

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 921-36D4CS								
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 <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						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		1540 FNL 811 FWL		SWNW		36		9.0 S		21.0 E		S		
Top of Uppermost Producing Zone		1297 FNL 823 FWL		NWNW		36		9.0 S		21.0 E		S		
At Total Depth		1297 FNL 823 FWL		NWNW		36		9.0 S		21.0 E		S		
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 823			23. NUMBER OF ACRES IN DRILLING UNIT 639								
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 398			26. PROPOSED DEPTH MD: 10629 TVD: 10618								
27. ELEVATION - GROUND LEVEL 5009			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 - 2630	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 - 10629	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength		320	3.38	12.0			
							50/50 Poz		1530	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 43047522760000				APPROVAL  Permit Manager										

Kerr-McGee Oil & Gas Onshore. L.P.**MORGAN STATE 921-36D4CS**

Surface: 1540 FNL / 811 FWL SWNW
 BHL: 1297 FNL / 823 FWL NWNW

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	1,385'	
Birds Nest	1,678'	Water
Mahogany	2,182'	Water
Wasatch	4,640'	Gas
Mesaverde	7,335'	Gas
Sego	9,540'	Gas
Castlegate	9,589'	Gas
MN5	10,018'	Gas
TVD =	10,618'	
TD =	10,629'	

- 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 Segoe 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 10618' TVD, approximately equals
7,008 psi (0.66 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 4,720 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 9540' TVD, approximately equals
6,106 psi (0.64 psi/ft = actual bottomhole gradient)

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

Maximum anticipated surface pressure equals approximately 3,993 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.

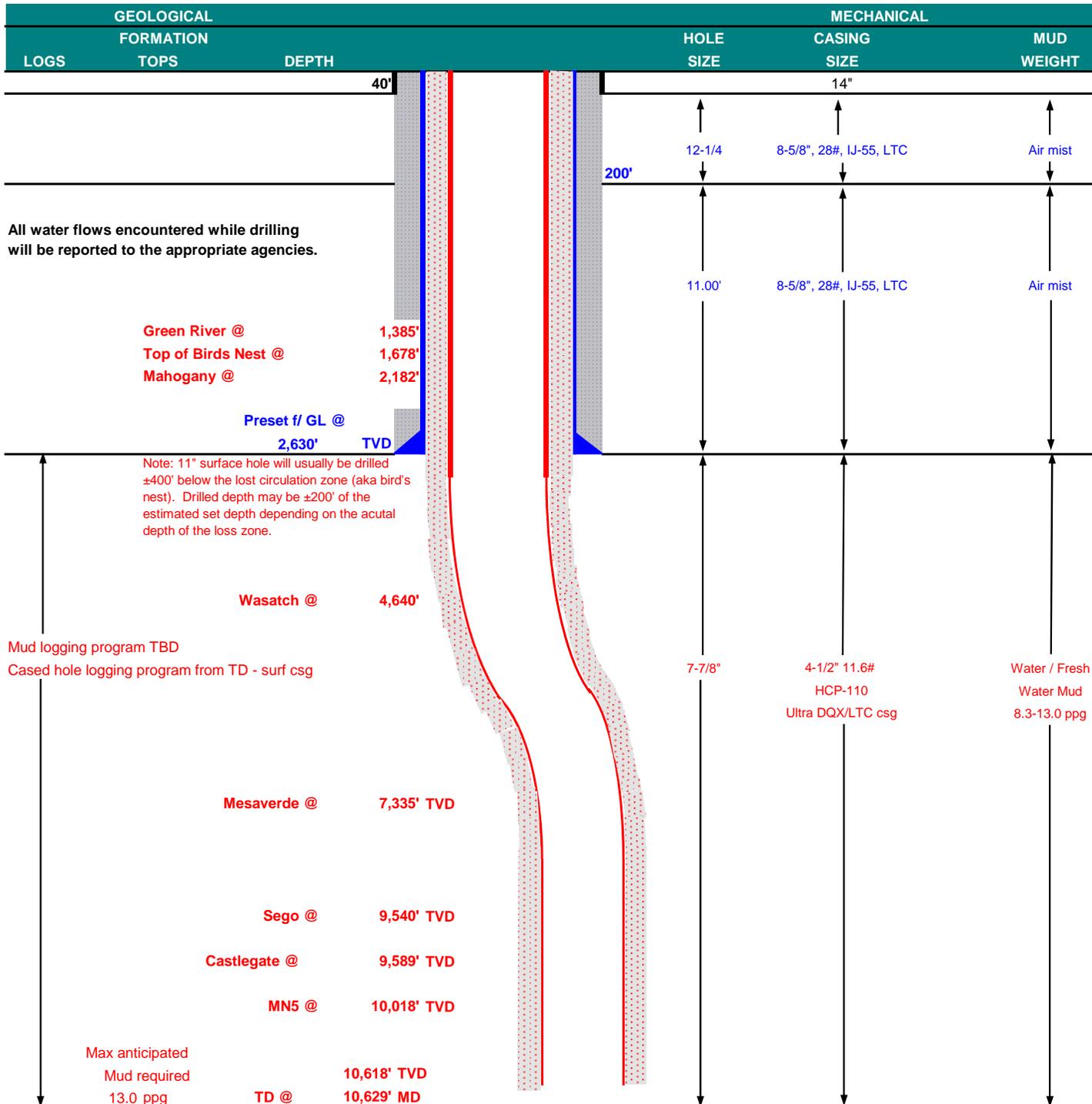
10. **Other Information:**

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 921-36D4CS		TD	10,618'	TVD	10,629' MD	
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION	5,007'
SURFACE LOCATION	SWNW	1540 FNL	811 FWL	Sec 36	T 9S	R 21E	
	Latitude:	39.995551	Longitude:	-109.505898		NAD 27	
BTM HOLE LOCATION	NWNW	1297 FNL	823 FWL	Sec 36	T 9S	R 21E	
	Latitude:	39.996218	Longitude:	-109.505856		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			
							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 2,630	28.00	IJ-55	LTC	2.05	1.53	5.40	N/A
PRODUCTION	4-1/2"	0	to 5,000	11.60	HCP-110	DQX	1.19	1.21	279,000	367,174
	4-1/2"	5,000	to 10,629'	11.60	HCP-110	LTC	1.19	1.21	5.33	

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	2,130'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	200	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	4,139'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00	3.38
	TAIL	6,490'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,530	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:

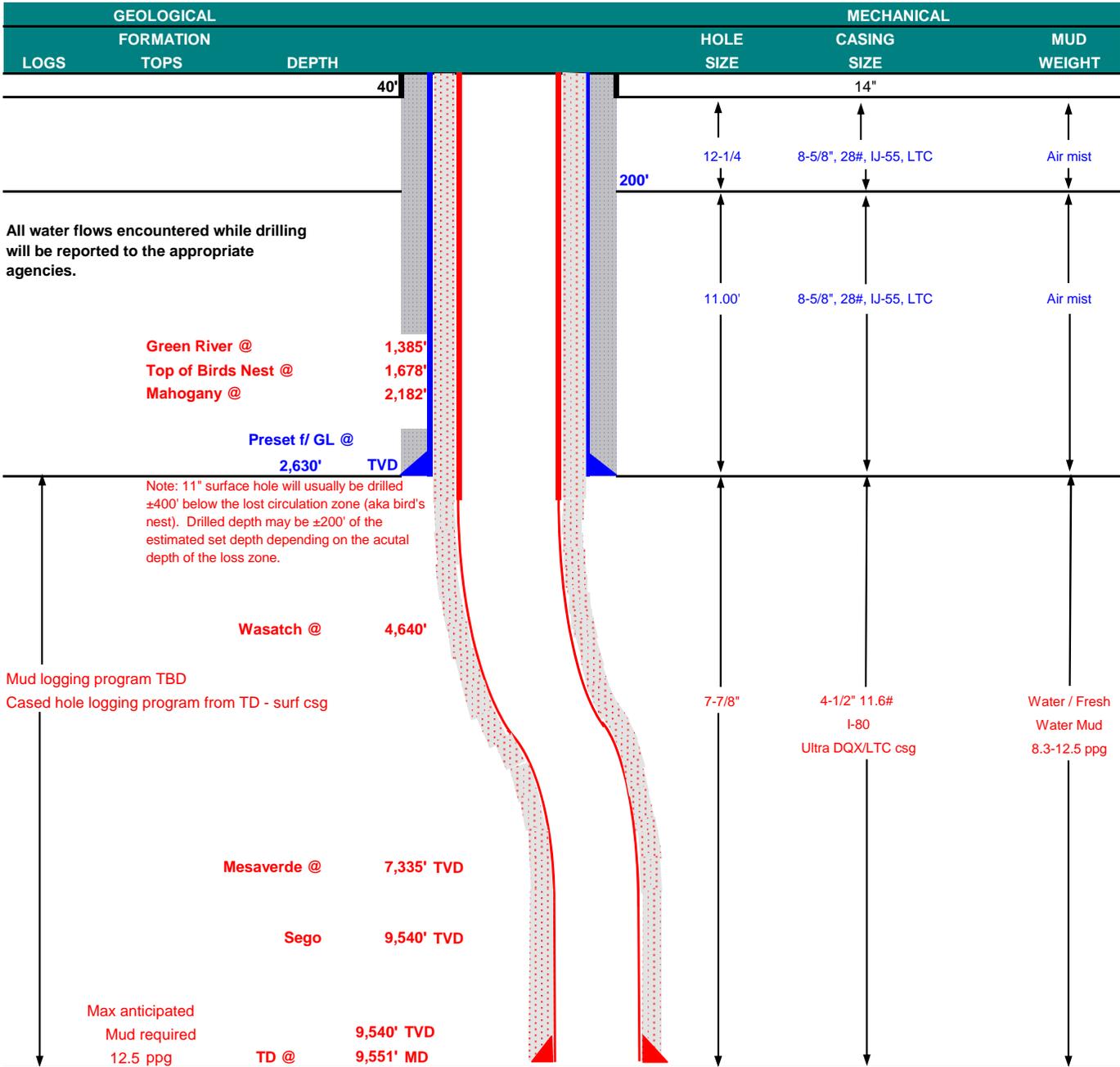
Kenny Gathings / Lovel Young

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 921-36D4CS		TD	9,540'	TVD 9,551' MD
FIELD	Natural Buttes	COUNTY	Uintah	STATE	Utah
SURFACE LOCATION	SWNW	1540 FNL	811 FWL	Sec 36 T 9S R 21E	FINISHED ELEVATION 5,007'
	Latitude: 39.995551		Longitude: -109.505898		NAD 27
BTM HOLE LOCATION	NWNW	1297 FNL	823 FWL	Sec 36 T 9S R 21E	
	Latitude: 39.996218		Longitude: -109.505856		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 2,630	28.00	IJ-55	LTC	2.05	1.53	5.40	N/A		
						7,780	6,350		267,035		
PRODUCTION	4-1/2"	0 to 5,000	11.60	I-80	DQX	1.11	1.02		2.98		
						7,780	6,350	223,000			
	4-1/2"	5,000 to 9,551'	11.60	I-80	LTC	1.11	1.02	5.22			

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	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	2,130'	65/35 Poz + 6% Gel + 10 pps gilsonite + 0.25 pps Flocele + 3% salt BWOW	200	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	4,131'	Premium Lite II +0.25 pps celloflake + 5 pps gilsonite + 10% gel + 0.5% extender	320	35%	12.00	3.38
	TAIL	5,420'	50/50 Poz/G + 10% salt + 2% gel + 0.1% R-3	1,280	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

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SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
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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.

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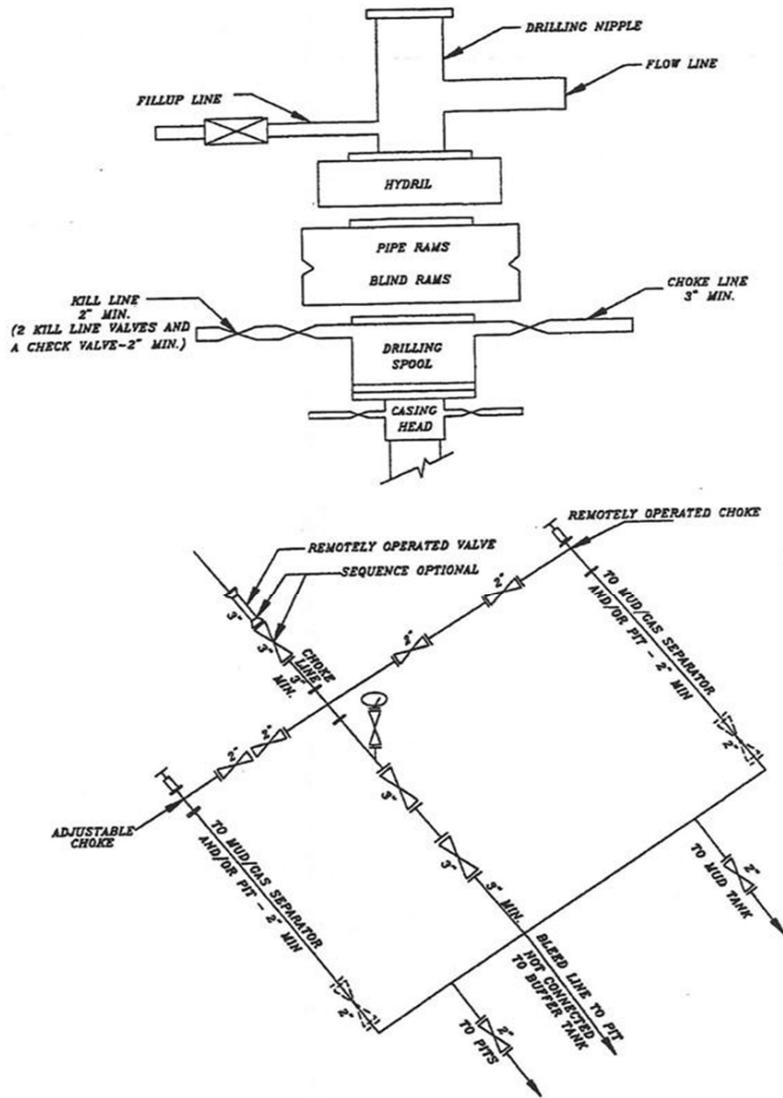
DRILLING ENGINEER: _____
Nick Spence / Danny Showers / Chad Loesel

DATE: _____

DRILLING SUPERINTENDENT: _____
Kenny Gathings / Lovel Young

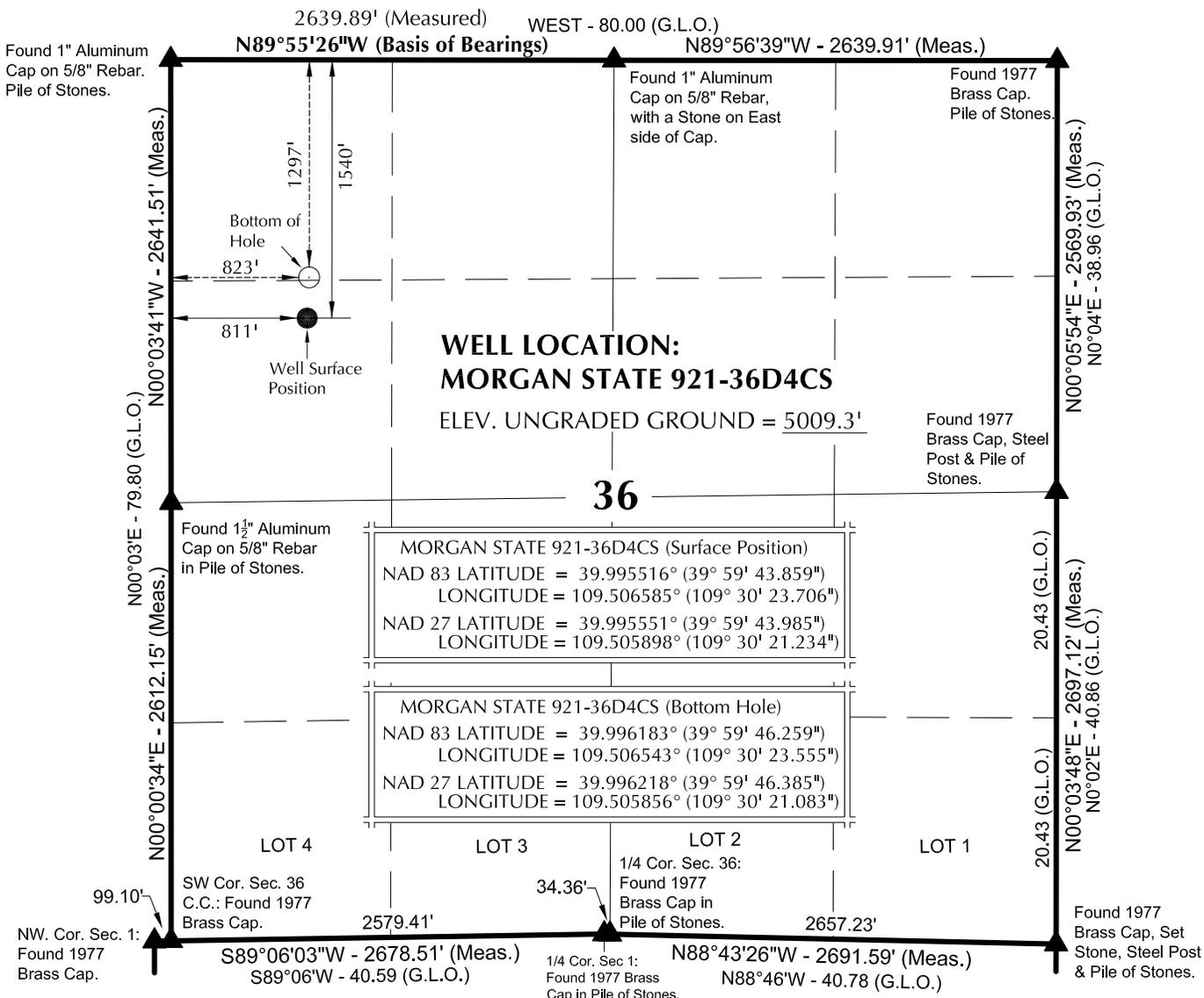
DATE: _____

EXHIBIT A
MORGAN STATE 921-36D4CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK

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



**WELL LOCATION:
MORGAN STATE 921-36D4CS**
ELEV. UNGRADED GROUND = 5009.3'

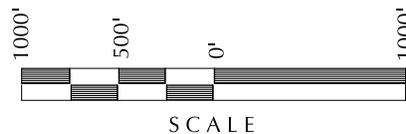
36

MORGAN STATE 921-36D4CS (Surface Position)
 NAD 83 LATITUDE = 39.995516° (39° 59' 43.859")
 LONGITUDE = 109.506585° (109° 30' 23.706")
 NAD 27 LATITUDE = 39.995551° (39° 59' 43.985")
 LONGITUDE = 109.505898° (109° 30' 21.234")

MORGAN STATE 921-36D4CS (Bottom Hole)
 NAD 83 LATITUDE = 39.996183° (39° 59' 46.259")
 LONGITUDE = 109.506543° (109° 30' 23.555")
 NAD 27 LATITUDE = 39.996218° (39° 59' 46.385")
 LONGITUDE = 109.505856° (109° 30' 21.083")

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 N02°48'18"E 243.14' 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.

