		DRL F/2150' - T/2330' (180'@ 90' ROP) W.O.B. 18 - 20K RPM 45 POWERHEAD 67 MUD MOTOR UP/DWN/ROT 83/65/76 7K DRAG PSI ON/OFF 1450/1280 M.W. 8.4# VIS 27 TORQUE ON/OFF 3000/2400 397 GPM PUMP RATE / NO AIR NOV - ONLINE .75' LEFT 1' LOW OF TARGET
	12:00 - 15:30	3.50	DRLSUR	02	D	P		DRL F/2330' - T/2650' (320'@ 91.4' ROP) W.O.B. 18 - 20K RPM 45 POWERHEAD 67 MUD MOTOR UP/DWN/ROT 88/69/79 9K DRAG PSI ON/OFF 1600/1330 M.W. 8.4# VIS 27 TORQUE ON/OFF 3000/2400 397 GPM PUMP RATE / NO AIR NOV-ONLINE 5' LOW .43' LEFT OF TARGET SLID 230' / 8.81%
	15:30 - 17:30	2.00	DRLSUR	05	C	P		CIRCULATE FOR CASING
	17:30 - 20:00	2.50	DRLSUR	06	A	P		LDDS,BHA & DIRECTIONAL TOOLS
	20:00 - 21:00	1.00	DRLSUR	12	A	P		MOVE PIPE RACKS AND CATWALK. PULL DIVERTER HEAD. RIG UP TO RUN CSG. MOVE CSG INTO POSITION TO P/U.
	21:00 - 22:30	1.50	DRLSUR	12	C	P		TIH 59 JOINTS 8 5/8", 28#, J55 CASING SHOE IS AT 2614.9' BAFFLE IS AT 2570.7'
	22:30 - 23:00	0.50	DRLSUR	05	D	P		PUMP CAPACITY OF CASING
	23:00 - 23:30	0.50	DRLSUR	12	B	P		HOLD SAFETY MEETING PUMP ON CASING RUN 200' OF 1". RIG DOWN RIG MOVE OFF WELL, RIG UP CEMENT TRUCKS, AND CEMENT HEAD.
	23:30 - 0:00	0.50	CSGSUR	12	E	P		MAKE UP HEAD AND LOAD PLUG. PRESSURE TEST LINES TO 2000PSI. PUMP 150BBLs AHEAD 8.4# H2O. PUMP 20BBLs 8.4# GEL H2O AHEAD, PUMP 148 SXS (73.5BBLs) 12# 2.78 YIELD CEMENT. PUMP 200 SX (41 BBLs) OF 15.8# 1.15 YIELD TAIL (2% CALC, 1/4#/SK OF FLOCECE) DROP PLUG ON THE FLY AND DISPLACE WITH 160.5BBLs OF 8.4# H2O. FINAL LIFT PRESSURE WAS 380PSI, BUMP PRESSURE WAS 550PSI HELD FOR 5 MINS. FLOAT HELD. NO RETURNS THRU OUT JOB. PUMP 125 SK 15.8 (25.6BBLs) CEMENT, W/4% CALCIUM DOWN 1". NO CEMENT TO SURFACE.
8/5/2012	0:00 - 1:00	1.00	CSGSUR	12	E	P		PUMP 150BBLs AHEAD 8.4# H2O. PUMP 20BBLs 8.4# GEL H2O AHEAD, PUMP 148 SXS (73.5BBLs) 12# 2.78 YIELD CEMENT. PUMP 200 SX (41 BBLs) OF 15.8# 1.15 YIELD TAIL (2% CALC, 1/4#/SK OF FLOCECE) DROP PLUG ON THE FLY AND DISPLACE WITH 160.5BBLs OF 8.4# H2O. FINAL LIFT PRESSURE WAS 380PSI, BUMP PRESSURE WAS 550PSI HELD FOR 5 MINS. FLOAT HELD. NO RETURNS THRU OUT JOB. PUMP 150 SK 15.8 (25.6BBLs) CEMENT, W/4% CALCIUM DOWN 1". NO CEMENT TO SURFACE.

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED		Spud Date: 8/3/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-361 PAD	Rig Name No: H&P 318/318, PROPETRO 11/11
Event: DRILLING		Start Date: 7/19/2012	End Date: 9/26/2012
Active Datum: RKB @5,059.00usft (above Mean Sea Level)		UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	1:00 - 2:30	1.50	CSGSUR	13	A	P		WOC PUMP 100SXS (20.4 BBLs) CEMENT DOWN BACKSIDE. (NO CMT TO SURFACE).
	2:30 - 6:30	4.00	CSGSUR	21	E	Z		***WAIT ON ADDITIONAL BULK TRUCK
	6:30 - 7:00	0.50	CSGSUR	13	A	P		WOC PUMP 150SXS (30.7 BBLs) CEMENT DOWN BACKSIDE. (NO CMT TO SURFACE).
	7:00 - 8:00	1.00	CSGSUR	13	A	P		WOC PUMP 150SXS (30.7 BBLs) CEMENT DOWN BACKSIDE. (CMT TO SURFACE). RELEASED RIG @ 08:00
9/19/2012	0:00 - 7:00	7.00	MIRU3	01	E	P		RIG DOWN FOR TRUCKS /// WAIT ON DAYLIGHT
	7:00 - 19:00	12.00	MIRU3	01	A	P		RIG DOWN & MOVE RIG 2.6 MILES /// STALLION - 4 MEN, 3 1 TON TRUCKS, 2 SEMI'S /// R.W. JONES-2 CRANES, 2 FORKLIFTS, 4 SWAMPERS, 4-OILERS, 2 PILOT CARS, 2 FLAGGERS, 6 TRUCKS & 2 PUSHERS /// H&P - 15 MEN & 1 PUSHER /// ON LOCATION @ 07:00 ~ LEFT LOCATION @ 19:00
	19:00 - 0:00	5.00	MIRU3	21	C	P		WAIT ON DAYLIGHT
9/20/2012	0:00 - 7:00	7.00	MIRU3	21	C	P		WAIT ON DAYLIGHT TO MOVE
	7:00 - 14:00	7.00	MIRU3	01	A	P		RIG DOWN & MOVE RIG 2.6 MILES /// R.W. JONES-2 CRANES, 2 FORKLIFTS, 4 SWAMPERS, 4-OILERS, 2 PILOT CARS, 2 FLAGGERS, 6 TRUCKS & 2 PUSHERS /// H&P - 15 MEN & 1 PUSHER /// RELEASE TRUCKS @ 14:00 /// RELEASE FIRST CRANE @ 14:30 /// RELEASE SECOND CRANE @
	14:00 - 0:00	10.00	MIRU3	01	B	P		BROKE TOUR RIG BY HAND , PICK UP BAILES , ELEV. PULL ELEC. LINES DOCK BLOCK TO TOP DRIVE
9/21/2012	0:00 - 8:00	8.00	MIRU3	01	B	P		RIG UP ROTARY TOOLS /// SKID RIG INTO CENTER POSITION OVER WELL
	8:00 - 13:30	5.50	PRPSPD	14	A	P		NIPPLE UP BOPE /// INSTALL SWACO ORBIT VALVE /// INSTALL SMITH ROTATING HEAD
	13:30 - 21:00	7.50	PRPSPD	15	A	P		PJSM /// RIG UP & TEST BOP , IBOP, LOWER KELLY VALVE, FLOOR VALVE, PIPE RAMS, BLIND RAMS, HCR, WING VALVES CHOKE MANIFOLD ,CHECK VALVE LOW 250 PSI & HIGH 5,000 PSI /// ANN LOW 250 PSI & HIGH 2500 PSI /// CASING 1500 PSI FOR 30 MINS /// TEST NOV SWACO CHOKE LINES & ORBIT VALVE TO 1,000 PSI /// ALL TESTS GOOD /// TEST PUMP & CHART RECORDER USED
	21:00 - 22:00	1.00	PRPSPD	14	B	P		INSTALL WEAR BUSHING
	22:00 - 22:30	0.50	PRPSPD	07	A	P		SERVICE RIG
	22:30 - 0:00	1.50	PRPSPD	06	A	P		PICK UP 7-7/8" BIT, MUD MOTOR, DIR. TOOLS, & SCRIBE
9/22/2012	0:00 - 2:30	2.50	PRPSPD	06	A	P		TIH WITH DIR. BHA #1
	2:30 - 3:00	0.50	PRPSPD	06	A	P		INSTALL ROTATING RUBBER
	3:00 - 4:00	1.00	PRPSPD	06	A	P		TIH WITH DIR. BHA #1 (TAG CMT @ 2558')
	4:00 - 6:30	2.50	DRLPRC	02	F	P		DRILL CEMENT & FLOAT EQUIPMENT F/ 2558'- 2642' /// WOB=10 ~ RPM=40 ~ GPM= 315