No. 6028691-11-11-11
 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 921-36E

MORGAN STATE 921-36D4CS
WELL PLAT
1297' FNL, 823' FWL (Bottom Hole)
NW ¼ NW 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

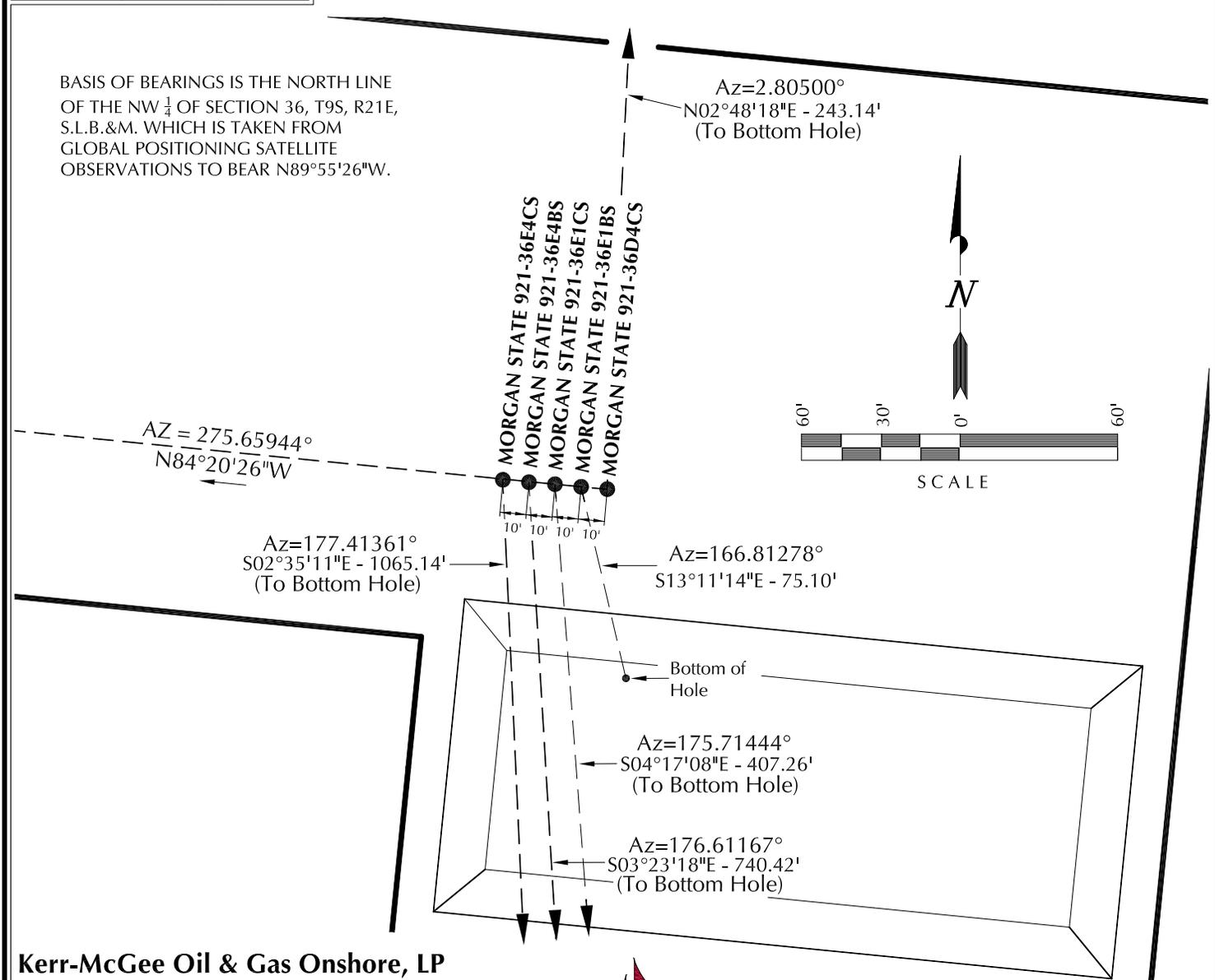
TIMBERLINE (435) 789-1365
 ENGINEERING & LAND SURVEYING, INC.
 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 10-11-11	SURVEYED BY: J.W.	SHEET NO: 1 1 OF 17
DATE DRAWN: 10-31-11	DRAWN BY: T.J.R.	
SCALE: 1" = 1000'	Date Last Revised:	

WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
MORGAN STATE 921-36D4CS	39°59'43.859"	109°30'23.706"	39°59'43.985"	109°30'21.234"	1540' FNL 811' FWL	39°59'46.259"	109°30'23.555"	39°59'46.385"	109°30'21.083"	1297' FNL 823' FWL
MORGAN STATE 921-36E1BS	39°59'43.869"	109°30'23.834"	39°59'43.995"	109°30'21.362"	1539' FNL 801' FWL	39°59'43.146"	109°30'23.613"	39°59'43.273"	109°30'21.141"	1612' FNL 818' FWL
MORGAN STATE 921-36E1CS	39°59'43.879"	109°30'23.961"	39°59'44.005"	109°30'21.489"	1538' FNL 791' FWL	39°59'39.866"	109°30'23.568"	39°59'39.992"	109°30'21.096"	1944' FNL 821' FWL
MORGAN STATE 921-36E4BS	39°59'43.888"	109°30'24.089"	39°59'44.015"	109°30'21.617"	1537' FNL 781' FWL	39°59'36.586"	109°30'23.523"	39°59'36.712"	109°30'21.051"	2276' FNL 824' FWL
MORGAN STATE 921-36E4CS	39°59'43.898"	109°30'24.217"	39°59'44.024"	109°30'21.745"	1536' FNL 771' FWL	39°59'33.385"	109°30'23.593"	39°59'33.511"	109°30'21.121"	2600' FNL 818' FWL

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 921-36D4CS	242.8'	11.9'	MORGAN STATE 921-36E1BS	-73.1'	17.1'	MORGAN STATE 921-36E1CS	-406.1'	30.4'	MORGAN STATE 921-36E4BS	-739.1'	43.8'
MORGAN STATE 921-36E4CS	-1064.1'	48.1'									



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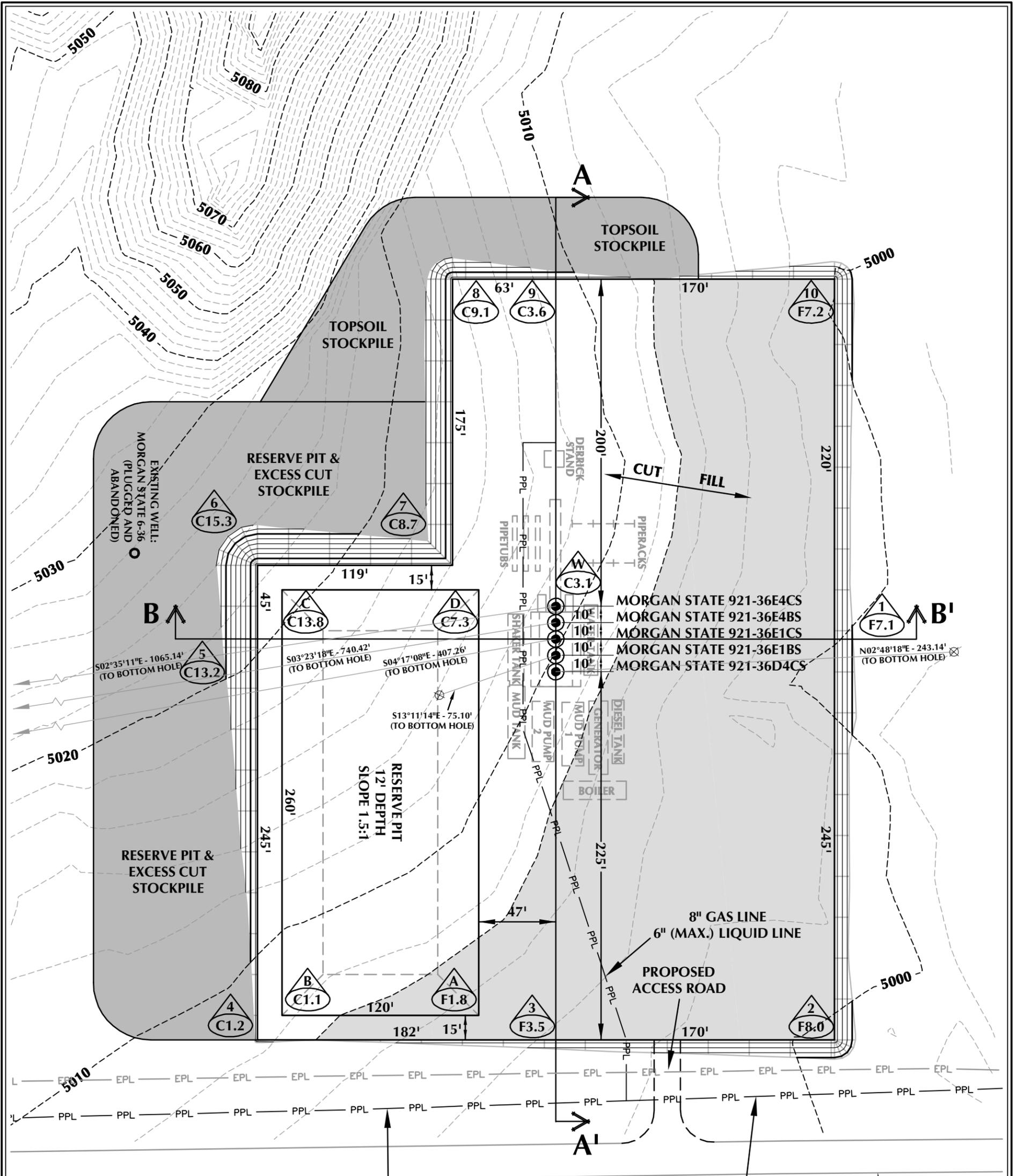
WELL PAD - MORGAN STATE 921-36E

WELL PAD INTERFERENCE PLAT
WELLS - MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS, MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS & MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., Uintah County, Utah.

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: 10-11-11	SURVEYED BY: J.W.	SHEET NO: 6
DATE DRAWN: 10-31-11	DRAWN BY: T.J.R.	
SCALE: 1" = 60'		6 OF 17



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

6" (MAX.) LIQUID LINE

8" GAS LINE
6" (MAX.) LIQUID LINE

GLEN BENCH ROAD

WELL PAD - MORGAN STATE 921-36E DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5010.3'
 FINISHED GRADE ELEVATION = 5007.2'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.68 ACRES
 TOTAL DISTURBANCE AREA = 5.00 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 14,142 C.Y.
 TOTAL FILL FOR WELL PAD = 12,442 C.Y.
 TOPSOIL @ 6" DEPTH = 2,811 C.Y.
 EXCESS MATERIAL = 1,700 C.Y.

RESERVE PIT QUANTITIES

TOTAL CUT FOR RESERVE PIT +/- 11,020 C.Y.
 RESERVE PIT CAPACITY (2' OF FREEBOARD) +/- 42,290 BARRELS

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WELL PAD - MORGAN STATE 921-36E

WELL PAD - LOCATION LAYOUT
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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

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(435) 789-1365

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'

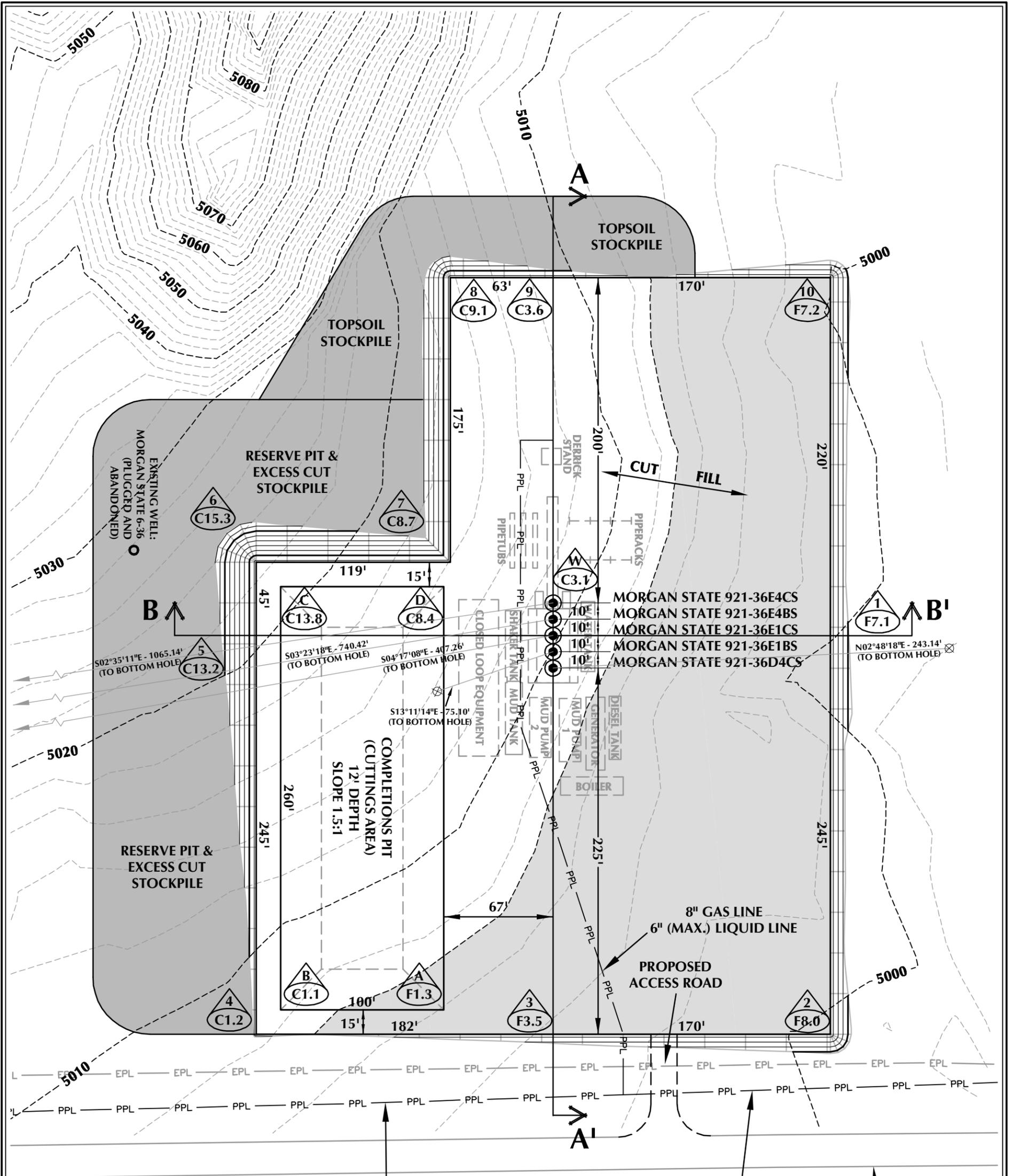
2' CONTOURS

SCALE: 1"=60' DATE: 11/11/11 SHEET NO:

REVISED:

7

7 OF 17



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

6" (MAX.) LIQUID LINE

8" GAS LINE
6" (MAX.) LIQUID LINE

GLEN BENCH ROAD

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

EXISTING GRADE @ CENTER OF WELL PAD = 5010.3'
 FINISHED GRADE ELEVATION = 5007.2'
 CUT SLOPES = 1.5:1
 FILL SLOPES = 1.5:1
 TOTAL WELL PAD AREA = 3.68 ACRES
 TOTAL DISTURBANCE AREA = 5.00 ACRES
 SHRINKAGE FACTOR = 1.10
 SWELL FACTOR = 1.00

WELL PAD QUANTITIES

TOTAL CUT FOR WELL PAD = 14,142 C.Y.
 TOTAL FILL FOR WELL PAD = 12,442 C.Y.
 TOPSOIL @ 6" DEPTH = 2,811 C.Y.
 EXCESS MATERIAL = 1,700 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT +/- 8,870 C.Y.
 COMPLETIONS PIT CAPACITY (2' OF FREEBOARD) +/- 33,770 BARRELS

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WELL PAD - MORGAN STATE 921-36E

WELL PAD - LOCATION LAYOUT
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH



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 Sheridan, WY 82801
 Phone 307-674-0609
 Fax 307-674-0182

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WELL PAD LEGEND

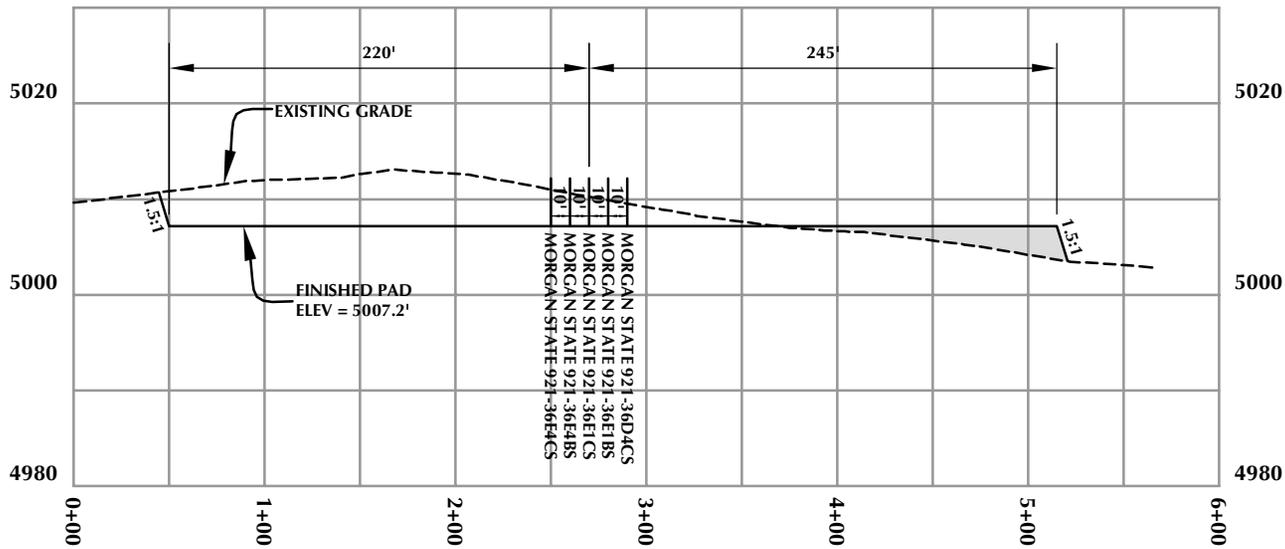
- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PROPOSED PIPELINE
- EXISTING PIPELINE



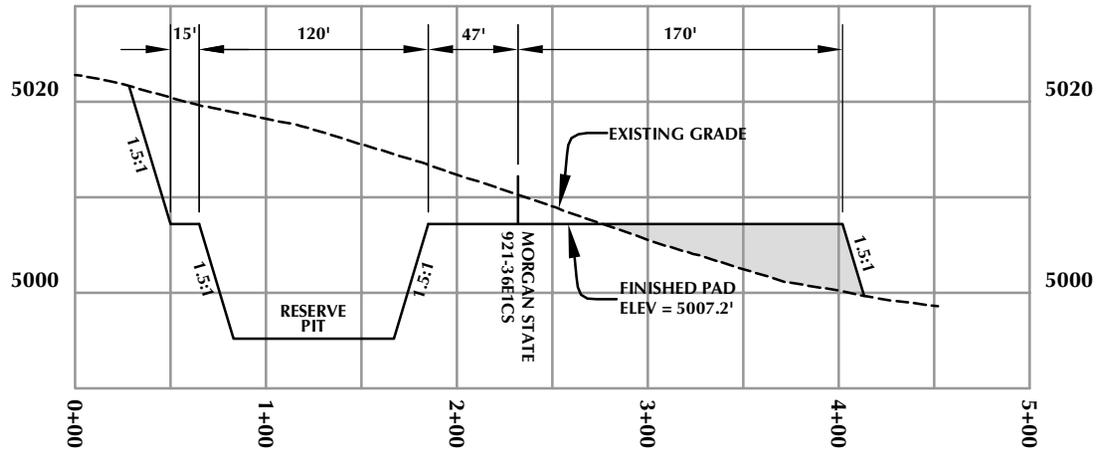
HORIZONTAL 0 30' 60' 1" = 60'
 2' CONTOURS

SCALE: 1"=60' DATE: 11/15/11 SHEET NO:

REVISID: **7B** 7B OF 17



CROSS SECTION A-A'



CROSS SECTION B-B'

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WELL PAD - MORGAN STATE 921-36E

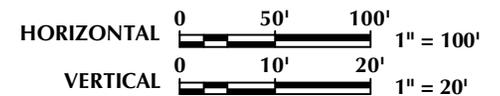
WELL PAD - CROSS SECTIONS
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH



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2155 North Main Street
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Phone 307-674-0609
Fax 307-674-0182

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

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Scale: 1"=100'

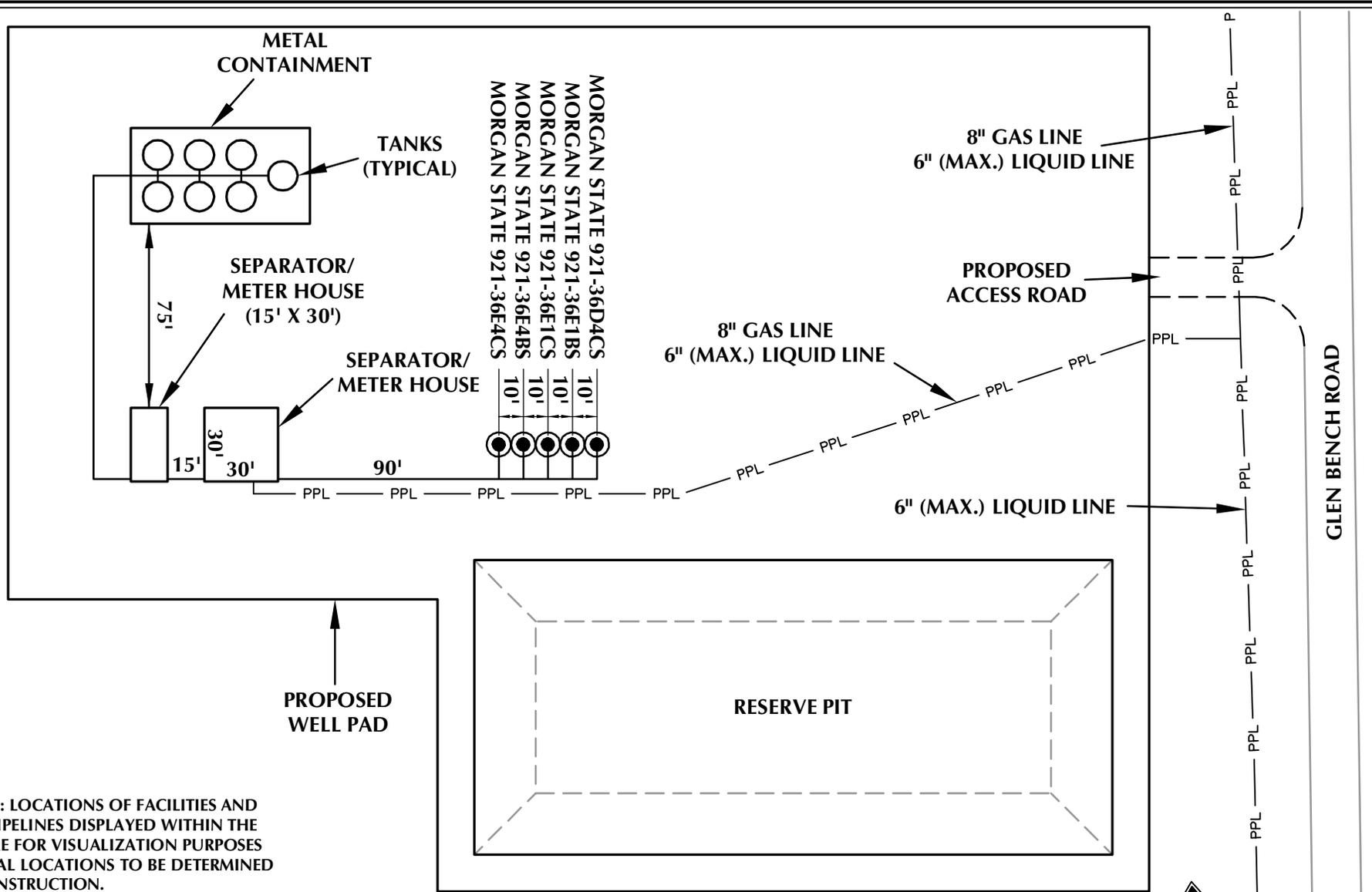
Date: 11/11/11

SHEET NO:

REVISED:

8

8 OF 17



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.

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WELL PAD - MORGAN STATE 921-36E

WELL PAD - FACILITIES DIAGRAM
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH



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2155 North Main Street
Sheridan, WY 82801
Phone 307-674-0609
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WELL PAD LEGEND

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



HORIZONTAL 1" = 60'

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(435) 789-1365

Scale: 1"=60'

Date: 11/11/11

SHEET NO:

9

9 OF 17

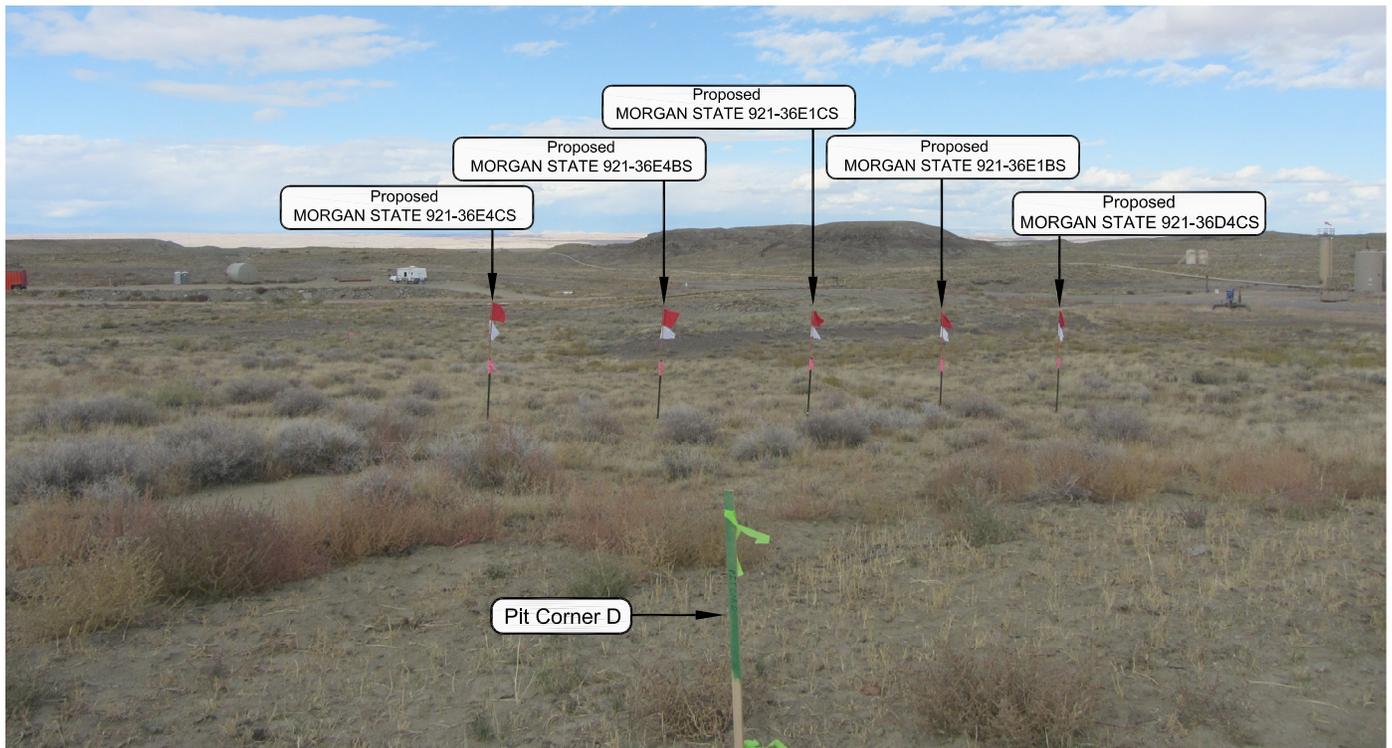


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

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WELL PAD - MORGAN STATE 921-36E

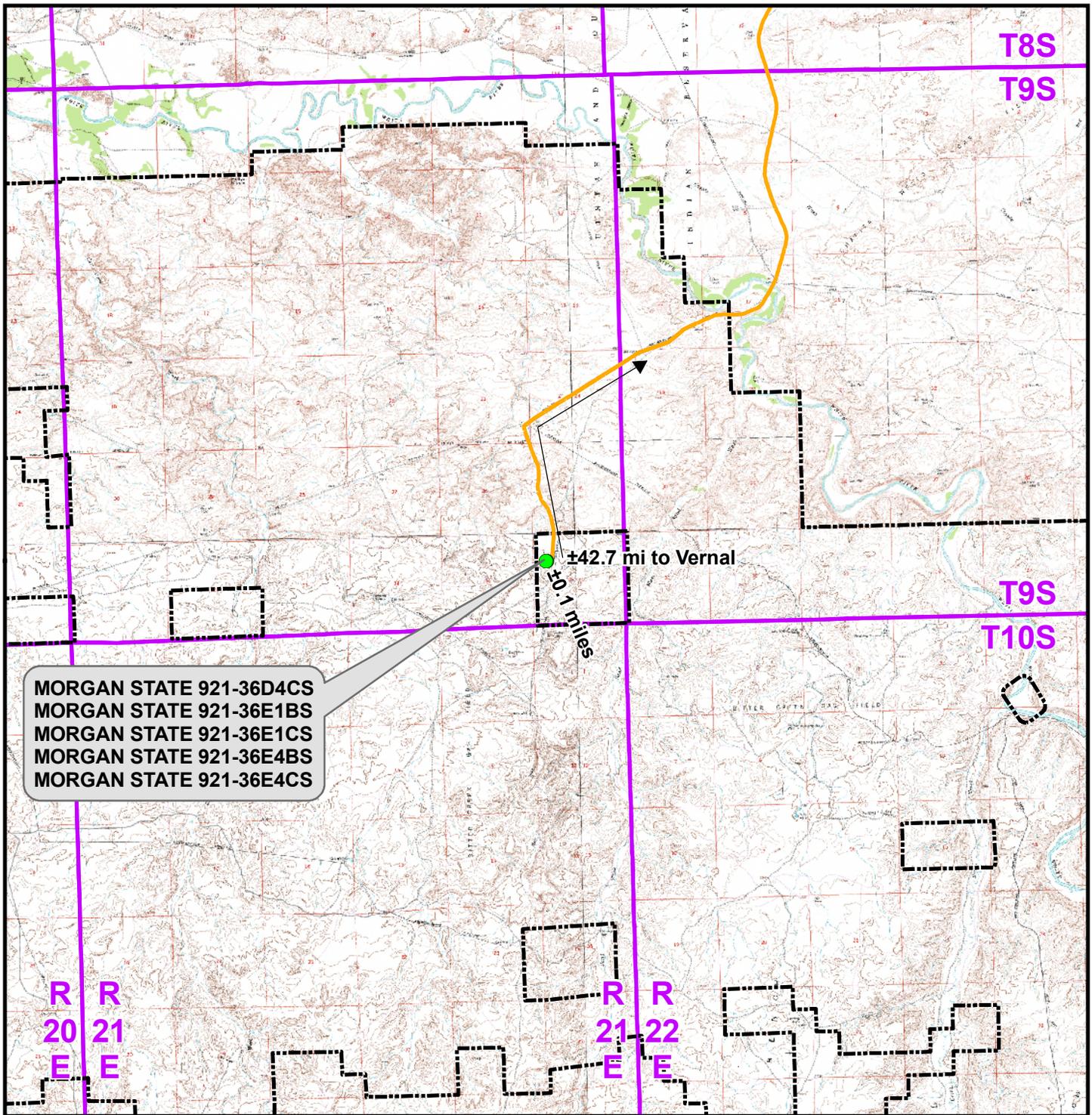
LOCATION PHOTOS
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS, MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS & MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH.