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED		Spud Date: 8/3/2012	
Project: UTAH-UINTAH		Site: MORGAN STATE 921-361 PAD	Rig Name No: H&P 318/318, PROPETRO 11/11
Event: DRILLING		Start Date: 7/19/2012	End Date: 9/26/2012
Active Datum: RKB @5,059.00usft (above Mean Sea Level)		UWI: NE/SE/O/9/S/21/E/36/O/0/26/PM/S/2090/E/O/722/O/O	

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:30 - 14:30	8.00	DRLPRC	02	B	P		DRILL 7-7/8" HOLE F/ 2670'- 3959' ROP=1289' @ 161 FPH WOB= 15-20K RPM= TOP DRIVE ~ 50 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF= 2000/1500 TORQUE ON/OFF= 7000/2000 UP/SO/ROT= 124/100/107 MUD WT.= 8.5 NOV ON LINE SWACO OFF LINE NO LOSSES
	14:30 - 17:30	3.00	DRLPRC	08	B	Z		***PULL 15 STDS & REPLACE WASH PIPE & PACKING SWIVEL SERVICE RIG & EQUIPMENT
	17:30 - 18:00	0.50	DRLPRC	07	A	P		
	18:00 - 0:00	6.00	DRLPRC	02	B	P		DRILL 7-7/8" HOLE F/ 3959'- 4621' ROP= 662' @ 110 FPH WOB= 15-20K RPM= TOP DRIVE ~ 50 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF= 2100/1600 TORQUE ON/OFF=9000/3000 UP/SO/ROT= 134/110/122 MUD WT.= 8.5 NOV ON LINE SWACO OFF LINE NO LOSSES
9/23/2012	0:00 - 7:00	7.00	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 4621'- 5568' ROP= 947' @ 135 FPH WOB= 18-25K RPM= TOP DRIVE ~ 50 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF= 2100/1600 TORQUE ON/OFF=9000/3000 UP/SO/ROT= 1190/124/137 MUD WT.= 8.5 NOV ON LINE SWACO OFF LINE NO LOSSES
	7:00 - 7:30	0.50	DRLPRV	05	A	X		***LOST CIRCULATION @ 5568' (200 BBL'S) PUMP HIGH LCM PILL & REGAIN CIRCULATION

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED Spud Date: 8/3/2012
 Project: UTAH-UINTAH Site: MORGAN STATE 921-361 PAD Rig Name No: H&P 318/318, PROPETRO 11/11
 Event: DRILLING Start Date: 7/19/2012 End Date: 9/26/2012
 Active Datum: RKB @5,059.00usft (above Mean Sea Level) UWI: NE/SE/O/9/S/21/E/36/O/0/26/PM/S/2090/E/O/722/O/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:30 - 16:30	9.00	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 5568'-6508' ROP= 940' @ 104 FPH WOB= 18-25K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 110 STROKES= 110 GPM= 495 SPP ON/OFF= 2000/1500 TORQUE ON/OFF=9000/5000 UP/SO/ROT= 176/138/157 MUD WT.= 8.6 NOV ON LINE SWACO OFF LINE LOST 200 BBL'S @ 5568' LOST 100 BBL'S TO SEEPAGE SERVICE RIG & EQUIPMENT
	16:30 - 17:00	0.50	DRLPRV	07	A	P		
	17:00 - 0:00	7.00	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 6508'-7172' ROP= 664' @ 94 FPH WOB= 18-25K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF= 2350/1950 TORQUE ON/OFF= 10000/6000 UP/SO/ROT= 185/141/161 MUD WT.= 8.6 NOV ON LINE SWACO OFF LINE LOST 150 BBL'S TO SEEPAGE 6.2' W & 17.7' N OF CENTER TARGET 64' & 2.5% SLIDE
9/24/2012	0:00 - 6:00	6.00	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 7172'-7643' ROP= 471' @ 78 FPH WOB= 20-30K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF=2350/1950 TORQUE ON/OFF= 10000/6000 UP/SO/ROT= 188/142/163 MUD WT.= 8.6 NOV ON LINE SWACO OFF LINE LOST 50 BBL'S TO SEEPAGE
	6:00 - 13:00	7.00	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 7643'- 8210' ROP= 567' @ 81 FPH WOB= 20-30K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF=2450/2000 TORQUE ON/OFF= 10000/6500 UP/SO/ROT=205/150/176 MUD WT.= 8.6 NOV ON LINE SWACO OFF LINE LOST 25 BBL'S TO SEEPAGE

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 7/19/2012

End Date: 9/26/2012

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	13:00 - 16:30	3.50	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 8210'- 8492' ROP= 282' @ 81 FPH WOB= 20-30K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF=2350/2050 TORQUE ON/OFF=11000/7000 UP/SO/ROT=206/150/178 MUD WT.= 8.6 NOV ON LINE SWACO OFF LINE LOST 25 BBL'S TO SEEPAGE SERVICE RIG & EQUIPMENT
	16:30 - 17:00	0.50	DRLPRV	07	A	P		
	17:00 - 0:00	7.00	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 8492'- 9073' ROP= 581' @ 83 FPH WOB= 20-30K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF=2350/2050 TORQUE ON/OFF= 9000/8000 UP/SO/ROT=228/167/192 MUD WT.= 8.6 NOV ON LINE SWACO OFF LINE LOST 50 BBL'S TO SEEPAGE 3.5' E & .5' S OF CENTER TARGET 4' FLARE
9/25/2012	0:00 - 4:30	4.50	DRLPRV	02	B	P		DRILL 7-7/8" HOLE F/ 9073'-9405' ROP= 332' @ 74 FPH WOB= 20-30K RPM= TOP DRIVE ~ 50-55 /// MOTOR ~ 118 STROKES= 120 GPM= 540 SPP ON/OFF=2350/2050 TORQUE ON/OFF= 9000/8000 UP/SO/ROT=228/167/192 MUD WT.= 8.7 NOV ON LINE SWACO OFF LINE
	4:30 - 10:30	6.00	DRLPRV	05	A	P		CIRCULATE & BUILD VOLUME FOR WIPER TRIP /// 42 VISC~12.2 WT ~10% LCM
	10:30 - 12:30	2.00	DRLPRV	06	E	P		SHORT TRIP 15 STDS /// TAGED BRIDGE @ 9248' /// WASH TO BOTTOM F/ 9248' - 9405'
	12:30 - 15:30	3.00	DRLPRV	05	A	P		CIRCULATE & CONDITION HOLE FOR 4.5" PROD. CSG
	15:30 - 21:30	6.00	DRLPRV	06	A	P		TOOH TO RUN 4.5" PROD. CSG /// LAY DOWN DIR. TOOLS
	21:30 - 22:00	0.50	CSGPRO	12	A	P		PULL WEAR BUSHING
	22:00 - 23:00	1.00	CSGPRO	12	A	P		PJSM W/ KIMZEY CASING CREW /// RIG UP CASING EQUIPMENT
	23:00 - 0:00	1.00	CSGPRO	12	C	P		START RUNNING 4.5" PRODUCTION CSG