CONSULTING, LLC
 2155 North Main Street
 Sheridan WY 82801
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 209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 10-11-11	PHOTOS TAKEN BY: J.W.	SHEET NO: 10
DATE DRAWN: 10-31-11	DRAWN BY: T.J.R.	
Date Last Revised:		10 OF 17



MORGAN STATE 921-36D4CS
 MORGAN STATE 921-36E1BS
 MORGAN STATE 921-36E1CS
 MORGAN STATE 921-36E4BS
 MORGAN STATE 921-36E4CS

Legend

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

Distance From Well Pad - MORGAN STATE 921-36E To Unit Boundary: ±771ft

WELL PAD - MORGAN STATE 921-36E

TOPO A
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

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

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 Denver, Colorado 80202



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SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

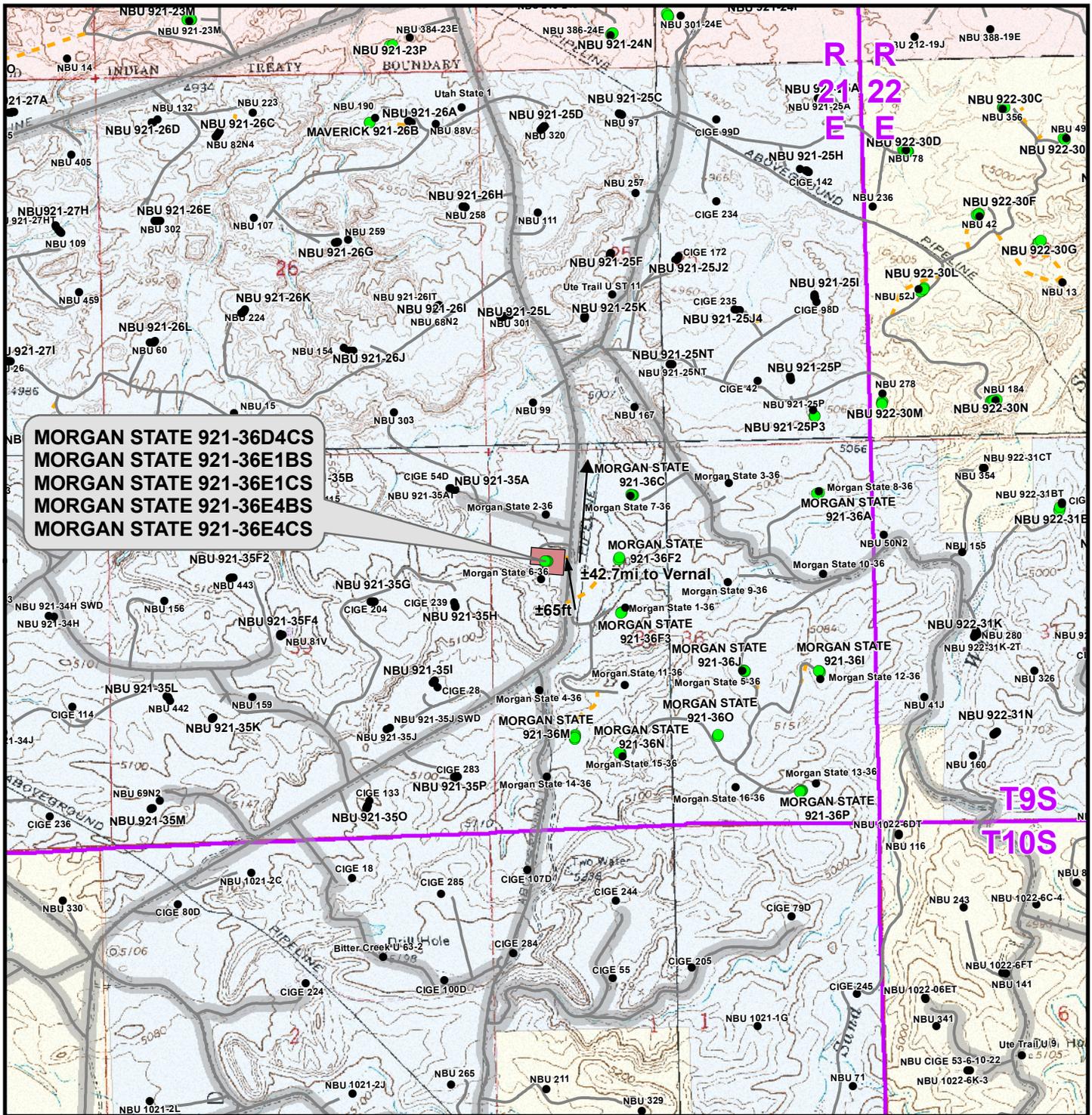
DATE: 11 Nov 2011

11

REVISED:

DATE:

11 OF 17



Legend

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

Total Proposed Road Length: ±65ft

WELL PAD - MORGAN STATE 921-36E

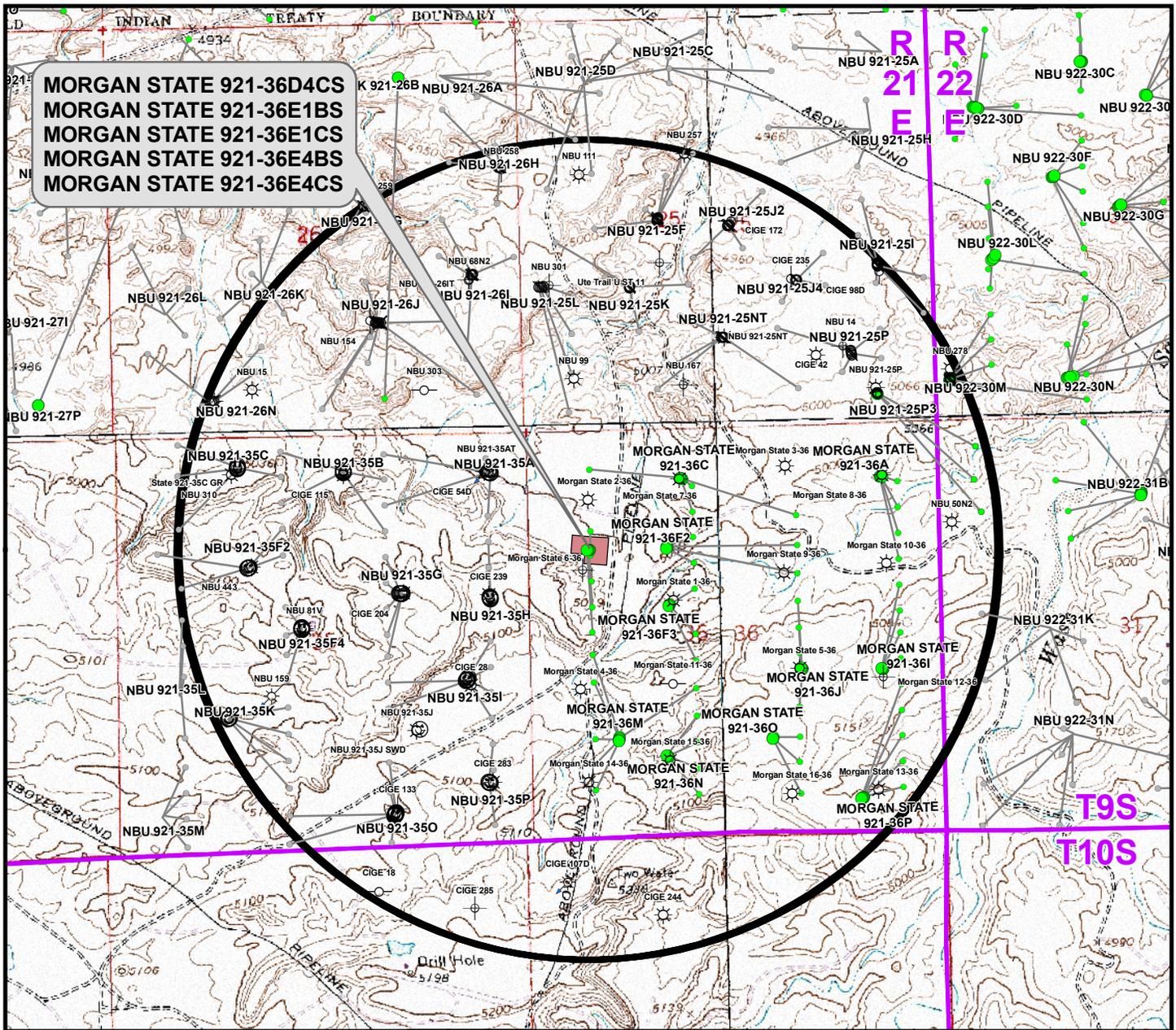
TOPO B
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah

**Kerr-McGee Oil &
 Gas Onshore L.P.**
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 Denver, Colorado 80202



CONSULTING, LLC
 2155 North Main Street
 Sheridan, Wyoming 82801
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SCALE: 1" = 2,000ft	NAD83 USP Central	12	SHEET NO:
DRAWN: TL	DATE: 11 Nov 2011		12 OF 17
REVISED:	DATE:		



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 921-36D4CS	Morgan State 2-36	398ft
MORGAN STATE 921-36E1BS	Morgan State 6-36	205ft
MORGAN STATE 921-36E1CS	Morgan State 6-36	189ft
MORGAN STATE 921-36E4BS	Morgan State 6-36	500ft
MORGAN STATE 921-36E4CS	Morgan State 4-36	749ft

Legend

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

WELL PAD - MORGAN STATE 921-36E

TOPO C
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., Uintah County, Utah

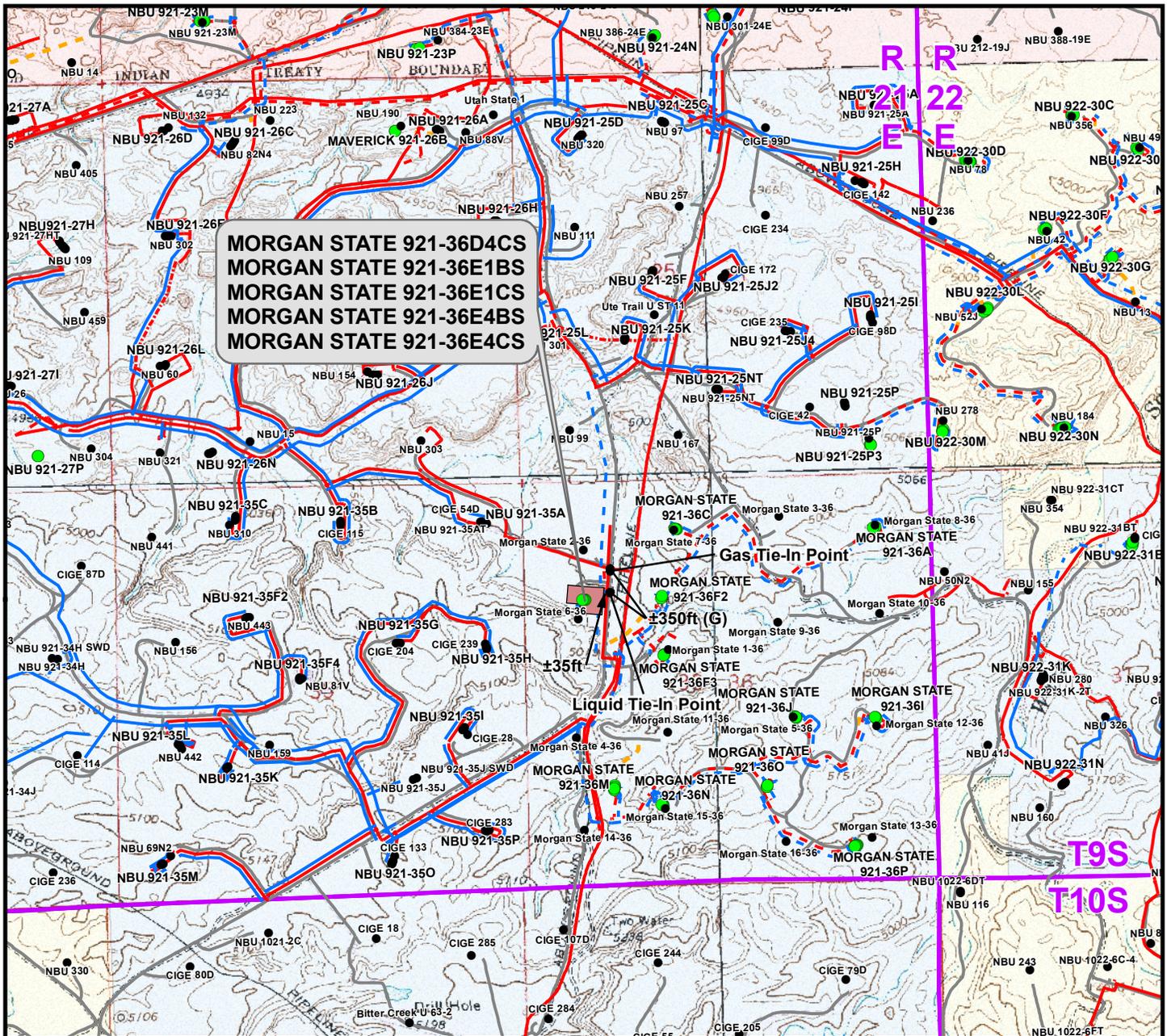
**Kerr-McGee Oil &
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 1099 18th Street
 Denver, Colorado 80202



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 2155 North Main Street
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SCALE: 1" = 2,000ft	NAD83 USP Central	13
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	

SHEET NO:
13 OF 17



**MORGAN STATE 921-36D4CS
MORGAN STATE 921-36E1BS
MORGAN STATE 921-36E1CS
MORGAN STATE 921-36E4BS
MORGAN STATE 921-36E4CS**

Proposed Liquid Pipeline	Length	Proposed Gas Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±395ft	Buried 8" (Meter House to Edge of Pad)	±395ft
Buried 6" (Max.) (Edge of Pad to Proposed Liquid Pipeline ROW In Progress)	±35ft	Buried 8" (Edge of Pad to Existing 16" Buried Gas Pipeline)	±385ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±430ft	TOTAL PROPOSED BURIED GAS PIPELINE =	±780ft

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

WELL PAD - MORGAN STATE 921-36E

TOPO D
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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

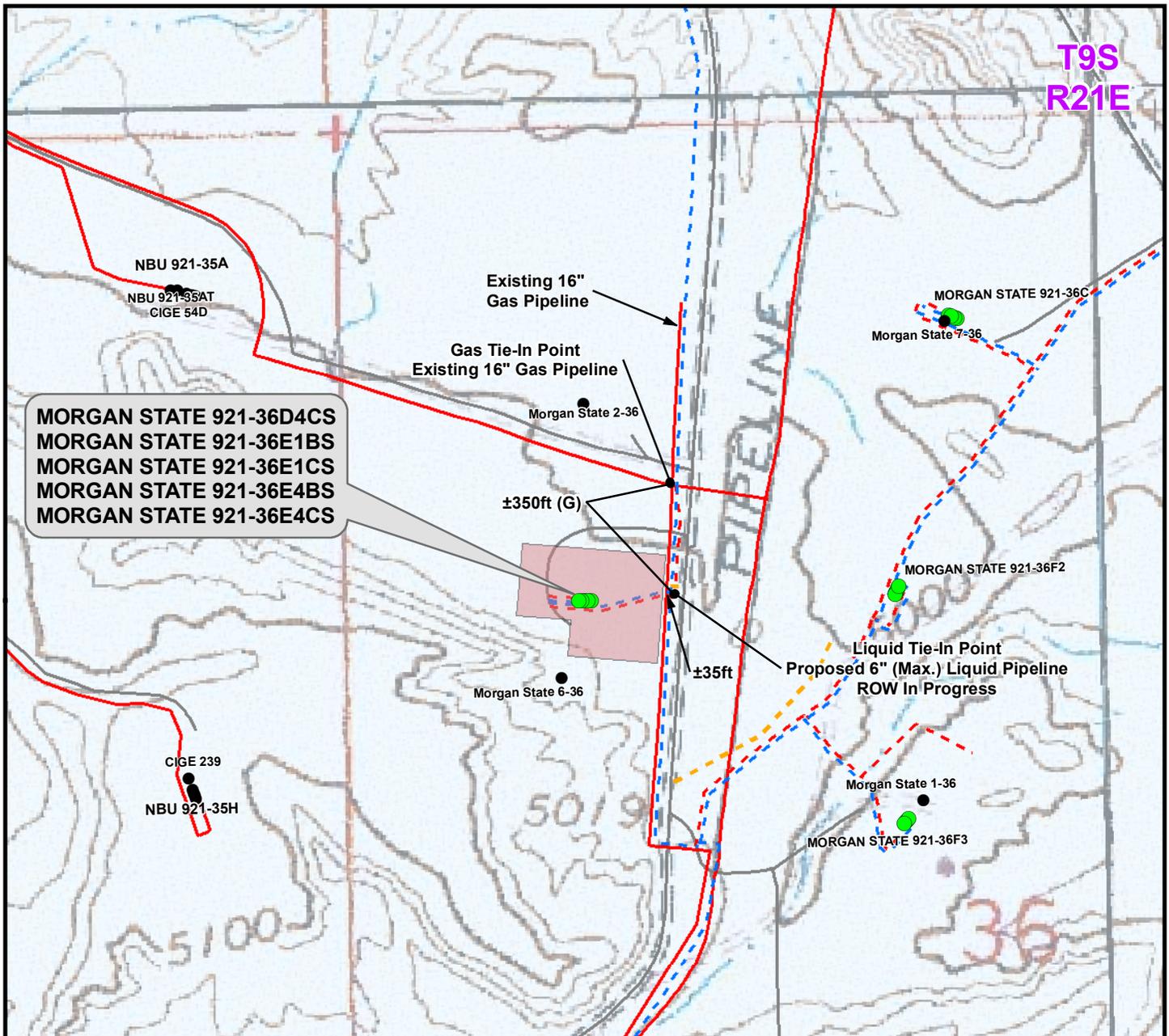
1099 18th Street
Denver, Colorado 80202

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

SCALE: 1" = 2,000ft	NAD83 USP Central	14
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	

SHEET NO:
14 OF 17

T9S
R21E



MORGAN STATE 921-36D4CS
MORGAN STATE 921-36E1BS
MORGAN STATE 921-36E1CS
MORGAN STATE 921-36E4BS
MORGAN STATE 921-36E4CS

Proposed Liquid Pipeline	Length
Buried 6" (Max.) (Meter House to Edge of Pad)	±395ft
Buried 6" (Max.) (Edge of Pad to Proposed Liquid Pipeline ROW In Progress)	±35ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±430ft

Proposed Gas Pipeline	Length
Buried 8" (Meter House to Edge of Pad)	±395ft
Buried 8" (Edge of Pad to Existing 16" Buried Gas Pipeline)	±385ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±780ft

Legend

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

WELL PAD - MORGAN STATE 921-36E

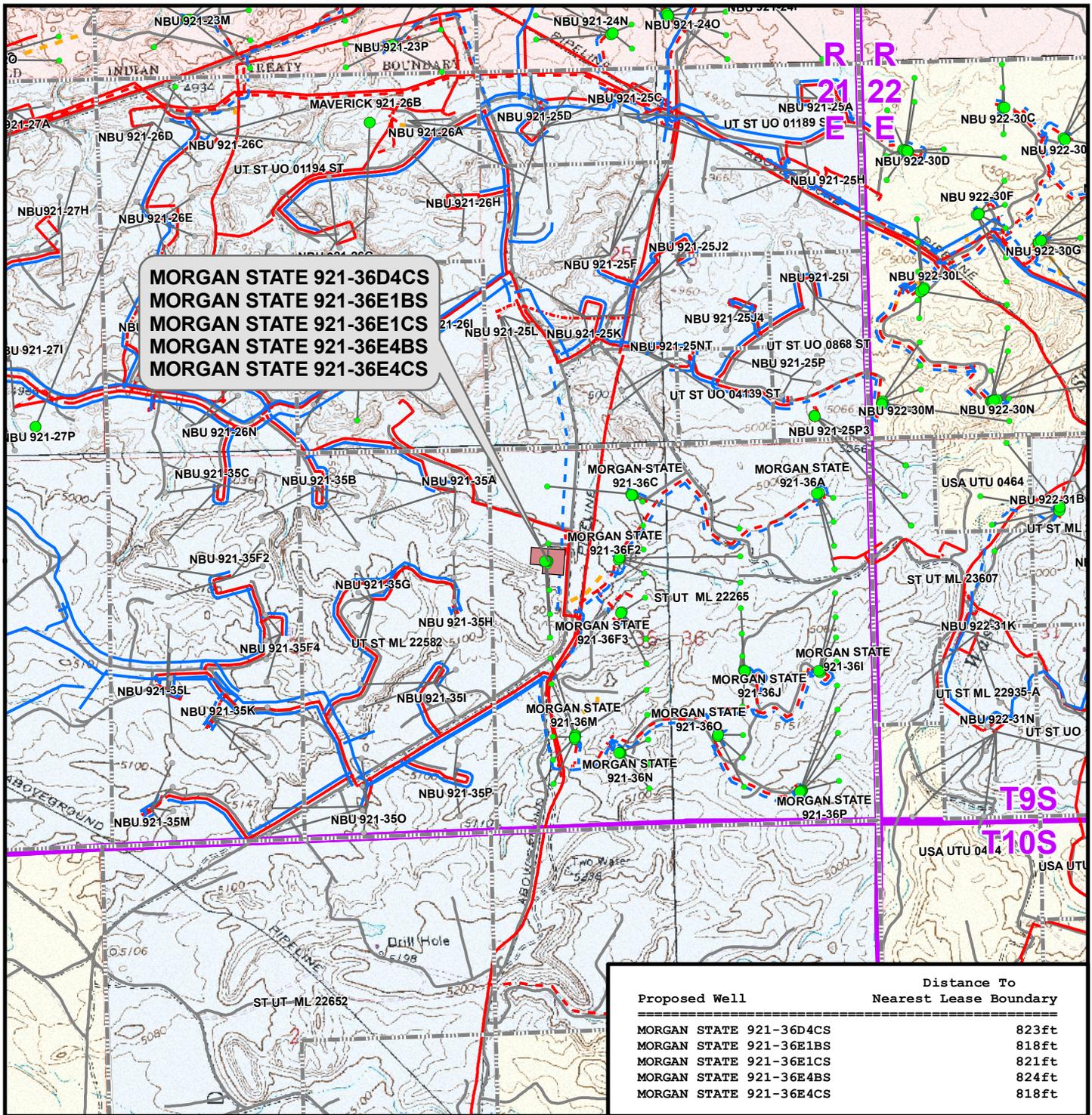
TOPO D2 (PAD & PIPELINE DETAIL)
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UINTAH COUNTY, UTAH

**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

SCALE: 1" = 500ft	NAD83 USP Central	15 15 OF 17
DRAWN: TL	DATE: 11 Nov 2011	
REVISED:	DATE:	



Legend

- Well - Proposed
- Bottom Hole - Proposed
- Bottom Hole - Existing
- Well Path
- Well Pad
- ▭ Lease Boundary
- Gas Pipeline - Proposed
- Gas Pipeline - To Be Upgraded
- Gas Pipeline - Existing
- Liquid Pipeline - Proposed
- Liquid Pipeline - Existing
- Road - Proposed
- Road - Existing
- Bureau of Land Management
- Indian Reservation
- State
- Private

WELL PAD - MORGAN STATE 921-36E

TOPO E
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 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

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 11 Nov 2011

DATE:

SHEET NO:

16

16 OF 17

**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – MORGAN STATE 921-36E
WELLS – MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS, MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS & MORGAN STATE 921-36E4CS
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 19.2 miles to the proposed access road to the west. Follow road flags in a westerly direction approximately 65 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 42.7 miles in a southerly direction.



WELL DETAILS: MORGAN STATE 921-36D4CS

GL 5007 & KB 4 @ 5011.00ft (ASSUMED)

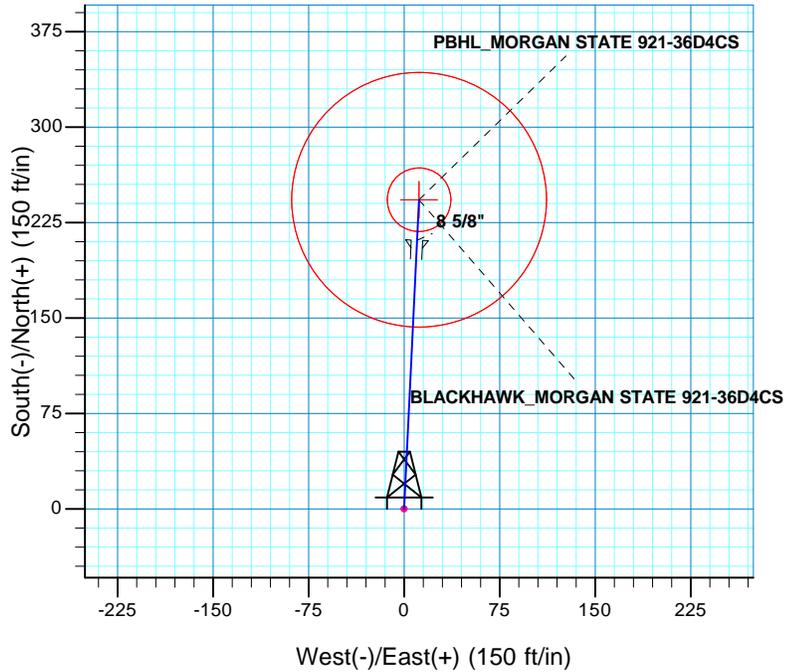
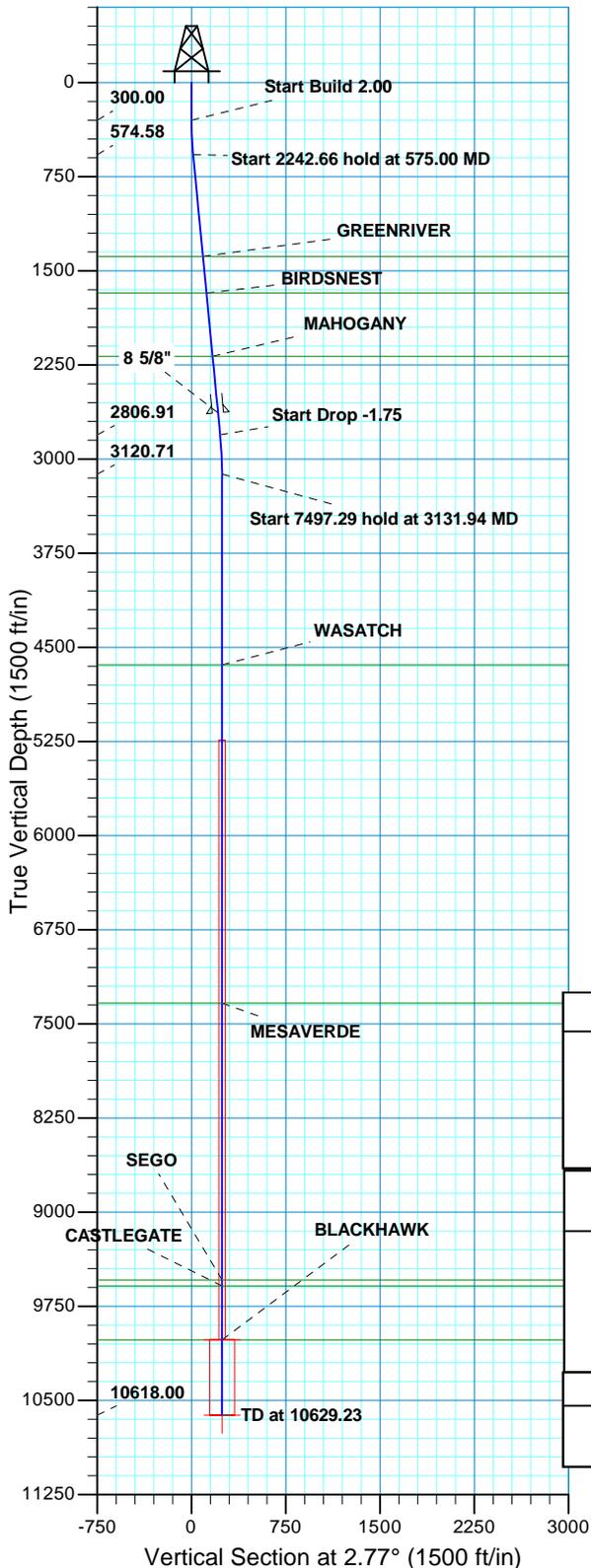
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14527931.65	2058887.84	39° 59' 43.984 N	109° 30' 21.233 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BLACKHAWK	10018.00	242.93	11.77	14528174.74	2058895.53	39° 59' 46.385 N	109° 30' 21.082 W	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10618.00	242.93	11.77	14528174.74	2058895.53	39° 59' 46.385 N	109° 30' 21.082 W	Circle (Radius: 100.00)
- plan hits target center								

Azimuths to True North
 Magnetic North: 11.02°

 Magnetic Field
 Strength: 52278.4snT
 Dip Angle: 65.85°
 Date: 2011/12/05
 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	
575.00	5.50	2.77	574.58	13.17	0.64	2.00	2.77	13.19	
2817.66	5.50	2.77	2806.91	227.87	11.04	0.00	0.00	228.14	
3131.94	0.00	0.00	3120.71	242.93	11.77	1.75	180.00	243.21	
10629.23	0.00	0.00	10618.00	242.93	11.77	0.00	0.00	243.21	PBHL_MORGAN STATE 921-36D4CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N		FORMATION TOP DETAILS		
Geodetic System: Universal Transverse Mercator (US Survey Feet)		TVDPath	MDPath	Formation
Datum: NAD 1927 (NADCON CONUS)		1385.00	1389.17	GREENRIVER
Ellipsoid: Clarke 1866		1678.00	1683.53	BIRDSNEST
Zone: Zone 12N (114 W to 108 W)		2182.00	2189.86	MAHOGANY
Location: SECTION 36 T9S R21E		4640.00	4651.23	WASATCH
System Datum: Mean Sea Level		7335.00	7346.23	MESAVERDE
		9540.00	9551.23	SEGO
		9589.00	9600.23	CASTLEGATE
		10018.00	10029.23	BLACKHAWK

CASING DETAILS			
TVD	MD	Name	Size
2632.00	2641.94	8 5/8"	8.625

RECEIVED :



US ROCKIES REGION PLANNING

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

MORGAN STATE 921-36E PAD

MORGAN STATE 921-36D4CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

05 December, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36D4CS	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 921-36E PAD, SECTION 36 T9S R21E				
Site Position:	Northing:	14,527,931.66 usft	Latitude:	39° 59' 43.984 N	
From: Lat/Long	Easting:	2,058,887.84 usft	Longitude:	109° 30' 21.233 W	
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.96 °

Well	MORGAN STATE 921-36D4CS, 1540 FNL 811 FWL			
Well Position	+N/-S	0.00 ft	Northing:	14,527,931.66 usft
	+E/-W	0.00 ft	Easting:	2,058,887.84 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	Ground Level:	5,007.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/12/05	11.02	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	2.77

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	
575.00	5.50	2.77	574.58	13.17	0.64	2.00	2.00	0.00	2.77	
2,817.66	5.50	2.77	2,806.91	227.87	11.04	0.00	0.00	0.00	0.00	
3,131.94	0.00	0.00	3,120.71	242.93	11.77	1.75	-1.75	0.00	180.00	
10,629.23	0.00	0.00	10,618.00	242.93	11.77	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 921-36D4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36D4CS	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	2.77	399.98	1.74	0.08	1.75	2.00	2.00	2.00	0.00
500.00	4.00	2.77	499.84	6.97	0.34	6.98	2.00	2.00	2.00	0.00
575.00	5.50	2.77	574.58	13.17	0.64	13.19	2.00	2.00	2.00	0.00
Start 2242.66 hold at 575.00 MD										
600.00	5.50	2.77	599.46	15.57	0.75	15.59	0.00	0.00	0.00	0.00
700.00	5.50	2.77	699.00	25.14	1.22	25.17	0.00	0.00	0.00	0.00
800.00	5.50	2.77	798.54	34.71	1.68	34.75	0.00	0.00	0.00	0.00
900.00	5.50	2.77	898.08	44.29	2.14	44.34	0.00	0.00	0.00	0.00
1,000.00	5.50	2.77	997.62	53.86	2.61	53.92	0.00	0.00	0.00	0.00
1,100.00	5.50	2.77	1,097.16	63.43	3.07	63.51	0.00	0.00	0.00	0.00
1,200.00	5.50	2.77	1,196.70	73.01	3.54	73.09	0.00	0.00	0.00	0.00
1,300.00	5.50	2.77	1,296.24	82.58	4.00	82.68	0.00	0.00	0.00	0.00
1,389.17	5.50	2.77	1,385.00	91.12	4.41	91.22	0.00	0.00	0.00	0.00
GREENRIVER										
1,400.00	5.50	2.77	1,395.78	92.15	4.46	92.26	0.00	0.00	0.00	0.00
1,500.00	5.50	2.77	1,495.32	101.73	4.93	101.85	0.00	0.00	0.00	0.00
1,600.00	5.50	2.77	1,594.86	111.30	5.39	111.43	0.00	0.00	0.00	0.00
1,683.53	5.50	2.77	1,678.00	119.30	5.78	119.44	0.00	0.00	0.00	0.00
BIRDSNEST										
1,700.00	5.50	2.77	1,694.40	120.87	5.85	121.02	0.00	0.00	0.00	0.00
1,800.00	5.50	2.77	1,793.94	130.45	6.32	130.60	0.00	0.00	0.00	0.00
1,900.00	5.50	2.77	1,893.48	140.02	6.78	140.18	0.00	0.00	0.00	0.00
2,000.00	5.50	2.77	1,993.02	149.59	7.25	149.77	0.00	0.00	0.00	0.00
2,100.00	5.50	2.77	2,092.56	159.17	7.71	159.35	0.00	0.00	0.00	0.00
2,189.86	5.50	2.77	2,182.00	167.77	8.13	167.97	0.00	0.00	0.00	0.00
MAHOGANY										
2,200.00	5.50	2.77	2,192.10	168.74	8.17	168.94	0.00	0.00	0.00	0.00
2,300.00	5.50	2.77	2,291.64	178.31	8.64	178.52	0.00	0.00	0.00	0.00
2,400.00	5.50	2.77	2,391.18	187.89	9.10	188.11	0.00	0.00	0.00	0.00
2,500.00	5.50	2.77	2,490.72	197.46	9.56	197.69	0.00	0.00	0.00	0.00
2,600.00	5.50	2.77	2,590.26	207.03	10.03	207.28	0.00	0.00	0.00	0.00
2,641.94	5.50	2.77	2,632.00	211.05	10.22	211.30	0.00	0.00	0.00	0.00
8 5/8"										
2,700.00	5.50	2.77	2,689.79	216.61	10.49	216.86	0.00	0.00	0.00	0.00
2,800.00	5.50	2.77	2,789.33	226.18	10.95	226.45	0.00	0.00	0.00	0.00
2,817.66	5.50	2.77	2,806.91	227.87	11.04	228.14	0.00	0.00	0.00	0.00
Start Drop -1.75										
2,900.00	4.06	2.77	2,888.96	234.72	11.37	235.00	1.75	-1.75	0.00	0.00
3,000.00	2.31	2.77	2,988.81	240.27	11.64	240.55	1.75	-1.75	0.00	0.00
3,100.00	0.56	2.77	3,088.77	242.77	11.76	243.06	1.75	-1.75	0.00	0.00
3,131.94	0.00	0.00	3,120.71	242.93	11.77	243.21	1.75	-1.75	0.00	0.00
Start 7497.29 hold at 3131.94 MD										
3,200.00	0.00	0.00	3,188.77	242.93	11.77	243.21	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,288.77	242.93	11.77	243.21	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,388.77	242.93	11.77	243.21	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,488.77	242.93	11.77	243.21	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,588.77	242.93	11.77	243.21	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,688.77	242.93	11.77	243.21	0.00	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36D4CS	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)
3,800.00	0.00	0.00	3,788.77	242.93	11.77	243.21	0.00	0.00	0.00
3,900.00	0.00	0.00	3,888.77	242.93	11.77	243.21	0.00	0.00	0.00
4,000.00	0.00	0.00	3,988.77	242.93	11.77	243.21	0.00	0.00	0.00
4,100.00	0.00	0.00	4,088.77	242.93	11.77	243.21	0.00	0.00	0.00
4,200.00	0.00	0.00	4,188.77	242.93	11.77	243.21	0.00	0.00	0.00
4,300.00	0.00	0.00	4,288.77	242.93	11.77	243.21	0.00	0.00	0.00
4,400.00	0.00	0.00	4,388.77	242.93	11.77	243.21	0.00	0.00	0.00
4,500.00	0.00	0.00	4,488.77	242.93	11.77	243.21	0.00	0.00	0.00
4,600.00	0.00	0.00	4,588.77	242.93	11.77	243.21	0.00	0.00	0.00
4,651.23	0.00	0.00	4,640.00	242.93	11.77	243.21	0.00	0.00	0.00
WASATCH									
4,700.00	0.00	0.00	4,688.77	242.93	11.77	243.21	0.00	0.00	0.00
4,800.00	0.00	0.00	4,788.77	242.93	11.77	243.21	0.00	0.00	0.00
4,900.00	0.00	0.00	4,888.77	242.93	11.77	243.21	0.00	0.00	0.00
5,000.00	0.00	0.00	4,988.77	242.93	11.77	243.21	0.00	0.00	0.00
5,100.00	0.00	0.00	5,088.77	242.93	11.77	243.21	0.00	0.00	0.00
5,200.00	0.00	0.00	5,188.77	242.93	11.77	243.21	0.00	0.00	0.00
5,300.00	0.00	0.00	5,288.77	242.93	11.77	243.21	0.00	0.00	0.00
5,400.00	0.00	0.00	5,388.77	242.93	11.77	243.21	0.00	0.00	0.00
5,500.00	0.00	0.00	5,488.77	242.93	11.77	243.21	0.00	0.00	0.00
5,600.00	0.00	0.00	5,588.77	242.93	11.77	243.21	0.00	0.00	0.00
5,700.00	0.00	0.00	5,688.77	242.93	11.77	243.21	0.00	0.00	0.00
5,800.00	0.00	0.00	5,788.77	242.93	11.77	243.21	0.00	0.00	0.00
5,900.00	0.00	0.00	5,888.77	242.93	11.77	243.21	0.00	0.00	0.00
6,000.00	0.00	0.00	5,988.77	242.93	11.77	243.21	0.00	0.00	0.00
6,100.00	0.00	0.00	6,088.77	242.93	11.77	243.21	0.00	0.00	0.00
6,200.00	0.00	0.00	6,188.77	242.93	11.77	243.21	0.00	0.00	0.00
6,300.00	0.00	0.00	6,288.77	242.93	11.77	243.21	0.00	0.00	0.00
6,400.00	0.00	0.00	6,388.77	242.93	11.77	243.21	0.00	0.00	0.00
6,500.00	0.00	0.00	6,488.77	242.93	11.77	243.21	0.00	0.00	0.00
6,600.00	0.00	0.00	6,588.77	242.93	11.77	243.21	0.00	0.00	0.00
6,700.00	0.00	0.00	6,688.77	242.93	11.77	243.21	0.00	0.00	0.00
6,800.00	0.00	0.00	6,788.77	242.93	11.77	243.21	0.00	0.00	0.00
6,900.00	0.00	0.00	6,888.77	242.93	11.77	243.21	0.00	0.00	0.00
7,000.00	0.00	0.00	6,988.77	242.93	11.77	243.21	0.00	0.00	0.00
7,100.00	0.00	0.00	7,088.77	242.93	11.77	243.21	0.00	0.00	0.00
7,200.00	0.00	0.00	7,188.77	242.93	11.77	243.21	0.00	0.00	0.00
7,300.00	0.00	0.00	7,288.77	242.93	11.77	243.21	0.00	0.00	0.00
7,346.23	0.00	0.00	7,335.00	242.93	11.77	243.21	0.00	0.00	0.00
MESAVERDE									
7,400.00	0.00	0.00	7,388.77	242.93	11.77	243.21	0.00	0.00	0.00
7,500.00	0.00	0.00	7,488.77	242.93	11.77	243.21	0.00	0.00	0.00
7,600.00	0.00	0.00	7,588.77	242.93	11.77	243.21	0.00	0.00	0.00
7,700.00	0.00	0.00	7,688.77	242.93	11.77	243.21	0.00	0.00	0.00
7,800.00	0.00	0.00	7,788.77	242.93	11.77	243.21	0.00	0.00	0.00
7,900.00	0.00	0.00	7,888.77	242.93	11.77	243.21	0.00	0.00	0.00
8,000.00	0.00	0.00	7,988.77	242.93	11.77	243.21	0.00	0.00	0.00
8,100.00	0.00	0.00	8,088.77	242.93	11.77	243.21	0.00	0.00	0.00
8,200.00	0.00	0.00	8,188.77	242.93	11.77	243.21	0.00	0.00	0.00
8,300.00	0.00	0.00	8,288.77	242.93	11.77	243.21	0.00	0.00	0.00
8,400.00	0.00	0.00	8,388.77	242.93	11.77	243.21	0.00	0.00	0.00
8,500.00	0.00	0.00	8,488.77	242.93	11.77	243.21	0.00	0.00	0.00
8,600.00	0.00	0.00	8,588.77	242.93	11.77	243.21	0.00	0.00	0.00
8,700.00	0.00	0.00	8,688.77	242.93	11.77	243.21	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36D4CS	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)	
8,800.00	0.00	0.00	8,788.77	242.93	11.77	243.21	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,888.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,988.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,100.00	0.00	0.00	9,088.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,200.00	0.00	0.00	9,188.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,300.00	0.00	0.00	9,288.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,388.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,488.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,551.23	0.00	0.00	9,540.00	242.93	11.77	243.21	0.00	0.00	0.00	
SEGO										
9,600.00	0.00	0.00	9,588.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,600.23	0.00	0.00	9,589.00	242.93	11.77	243.21	0.00	0.00	0.00	
CASTLEGATE										
9,700.00	0.00	0.00	9,688.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,788.77	242.93	11.77	243.21	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,888.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,988.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,029.23	0.00	0.00	10,018.00	242.93	11.77	243.21	0.00	0.00	0.00	
BLACKHAWK - BLACKHAWK_MORGAN STATE 921-36D4CS										
10,100.00	0.00	0.00	10,088.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,200.00	0.00	0.00	10,188.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,300.00	0.00	0.00	10,288.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,388.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,488.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,588.77	242.93	11.77	243.21	0.00	0.00	0.00	
10,629.23	0.00	0.00	10,618.00	242.93	11.77	243.21	0.00	0.00	0.00	
TD at 10629.23 - PBHL_MORGAN STATE 921-36D4CS										