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: H&P 318/318, PROPETRO 11/11

Event: DRILLING

Start Date: 7/19/2012

End Date: 9/26/2012

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/26/2012	0:00 - 6:00	6.00	CSGPRO	12	C	P		RUN 213 JOINTS 4.5" I-80 CASING TO 9390', TOP OF FLOAT COLLAR @ 9342', TOP OF MARKER @ 7201' TOP OF X/O @ 4972' /// WASHED THROUGH BRIDGE FROM 8905'-8915'
	6:00 - 7:30	1.50	CSGPRO	05	A	P		CIRCULATE & CONDITION HOLE FOR CEMENT
	7:30 - 8:00	0.50	CSGPRO	12	B	P		SAFETY MEETING W/ BJ SERVICES & RIG UP
	8:00 - 11:30	3.50	CSGPRO	12	E	P		CEMENT PROD CASING, PRESSURE TEST TO 5600 PSI, DROP BOTTOM PLUG , PUMP 25 BBLS SPACER , 565 SX, PREMIUM LITE II CEMENT + 5 LBS/SACK KOL-SEAL, 50 LB BAG + 0.4% BWOC FL-52 + 0.4% BWOC SODIUM METASILICATE + 6% BWOC BENTONITE II + 0.05LBS/SACK STATIC FREE + 0.6% BWOC R-3 +0.25 LBS/SACK CELLO FLAKE + 84.8% FRESH WATER ,12.0# ,1.77 YLD, LEAD , 1060 SACKS (50:50) POZ (FLY ASH): CLASS G CEMENT + 0.05 LBS/SACK STATIC FREE + 10% BWOW SODIUM CHLORIDE + 0.2% BWOC R-3 + 0.5% BWOC EC-1 + 0.002 GPS FP-6L + 2% BWOC BENTONITE II + 58.9% FRESH WATER 14.3# , 1.32 YLD TAIL, SHUT DOWN WASH UP ,DROP TOP PLUG, DISPLACE W/ 145.2 BBLS CLAY CARE + 1 GAL MAGNACIDE @ 8.34 PPG, FINAL LIFT 2626 PSI , BUMP PLUG @ 3320 PSI HELD F/ 5 MIN , FLOATS HELD , LOST CIRCULATION 100 BBLS INTO DISPLACEMENT, NO SPACER NO CEMENT BACK TO SURFACE ,TOP OF TAIL EST 4090', FLUSH STACK AND LINES , RIG DOWN CEMENTERS
	11:30 - 12:00	0.50	CSGPRO	14	B	P		INSTALL PACK OFF ASSEMBLY , LAY DOWN LANDING JOINT
	12:00 - 14:00	2.00	RDMO	14	A	P		NIPPLE DOWN BOP & PREPARE RIG F/ SKID, RELEASE RIG @ 14:00 9/26/2012 TO MORGAN STATE 921-361BS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	MORGAN STATE 921-361CS RED	Wellbore No.	OH
Well Name	MORGAN STATE 921-361CS	Wellbore Name	MORGAN STATE 921-361CS
Report No.	1	Report Date	12/5/2012
Project	UTAH-UINTAH	Site	MORGAN STATE 921-361 PAD
Rig Name/No.		Event	COMPLETION
Start Date	12/5/2012	End Date	1/30/2013
Spud Date	8/3/2012	Active Datum	RKB @5,059.00usft (above Mean Sea Level)
UWI	NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0		

1.3 General

Contractor	Job Method	Supervisor
Perforated Assembly	Conveyed Method	

1.4 Initial Conditions

Fluid Type	Fluid Density
Surface Press	Estimate Res Press
TVD Fluid Top	Fluid Head
Hydrostatic Press	Press Difference
Balance Cond	NEUTRAL

1.5 Summary

Gross Interval	5,983.0 (usft)-9,238.0 (usft)	Start Date/Time	1/21/2013 12:00AM
No. of Intervals	77	End Date/Time	1/21/2013 12:00AM
Total Shots	255	Net Perforation Interval	81.00 (usft)
Avg Shot Density	3.15 (shot/ft)	Final Surface Pressure	
		Final Press Date	

2 Intervals

2.1 Perforated Interval

Date	Formation/Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/21/2013 12:00AM	WASATCH/			5,983.0	5,984.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/21/2013 12:00AM	WASATCH/			6,026.0	6,027.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,036.0	6,037.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,097.0	6,098.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,186.0	6,187.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,246.0	6,247.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,327.0	6,328.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,400.0	6,401.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,411.0	6,412.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,418.0	6,419.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,458.0	6,459.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,507.0	6,508.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,525.0	6,526.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,567.0	6,568.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,595.0	6,596.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,617.0	6,618.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,643.0	6,644.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,672.0	6,673.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,685.0	6,686.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,729.0	6,730.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,775.0	6,776.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			6,853.0	6,854.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/21/2013 12:00AM	WASATCH/			7,197.0	7,198.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			7,206.0	7,207.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	WASATCH/			7,225.0	7,226.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,265.0	7,266.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,289.0	7,290.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,317.0	7,318.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,337.0	7,338.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,348.0	7,349.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,401.0	7,402.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,416.0	7,417.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,509.0	7,510.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,559.0	7,560.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,656.0	7,658.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,677.0	7,678.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,720.0	7,721.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,767.0	7,768.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,799.0	7,800.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,874.0	7,875.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,901.0	7,902.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,916.0	7,918.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			7,961.0	7,962.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/21/2013 12:00AM	MESAVERDE/			7,995.0	7,996.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,005.0	8,006.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,058.0	8,060.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,128.0	8,129.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,213.0	8,214.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,309.0	8,310.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,322.0	8,323.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,335.0	8,336.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,345.0	8,346.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,358.0	8,359.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,369.0	8,370.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,404.0	8,405.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,452.0	8,453.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,493.0	8,494.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,510.0	8,511.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,525.0	8,526.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,550.0	8,551.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,598.0	8,599.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,658.0	8,659.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,675.0	8,676.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,688.0	8,689.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
1/21/2013 12:00AM	MESAVERDE/			8,731.0	8,732.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,746.0	8,747.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,767.0	8,768.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,817.0	8,818.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,889.0	8,890.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,922.0	8,923.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,948.0	8,949.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,955.0	8,956.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			8,986.0	8,987.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			9,031.0	9,032.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			9,041.0	9,042.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			9,052.0	9,053.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
1/21/2013 12:00AM	MESAVERDE/			9,236.0	9,238.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

3 Plots

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: ROCKY MOUNTAIN WELL SERVICE
3/3

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
8/3/2012	-							
12/5/2012	10:30 - 10:45	0.25	FRAC	33	C	P		RU HOT OILER FILLED 8 5/8 X 4 1/2 ANNULAR WITH 30 BBLS H2O, PRESS TO 250 TO 300 PSI PUMPED 10 BBLS @ 2 BPM @ 300 PSI, ISIP 200 PSI BLEED WELL DOWN MOVED TO NEXT WELL
12/10/2012	10:00 - 13:00	3.00	FRAC	51	B	P		RU SCHLUMBERGER, ESTABLISH INJECTION RATE 3 BPM 925 PSI PUMPED 10 BBLS FRESH WATER PUMPED 10 BBLS CALCIUM WATER PUMPED 10 BBLS FRESH WATER PUMPED 10 BBLS ZONELOCK PUMPED 10 BBLS FRESH WATER MIXED AND PUMPED 410 SKS THIXOTROPIC CLASS G CEMENT 145 BBLS SLURY, @ 12.5 PPG @ AVG RATE 3.1 BPM 650 PSI FLUSHED WITH 3 BBLS FINAL PSI 380 PSI SHUT WELL IN TOTAL FLUID PUMPED 202 BBLS
12/11/2012	9:00 - 11:30	2.50	FRAC	41	A	P		RU WL RAN CBL FROM 4000' TO SURFACE GOOD BOND TO SUFACE, RD WL
12/12/2012	-							
1/15/2013	12:15 - 13:00	0.75	FRAC	33	C	P		FILL SURFACE CSG. MIRU CAMERON QUICK TEST. 1ST PSI TEST T/ 7000 PSI. HELD FOR 15 MIN LOST 61 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI.SWIFN
1/21/2013	8:00 - 13:00	5.00	SUBSPR	37	B	P		HSM, EQUALIZING WELL, MIRU CASED HOLE Solutons, PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE,

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-361CS RED Spud Date: 8/3/2012

Project: UTAH-UINTAH Site: MORGAN STATE 921-361 PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE
3/3

Event: COMPLETION Start Date: 12/5/2012 End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level) UWI: NE/SE/O/9/S/21/E/36/O/0/26/PM/S/2090/E/O/7/22/O/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/22/2013	7:00 - 17:00	10.00	FRAC	36	B	P		<p>PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ 30/50 MESH SAND & SLK WTR. ALL CBP'S ARE HALIBURTON 8K CBP'S. REFER TO STIM PJR FOR FLUID, SAND AND CHEMICAL VOLUME PUMP'D</p> <p>FRAC STG #1] WHP=1,798#, BRK DN PERFS=3,239#, @=4.7 BPM, INJ RT=49.4, INJ PSI=4,781#, INITIAL ISIP=2,549#, INITIAL FG=.72, FINAL ISIP=2,851#, FINAL FG=.75, AVERAGE RATE=48.9, AVERAGE PRESSURE=4,901#, MAX RATE=50.3, MAX PRESSURE=6,225#, NET PRESSURE INCREASE=302#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,966', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #2] WHP=2,520#, BRK DN PERFS=3,398#, @=3.4 BPM, INJ RT=48.9, INJ PSI=5,654#, INITIAL ISIP=2,645#, INITIAL FG=.74, FINAL ISIP=2,849#, FINAL FG=.76, AVERAGE RATE=50.2, AVERAGE PRESSURE=4,928#, MAX RATE=51.6, MAX PRESSURE=5,879#, NET PRESSURE INCREASE=205#, 20/24 83% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,719', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #3] WHP=1,380#, BRK DN PERFS=2,752#, @=4.8 BPM, INJ RT=49.8, INJ PSI=4,188#, INITIAL ISIP=1,552#, INITIAL FG=.62, FINAL ISIP=2,460#, FINAL FG=.73, AVERAGE RATE=49.8, AVERAGE PRESSURE=4,147#, MAX RATE=51.1, MAX PRESSURE=5,592#, NET PRESSURE INCREASE=908#, 23/24 96% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,483', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW. SWIFN.</p>

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: ROCKY MOUNTAIN WELL SERVICE
3/3

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

UWI: NE/SE/O9/S/21/E/36/O/O/26/PM/S/2090/E/O/722/O/O

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
1/23/2013	7:00 - 17:30	10.50	FRAC	36	B	P		<p>FRAC STG #4] WHP=1,469#, BRK DN PERFS=3,205#, @=4.8 BPM, INJ RT=50.2, INJ PSI=4,132#, INITIAL ISIP=1,957#, INITIAL FG=.67, FINAL ISIP=2,540#, FINAL FG=.74, AVERAGE RATE=50, AVERAGE PRESSURE=4,238#, MAX RATE=52.1, MAX PRESSURE=5,086#, NET PRESSURE INCREASE=583#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8,244', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #5] WHP=642#, BRK DN PERFS=2,747#, @=4.7 BPM, INJ RT=49.5, INJ PSI=4,827#, INITIAL ISIP=1,264#, INITIAL FG=.59, FINAL ISIP=2,575#, FINAL FG=.76, AVERAGE RATE=49.4, AVERAGE PRESSURE=4,615#, MAX RATE=50.2, MAX PRESSURE=5,096#, NET PRESSURE INCREASE=1,311#, 17/21 81% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7,948', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #6] WHP=1,770#, BRK DN PERFS=2,662#, @=4.7 BPM, INJ RT=49.9, INJ PSI=4,723#, INITIAL ISIP=2,172#, INITIAL FG=.72, FINAL ISIP=2,668#, FINAL FG=.78, AVERAGE RATE=49.2, AVERAGE PRESSURE=4,393#, MAX RATE=50.3, MAX PRESSURE=6,651#, NET PRESSURE INCREASE=496#, 21/21 100% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7,708', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #7] WHP=1,549#, BRK DN PERFS=3,293#, @=4.9 BPM, INJ RT=49.2, INJ PSI=4,917#, INITIAL ISIP=1,773#, INITIAL FG=.67, FINAL ISIP=2,470#, FINAL FG=.77, AVERAGE RATE=49.2, AVERAGE PRESSURE=4,419#, MAX RATE=50.3, MAX PRESSURE=5,661#, NET PRESSURE INCREASE=697#, 86% CALC PERFS OPEN. X OVER TO WIRE LINE SWIFN.</p>
1/24/2013	7:00 - 7:15	0.25	FRAC	48		P		<p>HSM, WORKING AROUND WIRE LINE</p>

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED Spud Date: 8/3/2012

Project: UTAH-UINTAH Site: MORGAN STATE 921-361 PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE 3/3