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	10,018.00	242.93	11.77	14,528,174.75	2,058,895.53	39° 59' 46.385 N	109° 30' 21.082 W	
PBHL_MORGAN STATI - plan hits target center - Circle (radius 100.00)	0.00	0.00	10,618.00	242.93	11.77	14,528,174.75	2,058,895.53	39° 59' 46.385 N	109° 30' 21.082 W	

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)		
2,641.94	2,632.00	8 5/8"	8.625	11.000		



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36D4CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,389.17	1,381.00	GREENRIVER			
1,683.53	1,674.00	BIRDSNEST			
2,189.86	2,178.00	MAHOGANY			
4,651.23	4,636.00	WASATCH			
7,346.23	7,331.00	MESAVERDE			
9,551.23	9,536.00	SEGO			
9,600.23	9,585.00	CASTLEGATE			
10,029.23	10,014.00	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	
575.00	574.58	13.17	0.64	Start 2242.66 hold at 575.00 MD	
2,817.66	2,806.91	227.87	11.04	Start Drop -1.75	
3,131.94	3,120.71	242.93	11.77	Start 7497.29 hold at 3131.94 MD	
10,629.23	10,618.00	242.93	11.77	TD at 10629.23	

MORGAN STATE 921-36D4CS

Surface:	1540 FNL / 811 FWL	SWNW	Lot
BHL:	1297 FNL / 823 FWL	NWNW	Lot

MORGAN STATE 921-36E1BS

Surface:	1539 FNL / 801 FWL	SWNW	Lot
BHL:	1612 FNL / 818 FWL	SWNW	Lot

MORGAN STATE 921-36E1CS

Surface:	1538 FNL / 791 FWL	SWNW	Lot
BHL:	1944 FNL / 821 FWL	SWNW	Lot

MORGAN STATE 921-36E4BS

Surface:	1537 FNL / 781 FWL	SWNW	Lot
BHL:	2276 FNL / 824 FWL	SWNW	Lot

MORGAN STATE 921-36E4CS

Surface:	1536 FNL / 771 FWL	SWNW	Lot
BHL:	2600 FNL / 818 FWL	SWNW	Lot

Pad: MORGAN STATE 921-36E 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 $\pm 65'$ (0.01 miles) of new access road 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:

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 $\pm 780'$ and the individual segments are broken up as follows:

- ±395' (0.1 miles) –New 8” buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±385' (0.1 miles) –New 8” buried gas pipeline from the edge of pad to the existing 16' buried gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±430' and the individual segments are broken up as follows:

- ±395' (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.
- ±35' (0.01 miles) –New 6” buried liquid pipeline from the edge of pad to the proposed liquid pipeline ROW in progress. 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 921-36D4CS
T9S-R21E
Section 36: SWNW (Surface), NWNW (Bottom Hole)
Surface: 1540' FNL, 811' FWL
Bottom Hole: 1297' FNL, 823' FWL
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

From: Jim Davis
To: APD APPROVAL
CC: Danielle Piernot; Julie Jacobson
Date: 2/23/2012 3:22 PM
Subject: APD Approval: the Kerr McGee Morgan State wells

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

4304752246 Morgan State 921-36G4BS
4304752253 Morgan State 921-36G4CS
4304752255 Morgan State 921-36J1CS
4304752256 Morgan State 921-36J4BS
4304752281 Morgan State 921-36F1BS
4304752282 Morgan State 921-36F1CS
4304752283 Morgan State 921-36G1BS
4304752284 Morgan State 921-36G1CS
4304752285 Morgan State 921-36F4BS
4304752286 Morgan State 921-36K1BS
4304752287 Morgan State 921-36K1CS
4304752247 Morgan State 921-36P1BS
4304752248 Morgan State 921-36P1CS
4304752249 Morgan State 921-36I4BS
4304752250 Morgan State 921-36I4CS
4304752252 Morgan State 921-36P4BS
4304752263 Morgan State 921-36K4CS
4304752264 Morgan State 921-36N1BS
4304752265 Morgan State 921-36N1CS
4304752266 Morgan State 921-36N4BS
4304752276 Morgan State 921-36D4CS
4304752277 Morgan State 921-36E1BS
4304752278 Morgan State 921-36E1CS
4304752279 Morgan State 921-36E4BS
4304752280 Morgan State 921-36E4CS
4304752245 Morgan State 921-36O4CS
4304752254 Morgan State 921-36O1CS
4304752267 Morgan State 921-36O1BS
4304752257 Morgan State 921-36K4BS
4304752258 Morgan State 921-36L1BS
4304752259 Morgan State 921-36L1CS
4304752260 Morgan State 921-36M1BS
4304752261 Morgan State 921-36M1CS
4304752262 Morgan State 921-36M4BS
4304752272 Morgan State 921-36B4CS
4304752273 Morgan State 921-36C4BS
4304752274 Morgan State 921-36C4CS
4304752275 Morgan State 921-36D1CS

There are eight more wells on two pads in this section, the 36A pad and the 36I pad, that have not yet been approved. Anadarko is gathering reclamation cost figures on pads similar to those as part of the process of acquiring adequate SITLA bonds.

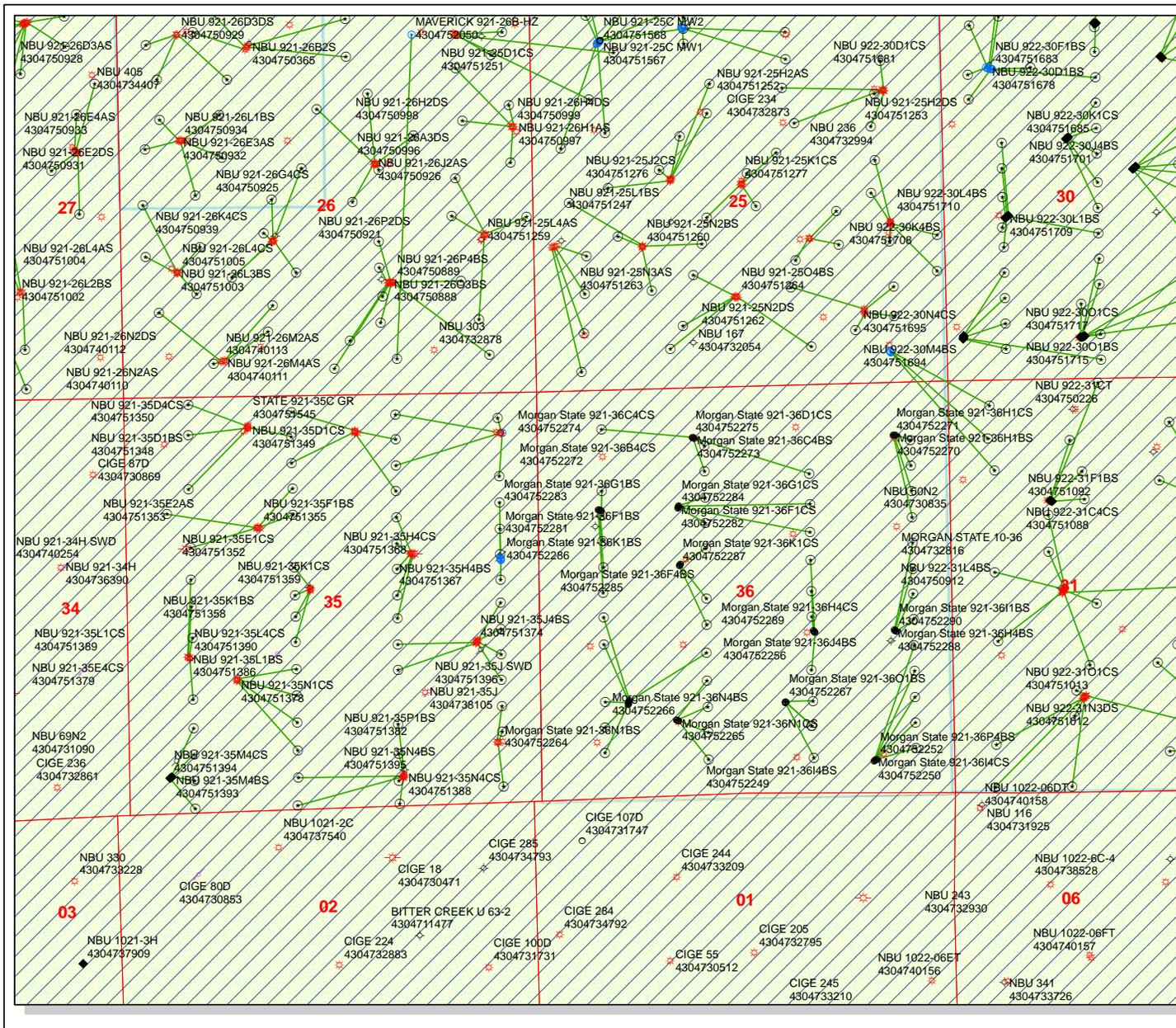
-Jim

Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov

API Well Number: 43047522760000

Phone: (801) 538-5156

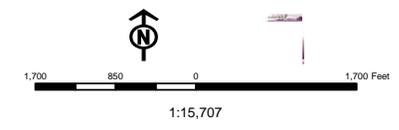
RECEIVED: February 23, 2012



API Number: 4304752276
Well Name: Morgan State 921-36D4CS
 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
NF SECONDARY	LA - Location Abandoned
PI OIL	LOC - New Location
PP GAS	OPS - Operation Suspended
PP GEOTHERM.	PA - Plugged Abandoned
PP OIL	PGW - Producing Gas Well
SECONDARY	POW - Producing Oil Well
TERMINATED	RET - Returned APD
Unknown	SGW - Shut-in Gas Well
ABANDONED	SOW - Shut-in Oil Well
ACTIVE	TA - Temp. Abandoned
COMBINED	TW - Test Well
INACTIVE	WDW - Water Disposal
STORAGE	WWI - Water Injection Well
TERMINATED	WSW - Water Supply Well



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-36D4CS			
String	Surf	Prod		
Casing Size(")	8.625	4.500		
Setting Depth (TVD)	2620	10618		
Previous Shoe Setting Depth (TVD)	0	2620		
Max Mud Weight (ppg)	8.4	13.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	10690		
Operators Max Anticipated Pressure (psi)	7008	12.7		

Calculations	Surf String	8.625	"
Max BHP (psi)	.052*Setting Depth*MW=	1144	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	830	NO <input type="checkbox"/> air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	568	NO <input type="checkbox"/> 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)=	568	NO <input type="checkbox"/>
Required Casing/BOPE Test Pressure=		2373	psi
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient

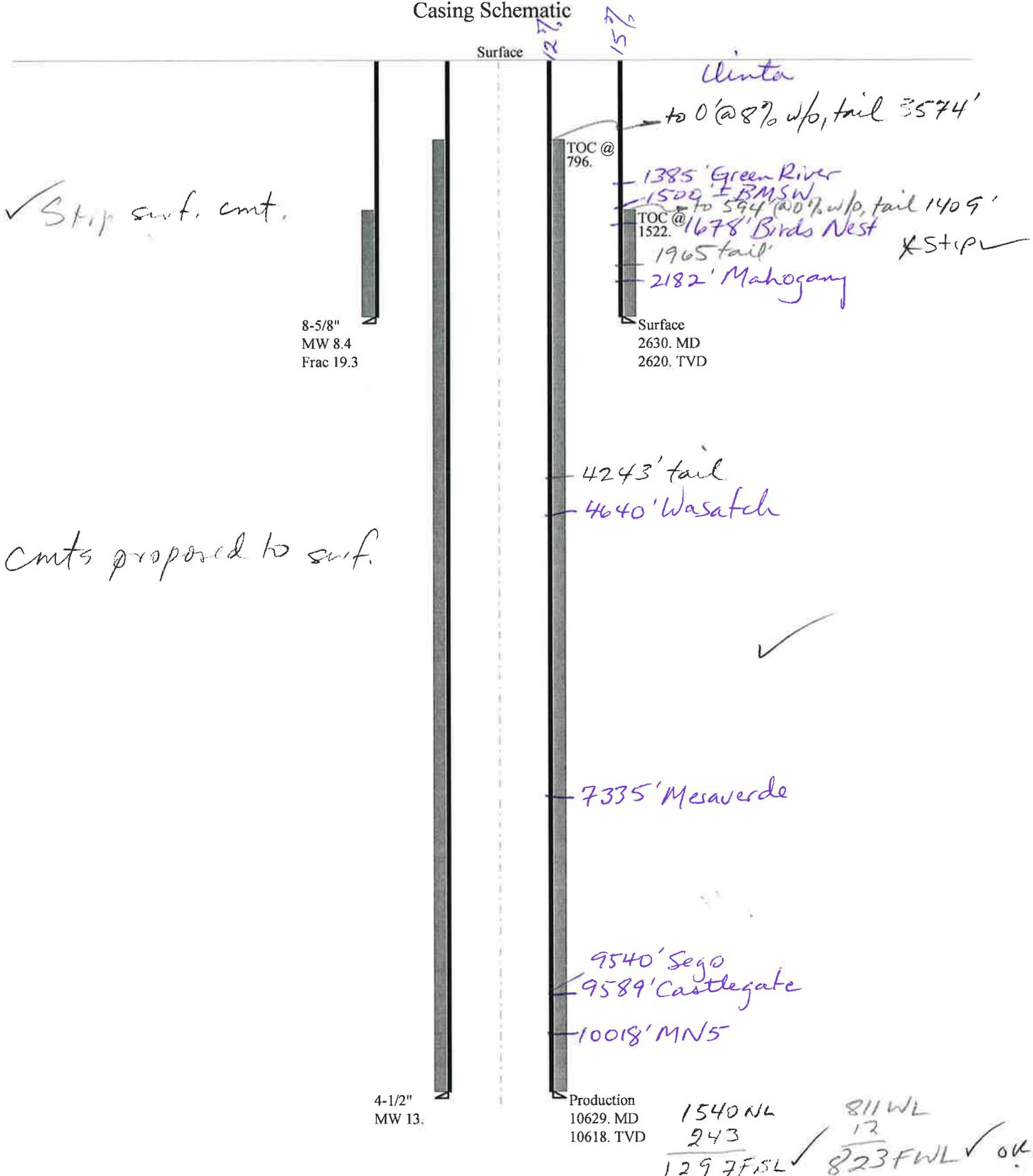
Calculations	Prod String	4.500	"
Max BHP (psi)	.052*Setting Depth*MW=	7178	
			BOPE Adequate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5904	NO <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4842	YES <input type="checkbox"/> OK
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5418	NO <input type="checkbox"/> Reasonable
Required Casing/BOPE Test Pressure=		5000	psi
*Max Pressure Allowed @ Previous Casing Shoe=		2620	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 <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="checkbox"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="checkbox"/>
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 <input type="checkbox"/>
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO <input type="checkbox"/>
			*Can Full Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO <input type="checkbox"/>
Required Casing/BOPE Test Pressure=			psi
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient

43047522760000 Morgan State 921-36D4CS

Casing Schematic



✓ Strip surf. cmt.

cmts proposed to surf.