Event: COMPLETION Start Date: 12/5/2012 End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level) UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 14:30	7.25	FRAC	36	B	P		<p>PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7,379', PERF MESAVERDE/ WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #8] WHP=250#, BRK DN PERFS=2,746#, @=5 BPM, INJ RT=48.9, INJ PSI=5,569#, INITIAL ISIP=1,609#, INITIAL FG=.66, FINAL ISIP=2,126#, FINAL FG=.73, AVERAGE RATE=49.2, AVERAGE PRESSURE=4,106#, MAX RATE=50.5, MAX PRESSURE=6,143#, NET PRESSURE INCREASE=517#, 15/24 63% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6,884', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #9] WHP=667#, BRK DN PERFS=2,124#, @=4.7 BPM, INJ RT=51.7, INJ PSI=3,592#, INITIAL ISIP=958#, INITIAL FG=.58, FINAL ISIP=1,888#, FINAL FG=.72, AVERAGE RATE=51.2, AVERAGE PRESSURE=3,626#, MAX RATE=52.3, MAX PRESSURE=4,490#, NET PRESSURE INCREASE=930#, 22/24 92% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #10] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6,578', PERF WASATCH USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #10] WHP=1,076#, BRK DN PERFS=1,988#, @=4 BPM, INJ RT=49.5, INJ PSI=3,438#, INITIAL ISIP=1,584#, INITIAL FG=.68, FINAL ISIP=1,785#, FINAL FG=.72, AVERAGE RATE=49, AVERAGE PRESSURE=3,247#, MAX RATE=55.7, MAX PRESSURE=3,958#, NET PRESSURE INCREASE=201#, 24/24 100% CALC PERFS OPEN. X OVER TO WIRE LINE</p> <p>PERF STG #11] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=6,277', PERF MESAVERDE USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW</p> <p>FRAC STG #11] WHP=552#, BRK DN PERFS=1,927#, @=4.7 BPM, INJ RT=51.8, INJ PSI=3,873#, INITIAL ISIP=425#, INITIAL FG=.51, FINAL ISIP=#, FINAL FG=#, AVERAGE RATE=#, AVERAGE PRESSURE=#, MAX RATE=#, MAX PRESSURE=#, NET PRESSURE INCREASE=#, 17/24 71% CALC PERFS OPEN. X OVER TO WIRE LINE</p>

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED Spud Date: 8/3/2012

Project: UTAH-UINTAH Site: MORGAN STATE 921-361 PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE
3/3

Event: COMPLETION Start Date: 12/5/2012 End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level) UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								P/U RIH W/ HALIBURTON 8K CBP, SET FOR TOP KILL @=5,933
								TOTAL FLUID PUMP'D=10,817 BBLS TOTAL SAND PUMP'D=248,125# HSM-JSA
1/29/2013	7:00 - 7:15	0.25	DRLOUT	48		P		
	7:15 - 15:00	7.75	DRLOUT	31	I	P		MIRU, NDWH, NUBOP, PU 3 7/8" BIT & POBS W/ XN SN, RIH W/ 192 JTS 2 3/8" L-80 TAG FILL @ 5,918', RU PWR SWWL, SWM, SDFN.
1/30/2013	7:00 - 7:15	0.25	DRLOUT	48		P		HSM-JSA

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-3611CS RED Spud Date: 8/3/2012

Project: UTAH-UINTAH Site: MORGAN STATE 921-361 PAD Rig Name No: ROCKY MOUNTAIN WELL SERVICE
3/3

Event: COMPLETION Start Date: 12/5/2012 End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level) UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:15 - 15:00	7.75	DRLOUT	44	C	P		<p>BRK CIRC, PRESS TEST BOP TO 3,000 PSI, LOST 0 PSI IN 15 MIN.</p> <p>C/O 15' SAND TAG PLUG #1 @ 5,933', DRL HAL 8K CBP IN 7 MIN, 0 PSI INC, FCP 0 PSI, RIH TAG FILL @ 6,232'.</p> <p>C/O 45' SAND TAG PLUG #2 @ 6,277', DRL HAL 8K CBP IN 6 MIN, 100 PSI INC, FCP 50 PSI, RIH TAG FILL @ 6,533'.</p> <p>C/O 45' SAND TAG PLUG #3 @ 6,578', DRL HAL 8K CBP IN 5 MIN, 0 PSI INC, FCP 50 PSI, RIH TAG FILL @ 6,824'.</p> <p>C/O 60' SAND TAG PLUG #4 @ 6,884', DRL HAL 8K CBP IN 6 MIN, 250 PSI INC, FCP 100 PSI, RIH TAG FILL @ 7,354'.</p> <p>C/O 25' SAND TAG PLUG #5 @ 7,379', DRL HAL 8K CBP IN 6 MIN, 200 PSI INC, FCP 150 PSI, RIH TAG FILL @ 7,673'.</p> <p>C/O 30' SAND TAG PLUG #6 @ 7,708', DRL HAL 8K CBP IN 7 MIN, 150 PSI INC, FCP 150 PSI, RIH TAG FILL @ 7,918'.</p> <p>C/O 30' SAND TAG PLUG #7 @ 7,948', DRL HAL 8K CBP IN 5 MIN, 100 PSI INC, FCP 150 PSI, RIH TAG FILL @ 8,214'.</p> <p>C/O 30' SAND TAG PLUG #8 @ 8,244', DRL HAL 8K CBP IN 6MIN, 450 PSI INC, FCP 350 PSI, RIH TAG FILL @ 8,423'.</p> <p>C/O 60' SAND TAG PLUG #9 @ 8,483', DRL HAL 8K CBP IN 6 MIN, 350 PSI INC, FCP 450 PSI, RIH TAG FILL @ 8,689'.</p> <p>C/O 30' SAND TAG PLUG #10 @ 8,719', DRL HAL 8K CBP IN 7 MIN, 150 PSI INC, FCP 450 PSI, RIH TAG FILL @ 8,946'.</p> <p>C/O 20' SAND TAG PLUG #11 @ 8,966', DRL HAL 8K CBP IN 6 MIN, 500 PSI INC, FCP 600 PSI, RIH TAG FILL @ 9,318' (80' BLW BTM PERF), CIRC CLEAN, RD PWR SWWL, POOH LD 19 JTS TBG, LAND TBG W/ 274 JTS 2 3/8" L-80 EOT @ 8,704.74', RD FLOOR & TBG EQUIP, NDBOP, NUWH, DROP BALL POBS @ 1,500 PSI, PRESS TEST FLOWLINE BETWEEN HAL 9,000 & WELLHEAD TO 3,000 PSI, LET BIT FALL 20 MIN TURN OVER TO FBC, DRAIN UP EQUIP, SDFN.</p> <p>KB-24' HANGER-.83'</p>

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-361CS RED

Spud Date: 8/3/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-361 PAD

Rig Name No: ROCKY MOUNTAIN WELL SERVICE
3/3

Event: COMPLETION

Start Date: 12/5/2012

End Date: 1/30/2013

Active Datum: RKB @5,059.00usft (above Mean Sea Level)

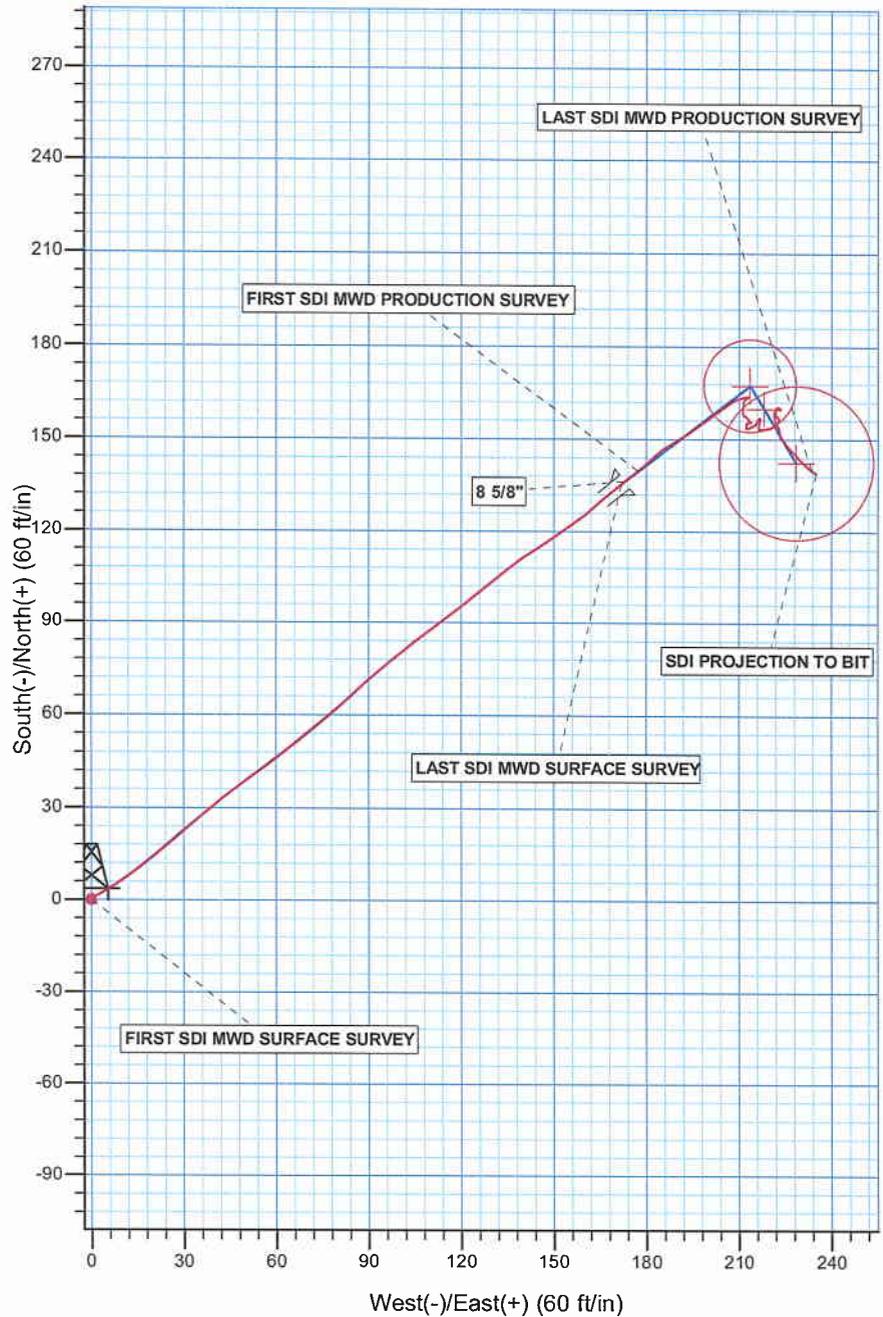
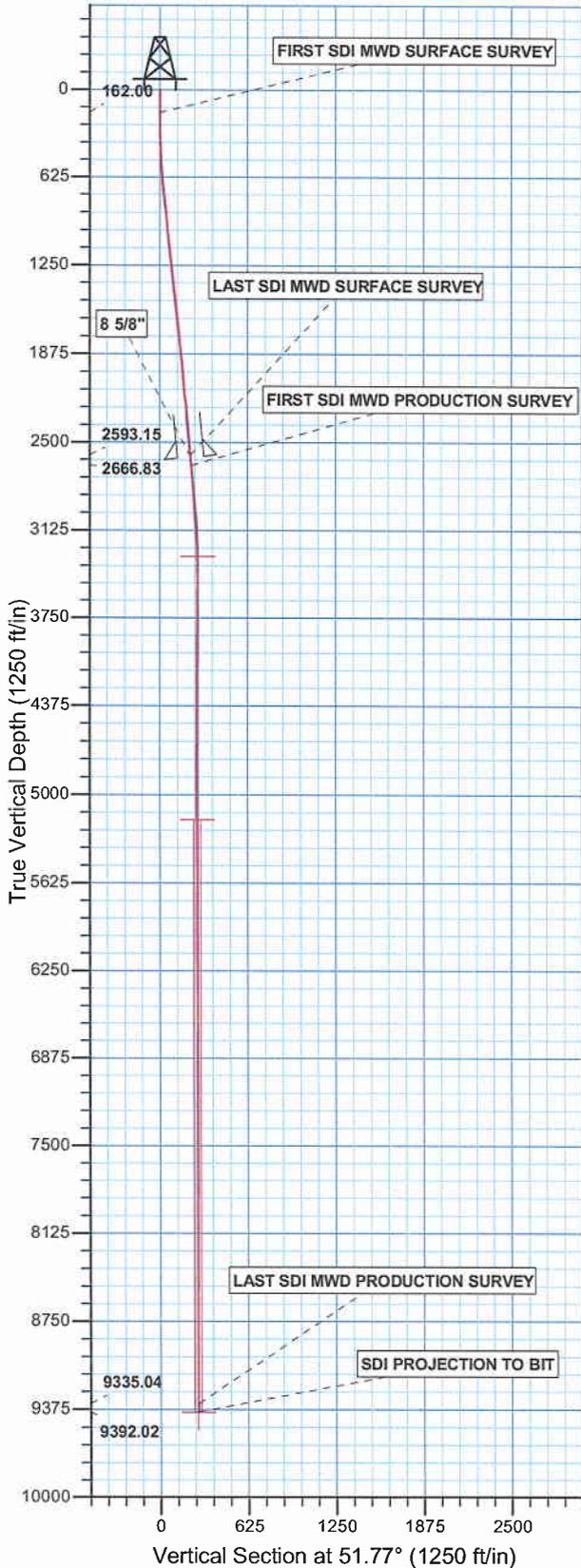
UWI: NE/SE/0/9/S/21/E/36/0/0/26/PM/S/2090/E/0/722/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
2/16/2013	7:00 -			50				274 JTS 2 3/8" L-80-8,677.71' POBS W/ XN SN-2.20' EOT @ 8,704.74' 315 JTS DEL 274 JTS USED 41 JTS RET TWTR=11,097 BBLS TWR=2,420 BBLS TWLTR=8,677 BBLS WELL IP'D ON 2/16/2013 - 2069 MCFD, 0 BOPD, 0 BWPD, CP 1800#, FTP 550#, CK 26/64, LP 100#, 24 HRS

WELL DETAILS: MORGAN STATE 921-361CS				
GL 5035 & KB 24 @ 5059.00ft (HP 318)				
+N/-S 0.00	+E/-W 0.00	Northing 14526371.20	Easting 2062653.99	Latitude 39.991093
				Longitude -109.492560

Azimuths to True North
 Magnetic North: 11.01°

Magnetic Field
 Strength: 52278.3snT
 Dip Angle: 65.85°
 Date: 12/02/2011
 Model: IGRF2010



PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N
Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 36 T9S R21E
System Datum: Mean Sea Level