8-5/8"
MW 8.4
Frac 19.3

4-1/2"
MW 13.

TOC @
796.

Surface
2630. MD
2620. TVD

Production
10629. MD
10618. TVD

1540 NL	811 WL
243	12
1297 FWSL ✓	823 FWL ✓ OK.

SW SW sec 36-9s -21E

Well name:	43047522760000 Morgan State 921-36D4CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-52276
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: 111 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,522 ft

Burst

Max anticipated surface pressure: 2,306 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,620 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: 2,304 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 210 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 5.5 °

Re subsequent strings:

Next setting depth: 10,618 ft
Next mud weight: 13.000 ppg
Next setting BHP: 7,170 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,620 ft
Injection pressure: 2,620 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	2630	8.625	28.00	I-55	LT&C	2620	2630	7.892	104148
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	1143	1880	1.644	2620	3390	1.29	73.4	348	4.74 J

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

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

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2620 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:	43047522760000 Morgan State 921-36D4CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-52276
Location:	UINTAH	COUNTY	

Design parameters:

Collapse

Mud weight: 13.000 ppg
 Design is based on evacuated pipe.

Minimum design factors:

Collapse:

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
 Surface temperature: 74 °F
 Bottom hole temperature: 223 °F
 Temperature gradient: 1.40 °F/100ft
 Minimum section length: 100 ft
 Cement top: 796 ft

Burst

Max anticipated surface pressure: 4,835 psi
 Internal gradient: 0.220 psi/ft
 Calculated BHP 7,170 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: 243 ft
 Maximum dogleg: 2 °/100ft
 Inclination at shoe: 0 °

Tension is based on air weight.
 Neutral point: 8,566 ft

Estimated cost: 159,121 (\$)

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	4989	5000	3.875	132000
1	5629	4.5	11.60	HCP-110	LT&C	10618	10629	3.875	27121

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	3369	8122	2.411	5932	10690	1.80	123.2	367.2	2.98 B
1	7170	8650	1.206	7170	10690	1.49	65.3	279	4.27 J

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

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

Date: March 5, 2012
 Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 10618 ft, a mud weight of 13 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.

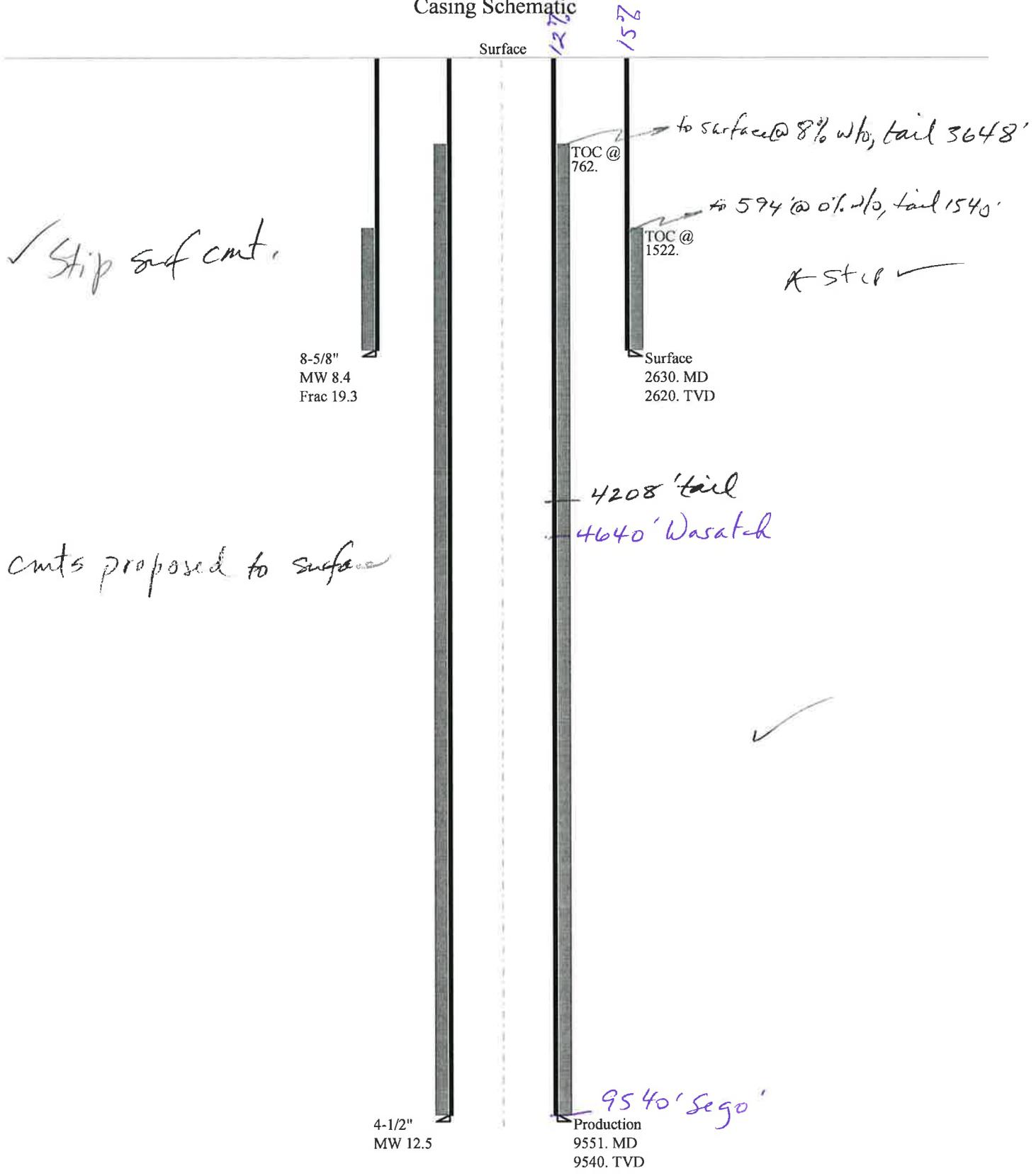
Burst strength is not adjusted for tension.

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.

43047522760000 Morgan State 921-36D4CS

Casing Schematic



Well name:	43047522760000 Morgan State 921-36D4CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-52276
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: 111 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,522 ft

Burst

Max anticipated surface pressure: 2,306 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,620 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: 2,304 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 210 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 5.5 °

Re subsequent strings:

Next setting depth: 9,540 ft
Next mud weight: 12.500 ppg
Next setting BHP: 6,195 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,620 ft
Injection pressure: 2,620 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	2630	8.625	28.00	I-55	LT&C	2620	2630	7.892	104148
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	1143	1880	1.644	2620	3390	1.29	73.4	348	4.74 J

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

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

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2620 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

Well name:	43047522760000 Morgan State 921-36D4CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Production	Project ID:	43-047-52276
Location:	UINTAH	COUNTY	

Design parameters:**Collapse**

Mud weight: 12.500 ppg
Internal fluid density: 1.500 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: 208 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft
Cement top: 762 ft

Burst

Max anticipated surface pressure: 4,096 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 6,195 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: 243 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Tension is based on air weight.
Neutral point: 7,768 ft

Estimated cost: 192,073 (\$)

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	4989	5000	3.875	132000
1	4551	4.5	11.60	I-80	LT&C	9540	9551	3.875	60073

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	2851	5907	2.072	5193	7780	1.50	110.7	267	2.41 J
1	5451	6360	1.167	6195	7780	1.26	52.8	212	4.02 J

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

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

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9540 ft, a mud weight of 12.5 ppg. An internal gradient of .078 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.

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 N

Sedimentation Issues N

Site Stability Issues N

Drainage Diversion Required? N

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)	100 to 200	5
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		40
		1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut except for 1.3 feet on the east side of pit. The reserve pit will be on the south side 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, and also place an excess cut stockpile adjacent to and east of the pit where it will be somewhat in fill.

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

Other Observations / Comments

David Hackford
Evaluator

1/11/2012
Date / Time

Application for Permit to Drill Statement of Basis

3/20/2012

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
5063	43047522760000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.		Surface Owner-APD		
Well Name	Morgan State 921-36D4CS		Unit		
Field	NATURAL BUTTES		Type of Work	DRILL	
Location	SWNW 36 9S 21E S 1540 FNL (UTM) 627494E 4428325N		811 FWL GPS Coord		

Geologic Statement of Basis

Kerr McGee proposes to set 2,630' 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, but this section is not part of that 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 42.7 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads.

Five wells will be directionally drilled from this location. They are the Morgan State 921-36D4CS, Morgan State 921-36E1BS, Morgan State 921-36E1CS, Morgan State 921-36E4BS and the Morgan State 921-36E4CS. It will be necessary to place an excess cut stockpile along the east side of the reserve pit where the pit will be in 1.3 feet of fill. The pad should be stable and sufficient for five wells, and is the best site for a location in the immediate area.

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 mixes to be used.

David Hackford
Onsite Evaluator

1/11/2012
Date / Time

Conditions of Approval / Application for Permit to Drill

Category	Condition
-----------------	------------------

RECEIVED: March 20, 2012

Application for Permit to Drill Statement of Basis

3/20/2012

Utah Division of Oil, Gas and Mining

Page 2

- 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 east side of the location, and an excess cut stockpile shall be placed on the east side of the pit.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/19/2011

API NO. ASSIGNED: 43047522760000

WELL NAME: Morgan State 921-36D4CS

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

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SWNW 36 090S 210E

Permit Tech Review:

SURFACE: 1540 FNL 0811 FWL

Engineering Review:

BOTTOM: 1297 FNL 0823 FWL

Geology Review:

COUNTY: UINTAH

LATITUDE: 39.99550

LONGITUDE: -109.50651

UTM SURF EASTINGS: 627494.00

NORTHINGS: 4428325.00

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 - bhill
 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 921-36D4CS
API Well Number: 43047522760000
Lease Number: ML 22265
Surface Owner: STATE
Approval Date: 3/20/2012

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).

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.

Surface casing shall be cemented to the surface.

Additional Approvals:

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

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

Notification Requirements:

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

- Within 24 hours following the spudding of the well - contact Carol Daniels
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
at <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

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 921-36D4CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522760000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW 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 checked="" type="checkbox"/> SPUD REPORT Date of Spud: 5/11/2012	<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. CMT W/28 SX READY
 MIX. SPUD WELL LOCATION ON DATE 5/11/2012 AT TIME 15:30 HRS.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 May 16, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 5/15/2012	

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
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	8. WELL NAME and NUMBER: Morgan State 921-36D4CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522760000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: NATURAL BUTTES
	COUNTY: UINTAH
	STATE: UTAH

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

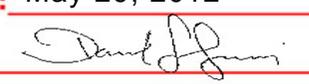
TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 5/30/2012	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<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="ACTS/ Pit Refurb"/>

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

Kerr-McGee Oil & Gas Onshore, LP is requesting to refurb the existing pit on this multi-well pad for completion operations. The refurb pit will be relined per the requirements in the COA of the APD. Upon completion of the wells on this pad, Kerr-McGee is also requesting to utilize this pit as an ACTS staging pit to be utilized for other completion operations in the area. The trucks will unload water into these tanks before the water is placed into the refurbished pit. The purpose of the frac tanks is to collect any hydro-carbons that may have been associated with the other completion operations before releasing into the pit. We plan to keep this pit open for 1 year. During this time the surrounding well location completion fluids will be recycled in this pit and utilized for other frac jobs in the surrounding sections. Thank you.

Approved by the Utah Division of Oil, Gas and Mining

Date: May 29, 2012

By: 

NAME (PLEASE PRINT) Danielle Piernot	PHONE NUMBER 720 929-6156	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 5/22/2012	



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 43047522760000

A synthetic liner with a minimum thickness of 30 mils with a felt subliner shall be properly installed and maintained in the pit.

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
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1. TYPE OF WELL Gas Well	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
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3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	8. WELL NAME and NUMBER: Morgan State 921-36D4CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. API NUMBER: 43047522760000
5. FIELD and POOL or WILDCAT: MORGAN STATE LATERAL BUTTES	9. FIELD and POOL or WILDCAT: MORGAN STATE LATERAL BUTTES
COUNTY: UINTAH	STATE: UTAH

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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: 5/28/2012	<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.

MIRU AIR RIG ON 5/26/2012. DRILLED SURFACE HOLE TO 2660'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 May 29, 2012**

NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 5/29/2012	

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
 Submitted By J. Scharnowske Phone Number 720.929.6304
 Well Name/Number MORGAN STATE 921-36D4CS
 Qtr/Qtr SWNW Section 36 Township 9S Range 21E
 Lease Serial Number ML 22265
 API Number 4304752276

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

Date/Time 05/11/2012 07:00 HRS AM PM

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

- Surface Casing
 Intermediate Casing
 Production Casing
 Liner
 Other

Date/Time 05/22/2012 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

MAY 09 2012

BUREAU OF LAND MANAGEMENT

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 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) 929-6029

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752276	MORGAN STATE 921-36D4CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	18529	5/11/2012			5/16/2012	
Comments: MIRU BUCKET RIG. SPUD WELL LOCATION ON 5/11/2012 AT 15:30 HRS. <i>MVRD BHL: nwnw</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752277	MORGAN STATE 921-36E1BS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	18530	5/12/2012			5/16/2012	
Comments: MIRU BUCKET RIG. SPUD WELL LOCATION ON 5/12/2012 AT 7:00 HRS. <i>MVRD BHL: SWNW</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752278	MORGAN STATE 921-36E1CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
A	99999	18531	5/12/2012			5/16/2012	
Comments: MIRU BUCKET RIG. SPUD WELL LOCATION ON 5/12/2012 AT 9:30 HRS. <i>MVRD BHL: SWNW</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)

CARA MAHLER

Name (Please Print)

Signature

REGULATORY ANALYST

Title

5/15/2012

Date

RECEIVED

MAY 16 2012

(5/2000)

Div. of Oil, Gas & Mining

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
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3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522760000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW 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: 7/6/2012	<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.

Drilled well to TD 9,557'in June 2012, and rig released July 3, 2012.

**Accepted by the
 Utah Division of
 Oil, Gas and Mining
 FOR RECORD ONLY
 July 10, 2012**

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 7/6/2012	

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 921-36D4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522760000
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: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	9. FIELD and POOL or WILDCAT: MORGAN STATE BUTTES COUNTY: UINTAH STATE: UTAH

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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: 7/3/2012	<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
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	<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 ROTARY RIG. FINISHED DRILLING FROM 2,660' TO 9,557' ON JULY 1, 2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P 298 RIG ON JULY 3, 2012 @ 13:00 HRS. DETAILS OF CEMENT JOB 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
 July 11, 2012

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regulatory Analyst
SIGNATURE N/A	DATE 7/8/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	FORM 9 5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
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1. TYPE OF WELL Gas Well	8. WELL NAME and NUMBER: MORGAN STATE 921-36D4CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.	9. API NUMBER: 43047522760000
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: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S	COUNTY: UINTAH STATE: UTAH

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<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: 9/5/2012	<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
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	<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 August 2012. Well TD at 9,557

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

FOR RECORD ONLY

September 05, 2012

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/5/2012	

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 921-36D4CS
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779	9. API NUMBER: 43047522760000
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW 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: 10/3/2012	<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.

Started completing the well. Well TD at 9,557.