Design: OH (MORGAN STATE 921-361CS/OH)
 Created By: Gabe Kendall Date: 11:43, September 27 2012



Scientific Drilling

US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

MORGAN STATE 921-36I

MORGAN STATE 921-36I1CS

OH

Design: OH

Standard Survey Report

27 September, 2012

Anadarko 
Petroleum Corporation

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-3611CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 5035 & KB 24 @ 5059.00ft (HP 318)
Site:	MORGAN STATE 921-361	MD Reference:	GL 5035 & KB 24 @ 5059.00ft (HP 318)
Well:	MORGAN STATE 921-3611CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	MORGAN STATE 921-361, SECTION 36 T9S R21E				
Site Position:		Northing:	14,526,390.12 usft	Latitude:	39.991146
From:	Lat/Long	Easting:	2,062,630.69 usft	Longitude:	-109.492632
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.97 °

Well	MORGAN STATE 921-3611CS, 2090 FSL 722 FEL					
Well Position	+N-S	0.00 ft	Northing:	14,526,371.21 usft	Latitude:	39.991093
	+E-W	0.00 ft	Easting:	2,062,653.98 usft	Longitude:	-109.492550
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	5,035.00 ft

Wellbore	OH				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/02/11	11.01	65.85	52,278

Design	OH				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)	
	0.00	0.00	0.00	51.77	

Survey Program	Date	09/27/12			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
20.00	2,604.00	Survey #1 SDI MWD SURFACE (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	
2,604.00	9,405.00	Survey #2 SDI MWD PRODUCTION (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	
162.00	0.09	330.36	162.00	0.10	-0.06	0.02	0.06	0.06	0.00	
FIRST SDI MWD SURFACE SURVEY										
192.00	0.18	289.19	192.00	0.13	-0.11	-0.01	0.42	0.30	-137.23	
275.00	0.88	54.08	275.00	0.55	0.28	0.56	1.20	0.84	150.47	
360.00	2.02	62.43	359.97	1.63	2.14	2.69	1.36	1.34	9.82	
452.00	2.79	60.28	451.89	3.49	5.52	6.49	0.84	0.84	-2.34	
542.00	3.52	52.85	541.75	6.24	9.62	11.42	0.93	0.81	-8.26	
632.00	4.57	53.64	631.52	10.04	14.71	17.77	1.17	1.17	0.88	

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-3611CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	GL 5035 & KB 24 @ 5059.00ft (HP 318)
Site:	MORGAN STATE 921-361	MD Reference:	GL 5035 & KB 24 @ 5059.00ft (HP 318)
Well:	MORGAN STATE 921-3611CS	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
722.00	5.70	50.69	721.16	14.99	21.06	25.82	1.29	1.26	-3.28	
812.00	6.42	48.46	810.66	21.16	28.28	35.31	0.84	0.80	-2.48	
902.00	6.16	50.66	900.12	27.56	35.79	45.16	0.39	-0.29	2.44	
992.00	6.42	51.45	989.58	33.76	43.46	55.02	0.30	0.29	0.88	
1,082.00	6.07	53.64	1,079.04	39.71	51.22	64.81	0.47	-0.39	2.43	
1,172.00	6.16	53.12	1,168.53	45.43	58.92	74.39	0.12	0.10	-0.58	
1,262.00	6.33	51.97	1,257.99	51.39	66.69	84.18	0.23	0.19	-1.28	
1,352.00	6.68	51.01	1,347.42	57.74	74.66	94.38	0.41	0.39	-1.07	
1,442.00	6.07	47.67	1,436.86	64.23	82.25	104.36	0.79	-0.68	-3.71	
1,532.00	6.16	47.84	1,526.35	70.68	89.35	113.92	0.10	0.10	0.19	
1,622.00	6.42	50.13	1,615.80	77.15	96.79	123.77	0.40	0.29	2.54	
1,712.00	6.33	52.41	1,705.25	83.40	104.58	133.76	0.30	-0.10	2.53	
1,802.00	6.42	52.06	1,794.69	89.52	112.48	143.75	0.11	0.10	-0.39	
1,892.00	6.31	52.83	1,884.14	95.60	120.39	153.73	0.15	-0.12	0.86	
1,982.00	5.46	50.07	1,973.66	101.34	127.62	162.96	1.00	-0.94	-3.07	
2,072.00	4.84	49.60	2,063.30	106.55	133.79	171.03	0.69	-0.69	-0.52	
2,162.00	5.01	54.96	2,152.97	111.26	139.90	178.75	0.54	0.19	5.96	
2,252.00	5.01	56.81	2,242.62	115.67	146.41	186.59	0.18	0.00	2.06	
2,342.00	5.51	54.08	2,332.24	120.36	153.19	194.82	0.62	0.56	-3.03	
2,432.00	5.19	51.58	2,421.85	125.42	159.88	203.21	0.44	-0.36	-2.78	
2,522.00	5.06	48.29	2,511.49	130.59	166.03	211.24	0.36	-0.14	-3.66	
2,604.00	5.36	52.50	2,593.15	135.33	171.77	218.68	0.59	0.37	5.13	
LAST SDI MWD SURFACE SURVEY										
2,678.00	5.28	49.58	2,666.83	139.64	177.11	225.54	0.38	-0.11	-3.95	
FIRST SDI MWD PRODUCTION SURVEY										
2,772.00	4.04	47.29	2,760.52	144.69	182.83	233.16	1.33	-1.32	-2.44	
2,867.00	3.69	63.47	2,855.31	148.33	188.03	239.49	1.20	-0.37	17.03	
2,961.00	3.61	53.27	2,949.12	151.45	193.11	245.41	0.70	-0.09	-10.85	
3,056.00	3.96	54.24	3,043.91	155.15	198.16	251.68	0.37	0.37	1.02	
3,149.00	3.25	53.97	3,136.73	158.58	202.90	257.52	0.76	-0.76	-0.29	
3,244.00	2.46	53.18	3,231.61	161.39	206.71	262.25	0.83	-0.83	-0.83	
3,338.00	1.49	66.98	3,325.55	163.07	209.45	265.44	1.14	-1.03	14.68	
3,433.00	1.67	79.02	3,420.52	163.82	211.95	267.87	0.40	0.19	12.67	
3,527.00	0.43	241.60	3,514.51	163.91	212.98	268.74	2.22	-1.32	172.96	
3,622.00	0.44	208.13	3,609.50	163.42	212.50	268.05	0.26	0.01	-35.23	
3,716.00	0.70	228.96	3,703.50	162.73	211.89	267.15	0.35	0.28	22.16	
3,811.00	0.79	190.38	3,798.49	161.70	211.34	266.08	0.53	0.09	-40.61	
3,905.00	0.90	173.17	3,892.48	160.33	211.31	265.21	0.29	0.12	-18.31	
3,999.00	1.06	187.30	3,986.47	158.74	211.29	264.20	0.31	0.17	15.03	
4,094.00	0.35	82.98	4,081.46	157.90	211.46	263.82	1.26	-0.75	-109.81	
4,188.00	0.62	142.74	4,175.46	157.53	212.06	264.06	0.57	0.29	63.57	
4,282.00	0.79	128.24	4,269.45	156.72	212.87	264.20	0.26	0.18	-15.43	
4,376.00	0.70	153.20	4,363.44	155.81	213.64	264.24	0.36	-0.10	26.55	

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: MORGAN STATE 921-36I
Well: MORGAN STATE 921-36I1CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well MORGAN STATE 921-36I1CS
TVD Reference: GL 5035 & KB 24 @ 5059.00ft (HP 318)
MD Reference: GL 5035 & KB 24 @ 5059.00ft (HP 318)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,471.00	0.26	318.88	4,458.44	155.45	213.76	264.11	1.00	-0.46	174.40
4,565.00	0.53	260.25	4,552.44	155.54	213.19	263.72	0.48	0.29	-62.37
4,659.00	0.44	206.90	4,646.44	155.15	212.60	263.01	0.47	-0.10	-56.76
4,753.00	0.35	190.03	4,740.43	154.54	212.39	262.47	0.16	-0.10	-17.95
4,848.00	0.69	167.18	4,835.43	153.70	212.46	262.01	0.41	0.36	-24.05
4,942.00	0.84	53.57	4,929.43	153.56	213.14	262.45	1.36	0.16	-120.86
5,037.00	0.79	61.88	5,024.42	154.28	214.28	263.79	0.13	-0.05	8.75
5,131.00	0.44	58.02	5,118.41	154.77	215.16	264.79	0.37	-0.37	-4.11
5,226.00	0.62	31.91	5,213.41	155.40	215.74	265.64	0.31	0.19	-27.48
5,320.00	0.44	18.73	5,307.40	156.18	216.12	266.42	0.23	-0.19	-14.02
5,414.00	0.35	58.63	5,401.40	156.67	216.49	267.01	0.30	-0.10	42.45
5,509.00	0.09	77.10	5,496.40	156.84	216.81	267.36	0.28	-0.27	19.44
5,603.00	0.09	276.24	5,590.40	156.86	216.80	267.38	0.19	0.00	-171.13
5,697.00	0.18	168.49	5,684.40	156.72	216.76	267.26	0.24	0.10	-114.63
5,792.00	0.53	184.14	5,779.40	156.14	216.76	266.89	0.38	0.37	16.47
5,886.00	0.53	189.06	5,873.39	155.28	216.66	266.28	0.05	0.00	5.23
5,981.00	0.79	190.47	5,968.39	154.20	216.47	265.47	0.27	0.27	1.48
6,075.00	0.00	10.91	6,062.38	153.56	216.35	264.98	0.84	-0.84	0.00
6,170.00	0.44	157.24	6,157.38	153.23	216.49	264.88	0.46	0.46	0.00
6,264.00	1.41	76.56	6,251.37	153.16	217.76	265.83	1.50	1.03	-85.83
6,359.00	1.32	79.29	6,346.35	153.64	219.97	267.87	0.12	-0.09	2.87
6,453.00	1.02	50.17	6,440.33	154.37	221.68	269.66	0.70	-0.32	-30.98
6,547.00	1.06	333.47	6,534.32	155.69	221.93	270.68	1.37	0.04	-81.60
6,642.00	0.79	348.23	6,629.30	157.11	221.40	271.15	0.38	-0.28	15.54
6,736.00	0.70	10.73	6,723.30	158.31	221.38	271.87	0.32	-0.10	23.94
6,831.00	0.62	16.80	6,818.29	159.38	221.64	272.73	0.11	-0.08	6.39
6,925.00	0.53	56.35	6,912.28	160.10	222.14	273.58	0.42	-0.10	42.07
7,020.00	0.35	81.31	7,007.28	160.39	222.80	274.27	0.27	-0.19	26.27
7,114.00	0.70	139.49	7,101.28	160.00	223.45	274.54	0.63	0.37	61.89
7,208.00	0.62	283.90	7,195.28	159.68	223.33	274.25	1.34	-0.09	153.63
7,303.00	0.35	269.83	7,290.27	159.81	222.54	273.71	0.31	-0.28	-14.81
7,397.00	0.18	275.28	7,384.27	159.82	222.11	273.37	0.18	-0.18	5.80
7,492.00	0.18	183.17	7,479.27	159.68	221.95	273.17	0.27	0.00	-96.96
7,586.00	0.26	184.84	7,573.27	159.32	221.93	272.92	0.09	0.09	1.78
7,681.00	0.62	179.13	7,668.27	158.59	221.92	272.46	0.38	0.38	-6.01
7,775.00	0.70	142.04	7,762.26	157.63	222.28	272.15	0.45	0.09	-39.46
7,870.00	0.79	156.01	7,857.25	156.58	222.90	271.99	0.21	0.09	14.71
7,964.00	0.70	231.25	7,951.25	155.63	222.72	271.25	0.97	-0.10	80.04
8,058.00	0.26	231.31	8,045.24	155.13	222.10	270.47	0.47	-0.47	0.06
8,153.00	0.20	103.03	8,140.24	154.96	222.10	270.36	0.44	-0.06	-135.03
8,247.00	0.44	161.90	8,234.24	154.58	222.37	270.33	0.40	0.26	62.63
8,342.00	1.06	152.76	8,329.23	153.45	222.88	270.04	0.66	0.65	-9.62
8,436.00	0.62	195.67	8,423.22	152.19	223.14	269.46	0.79	-0.47	45.65
8,530.00	0.44	157.77	8,517.22	151.37	223.14	268.95	0.41	-0.19	-40.32

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: MORGAN STATE 921-36I
Well: MORGAN STATE 921-36I1CS
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well MORGAN STATE 921-36I1CS
TVD Reference: GL 5035 & KB 24 @ 5059.00ft (HP 318)
MD Reference: GL 5035 & KB 24 @ 5059.00ft (HP 318)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,625.00	0.35	163.13	8,612.22	150.75	223.37	268.75	0.10	-0.09	5.64	
8,719.00	0.53	121.39	8,706.22	150.25	223.82	268.79	0.38	0.19	-44.40	
8,814.00	0.88	144.59	8,801.21	149.43	224.62	268.91	0.47	0.37	24.42	
8,908.00	1.14	145.56	8,895.19	148.07	225.56	268.81	0.28	0.28	1.03	
9,002.00	1.49	132.64	8,989.17	146.47	226.99	268.95	0.49	0.37	-13.74	
9,097.00	1.41	138.35	9,084.14	144.76	228.68	269.21	0.17	-0.08	6.01	
9,191.00	1.55	138.92	9,178.11	142.94	230.28	269.34	0.15	0.15	0.61	
9,286.00	1.67	127.27	9,273.07	141.13	232.23	269.75	0.37	0.13	-12.26	
9,348.00	1.67	130.97	9,335.04	139.99	233.63	270.15	0.17	0.00	5.97	
LAST SDI MWD PRODUCTION SURVEY										
9,405.00	1.67	130.97	9,392.02	138.90	234.88	270.46	0.00	0.00	0.00	
SDI PROJECTION TO BIT										

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,619.00	2,608.09	8 5/8"	8.625	11.000

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
162.00	162.00	0.10	-0.06	FIRST SDI MWD SURFACE SURVEY
2,604.00	2,593.15	135.33	171.77	LAST SDI MWD SURFACE SURVEY
2,678.00	2,666.83	139.64	177.11	FIRST SDI MWD PRODUCTION SURVEY
9,348.00	9,335.04	139.99	233.63	LAST SDI MWD PRODUCTION SURVEY
9,405.00	9,392.02	138.90	234.88	SDI PROJECTION TO BIT

Checked By: _____ Approved By: _____ Date: _____