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

NAME (PLEASE PRINT) Jaime Scharnowske	PHONE NUMBER 720 929-6304	TITLE Regularatory Analyst
SIGNATURE N/A	DATE 10/3/2012	

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 921-36D4CS	
9. API NUMBER: 43047522760000	
9. FIELD and POOL or WILDCAT: MORGAN STATE LATERAL 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: 1540 FNL 0811 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW 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 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: 10/8/2012	<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.

The subject well was placed on production on 10/08/2012. 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
 October 18, 2012**

NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 10/10/2012	

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

C
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) 929-6857

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752276	Morgan State 921-36D4CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	18529	18529	5/11/2012			10/8/2012	
Comments: This well is completed in the Wasatch and Mesaverde formations.						11/21/2012	
WSMVD BHL: RWNW							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752277	Morgan State 921-36E1BS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	18530	18530	5/12/2012			10/4/2012	
Comments: This well is completed in the Wasatch and Mesaverde formations.						11/21/2012	
WSMVD BHL: SWNW							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752278	Morgan State 921-36E1CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	18531	18531	5/12/2012			10/10/2012	
Comments: This well is completed in the Wasatch and Mesaverde formations.						11/21/2012	
WSMVD BHL: SWNW							

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)

Lindsey Frazier

Name (Please Print)

Signature

REGULATORY ANALYST II

Title

11/20/2012

Date

RECEIVED

NOV 20 2012

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

AMENDED REPORT FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. LEASE DESIGNATION AND SERIAL NUMBER:
ML 22265

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT or CA AGREEMENT NAME
UTU63047A

8. WELL NAME and NUMBER:
MORGAN STATE 921-36D4CS

9. API NUMBER:
4304752276

10. FIELD AND POOL, OR WILDCAT
NATURAL BUTTES

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

12. COUNTY
UINTAH

13. STATE
UTAH

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: **SWNW 1540 FNL 811 FWL S36,T9S,R21E**
AT TOP PRODUCING INTERVAL REPORTED BELOW: **NWNW 1280 FNL 823 FWL S36,T9S,R21E**
AT TOTAL DEPTH: **NWNW 1313 FNL 831 FWL S36,T9S,R21E** *BHL by HSM*

14. DATE SPUNDED: **5/11/2012** 15. DATE T.D. REACHED: **7/1/2012** 16. DATE COMPLETED: **10/8/2012** ABANDONED READY TO PRODUCE

17. ELEVATIONS (DF, RKB, RT, GL): **5007 GL**

18. TOTAL DEPTH: MD **9,557** TVD **9,543** 19. PLUG BACK T.D.: MD **9,494** TVD **9,478.34** 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-BHV-DSN/SD/ACTR-BCSAT

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	2,650		754		0	
7 7/8"	4 1/2" I-80	11.6#	0	9,540		1,695		2410	

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"	8,809							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) WASATCH	6,484	7,357			6,484 7,357	0.36	72	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B) MESAVERDE	7,411	9,282			7,411 9,282	0.36	165	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

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

DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6484-9282	PUMP 11,816 BBLs SLICK H2O & 263,876 LBS 30/50 OTTAWA SAND
	10 STAGES

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

30. WELL STATUS:
PROD

RECEIVED

31. INITIAL PRODUCTION

INTERVAL A (As shown in item #26)

DATE FIRST PRODUCED: 10/8/2012		TEST DATE: 10/11/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →		OIL – BBL: 0	GAS – MCF: 1,696	WATER – BBL: 0	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,387	CSG. PRESS. 2,063	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL: 0	GAS – MCF: 1,696	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	1,421
				BIRD'S NEST	1,698
				MAHOGANY	2,222
				WASATCH	4,695
				MESAVERDE	7,365

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 4965'; LTC csg was run from 4965' to 9540'. 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 *Lindsay Frazier* DATE 10-30-2012

This report must be submitted within 30 days of

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

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

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

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

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/26/2012	14:00 - 19:00	5.00	MIRU	01	A	P		MOVE RIG 4 MILES & RIG UP /// 7 HOWCROFT TRUCKS /// 7 HOWCROFT PERSONEL /// 5 STALLION PERSONEL /// 5 CAPSTAR PERSONEL /// 1 FORKLIFT WORK ON RIG HYDRAULICS (WINCH WOULD NOT WORK)
	19:00 - 20:30	1.50	MIRU	08	A	Z		WELD ON CONDUCTOR & RIG UP FLOWLINE
	20:30 - 0:00	3.50	PRSPD	14	A	P		WELD ON CONDUCTOR & RIG UP FLOWLINE
5/27/2012	0:00 - 0:30	0.50	PRSPD	06	A	P		PU 12.25" BIT & 8" MM
	0:30 - 1:30	1.00	PRSPD	08	A	Z		WORK ON AUTO DRILLER (AIR LINES PLUGGED)
	1:30 - 3:00	1.50	DRLSUR	02	B	P		DRILL 12.25" SURFACE HOLE F/ 49'- 210' ROP= 161' @ 107 FPH WOB= 14/22K RPM= 55/105 SPP=800/500 GPM= 595 TRQ= 2600/1900 PU/SO/ROT = 49/46/47 NO LOSSES HOLE IN GOOD SHAPE
	3:00 - 3:30	0.50	DRLSUR	06	A	P		TOOH & LD 12.25" BIT
	3:30 - 4:30	1.00	DRLSUR	06	A	P		PU 11" BIT, DIR TOOLS, SCRIBE & TIH
	4:30 - 6:30	2.00	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 210'-467' ROP= 257' @ 128 FPH WOB= 24/28K RPM= 55/105 SPP=1200/900 GPM= 595 TRQ= 2800/2400 PU/SO/ROT = 51/45/48 NO LOSSES HOLE IN GOOD SHAPE
	6:30 - 7:00	0.50	DRLSUR	08	A	Z		CHANGE OUT DRIVE CABLE ON AUTO DRILLER
	7:00 - 17:30	10.50	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 467'-1885' ROP= 1418' @ 135 FPH WOB= 24/28K RPM= 55/105 SPP=1200/900 GPM= 595 TRQ= 2800/2400 PU/SO/ROT = 90/76/84 NO LOSSES HOLE IN GOOD SHAPE
	17:30 - 18:00	0.50	DRLSUR	07	A	P		SERVICE RIG & EQUIPMENT

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED Spud Date: 5/27/2012
 Project: UTAH-UINTAH Site: MORGAN STATE 921-36E PAD Rig Name No: H&P 298/298, CAPSTAR 310/310
 Event: DRILLING Start Date: 5/16/2012 End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level) UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:00 - 0:00	6.00	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 1885'-2628' ROP= 743' @ 124 FPH WOB= 24/28K RPM= 55/105 SPP=1200/900 GPM= 595 TRQ= 2800/2400 PU/SO/ROT = 114/90/104 LOST 50% RETURNS @ 1920' /// AIR ON @ 800 CFM HOLE IN GOOD SHAPE
5/28/2012	0:00 - 0:30	0.50	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 1885'-2628' ROP= 743' @ 124 FPH WOB= 24/28K RPM= 55/105 SPP=1200/900 GPM= 595 TRQ= 2800/2400 PU/SO/ROT = 114/90/104 LOST 50% RETURNS @ 1920' /// AIR ON @ 800 CFM HOLE IN GOOD SHAPE
	0:30 - 1:00	0.50	DRLSUR	05	F	P		CIRC & COND HOLE F/ 8.625" SURFACE CSG
	1:00 - 3:30	2.50	DRLSUR	06	A	P		LAY DOWN DRILL STRING & DIR TOOLS
	3:30 - 5:30	2.00	CSGSUR	12	C	P		PJSM ///RUN 60 JT'S, 8.625", 28#, J-55, LT&C CSG /// SHOE SET @ 2632' & BAFFLE @ 2586'
	5:30 - 6:00	0.50	CSGSUR	05	F	P		CIRC 8.625" CSG @ 2632'
	6:00 - 8:00	2.00	CSGSUR	12	E	P		PJSM WITH PRO PETRO CMT CREW /// PUMP 40 BBL'S WATER AHEAD FOLLOWED BY 20 BBL GEL WATER FLUSH /// LEAD = 220sx CLASS G CMT @ 11.0 WT & 3.82 YIELD /// TAIL = 200sx CLASS G CMT @ 15.8 WT & 1.15 YIELD /// DROP PLUG & DISPLACE W/ 161 BBL'S WATER /// PLUG DN @ 07:27 5/28/2012 /// BUMP PLUG W/ 600 PSI /// FINAL LIFT = 300 PSI /// CHECK FLOATS - HELD W/ 1 BBL BACK /// NO RETURNS & NO CMT TO SURFACE
	8:00 - 9:00	1.00	CSGSUR	14	A	P		RUN 200' OF 1" DN BACKSIDE & PUMP 1st TOP OUT W/ 150 SX CLASS G CMT @ 15.8 WT & 1.15 YIELD /// NO CMT TO SURFACE
	9:00 - 10:00	1.00	CSGSUR	12	E	P		WOC /// CUT OFF CONDUCTOR & HANG SURFACE CSG PUMP SECOND TOP OUT W/ 100sx CLASS G CMT @ 15.8 WT & 1.15 YIELD /// NO CMT TO SURFACE /// WILL TOP OUT AGAIN WHEN OUT FOR NEXT JOB /// RELEASE RIG @ 10:00 05/28/2012 TO THE MORGAN STATE 921-36E1BS
6/24/2012	18:00 - 0:00	6.00	MIRU	01	E	P		PUMP THIRD TOP OUT W/ 84 SX /// CMT TO SURFACE RD & PREPARE FOR RIG MOVE/ JONES TRUCKING 2 TRUCKS 1 FORK LIFT - 4 PEOPLE / J&C CRANE 1 - 4 PEOPLE / HP 11 PERSONNEL / / MOUNTIAN WEST 2 TRUCKS 5 PERSONNEL CAMPS MOVED FROM OLD LOCATION TO NEW LOCATION

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
6/25/2012	0:00 - 6:00	6.00	RDMO	01	E	P		RD RT
	6:00 - 18:00	12.00	MIRU	01	B	P		MIRU / JONES TRUCKING 12 TRUCKS - 2 FORK LIFTS 23 PERSONNEL / J&C CRANE 1CRANE - 5 PEOPLE / H&P 14 PERSONNEL 100 % OFF OLD LOCATION / BACK YARD SET IN 40% RIGGED UP - 14 MILE RIG MOVE
	18:00 - 0:00	6.00	RDMO	21	C	P		W.O.DAYLIGHT
6/26/2012	0:00 - 6:00	6.00	MIRU	21	C	P		W.O.DAYLIGHT
	6:00 - 18:00	12.00	MIRU	01	B	P		MIRU RT / JONES TRUCKING 7 TRUCKS 2 FORK LIFTS - 12 PERSONNEL / J&C CRANES 1 - 5 PEOPLE / H&P 14 PERSONNEL/ 80% RIGGED UP DRK IN AIR @ 14:25 / TRUCKS & CRANE OFF LOCATION @ 15:30 - 14 MILE RIG MOVE
6/27/2012	18:00 - 0:00	6.00	MIRU	21	C	P		W.O.DAYLIGHTS
	0:00 - 5:00	5.00	MIRU	01	B	P		MIRU RT
	5:00 - 11:00	6.00	PRPSPD	14	A	P		NIPPLE UP BOP & EQUIPMENT
	11:00 - 19:30	8.50	PRPSPD	14	A	P		NIPPLE UP MI SWACO PRESSURE CONTROL EQUIPMENT & SMITH ORBIT VALVES & ROTATING HEAD
	19:30 - 23:00	3.50	PRPSPD	15	A	P		PRESSURE TEST BOP'S & EQUIPMENT AS PER PROGRAM 250/5000 AND 250 /2500 ON ANNULAR
6/28/2012	23:00 - 0:00	1.00	PRPSPD	14	B	P		INSTALL WEAR BUSHING / INSTALL SMITH BEARING ASSY
	0:00 - 1:00	1.00	PRPSPD	15	A	P		PRESSURE TEST MI SWACO PRESSURE CONTROL EQUIPMENT
	1:00 - 1:30	0.50	PRPSPD	15	A	P		PRESSURE TEST IBOP
	1:30 - 7:30	6.00	PRPSPD	06	A	P		PU & MU BHA # 1 WITH WEATHERFORD, TEST SAME TIH P/U DRILL PIPE TO 2,540' TAG CEMENT LEVEL DERRICK INSTALL ROTATING HEAD
	7:30 - 8:30	1.00	PRPSPD	07	B	P		SERVICE RIG
	8:30 - 9:00	0.50	PRPSPD	07	A	P		PRE SPUD INSPECTION & MEETING
	9:00 - 10:00	1.00	PRPSPD	23		P		
	10:00 - 11:00	1.00	DRLPRO	02	D	P		DRILL CEMENT AND SHOE TRACK FROM 2,540' TO 2,649' CLEAN OUT RAT HOLE TO 2,660'
	11:00 - 14:00	3.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 2,660' TO 3,235' = 575' @ 191.66 FPH
	14:00 - 15:30	1.50	DRLPRO	22	L	Z		WOB 18,000-24,000 TOP DRIVE RPM 60-70 MUD MOTOR RPM 104 PUMPS 110 SPM=495GPM PUMP PRESSURE ON/OFF BTM 1,675/1,375 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 116,000 SLACK OFF WT 86,000 ROT WT 99,000 MUD WT 8.4 VIS 26 WORKING ON BOTH MUD PUMPS CHANGE OUT LINERS & PISTONS ***FAILURE: RIG EQUIPMENT - (Mud Pumps)

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	15:30 - 19:30	4.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 3,235' TO 3,837' = 602' @ 150.5 FPH WOB 18,000-24,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 104/115 PUMPS 110 SPM=495/ 558GPM PUMP PRESSURE ON/OFF BTM 1,900/1,650 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 120,000 SLACK OFF WT 92,000 ROT WT 108,000 SLIDE 35' IN 25 MIN 2.98% OF FOOTAGE DRILLED, 5.61 %OF HRS DRILLED MUD WT 8.4 VIS 26
	19:30 - 20:30	1.00	DRLPRO	08	B	Z		REPLACE INCODER ON TOP DRIVE ***FAILURE: RIG EQUIPMENT - (TOP DRIVE)
	20:30 - 0:00	3.50	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 3,837' TO 4,470' = 633' @ 180.85 FPH WOB 20,000-25,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 104/115 PUMPS 110 SPM=495/ 558GPM PUMP PRESSURE ON/OFF BTM 1,900/1,450 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 130,000 SLACK OFF WT 112,000 ROT WT 120,000 SLIDE 25' IN 20 MIN 4.01% OF FOOTAGE DRILLED, 9.52 %OF HRS DRILLED MUD WT 8.4 VIS 25
6/29/2012	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 4,470' TO 5,535' = 1065' @ 177.5 FPH WOB 20,000-25,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 115 PUMPS 110 SPM= 558GPM PUMP PRESSURE ON/OFF BTM 2400/1950 TORQUE ON/OFF BTM 8,000/ 5,000 PICK UP WT 148,000 SLACK OFF WT 123,000 ROT WT 135,000 SLIDE 20' IN 15 MIN 2.26% OF FOOTAGE DRILLED, 5 %OF HRS DRILLED MUD WT 8.8 VIS 32 LIGHT MUD UP @ 5,100' 100 BBL MUD LOSE

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 14:00	8.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 5,535' TO 6,480' = 945' @ 118.12 FPH WOB 20,000-26,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 104/115 PUMPS 110 SPM=495/ 558GPM PUMP PRESSURE ON/OFF BTM 2100/1750 TORQUE ON/OFF BTM 9,000/6,000 PICK UP WT 178,000 SLACK OFF WT 135,000 ROT WT 150,000 SLIDE 20' IN 15 MIN 1.7% OF FOOTAGE DRILLED 2.7 %OF HRS DRILLED MUD WT 9.4 VIS 34 175 BBL MUD LOSE
	14:00 - 14:30	0.50	DRLPRO	07	A	P		SERVICE RIG @ 6,480'
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 6,480' TO 7,186' = 706' @ 74.31FPH WOB 20,000-26,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 104/115 PUMPS 110 SPM=495/ 558GPM PUMP PRESSURE ON/OFF BTM 2100/1750 TORQUE ON/OFF BTM 10,000/7,000 PICK UP WT 186,000 SLACK OFF WT 138,000 ROT WT 158,000 SLIDE 20' IN 20 MIN 2.83% OF FOOTAGE DRILLED 3.51 %OF HRS DRILLED MUD WT 9.8 VIS 35 NO MUD LOSE
6/30/2012	0:00 - 3:30	3.50	DRLPRO	02	D	P		DRILL / SURVEY F/ 7,186' TO 7,424' = 238' @ 68FPH WOB 20,000-26,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 104/115 PUMPS 110 SPM=495/ 558GPM PUMP PRESSURE ON/OFF BTM 2100/1750 TORQUE ON/OFF BTM 10,000/7,000 PICK UP WT 186,000 SLACK OFF WT 138,000 ROT WT 158,000 MUD WT 10.0 VIS 36 NO MUD LOSE
	3:30 - 4:30	1.00	DRLPRO	22	L	Z		ATTEMPT TO VERIFY CORRECT SURVEY (INTERFERENCE FROM SST 54 SURVEY EQUIPMENT) ***FAILURE: MWD

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	4:30 - 14:00	9.50	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY F/ 7,424' TO 7,900' = 476' @ 50.10 FPH WOB 20,000-26,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 104 PUMPS 110 SPM=495GPM PUMP PRESSURE ON/OFF BTM 2300/2100 TORQUE ON/OFF BTM 10,000/7,000 PICK UP WT 202,000 SLACK OFF WT 146,000 ROT WT 171,000 SLIDE 30' IN 85 MIN 7.95% OF FOOTAGE DRILLED 18.8 %OF HRS DRILLED MUD WT 10.3 VIS 36 325 BBL MUD LOSE
	14:00 - 14:30	0.50	DRLPRO	07	A	P		SERVICE RIG @ 7,900'
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL / SURVEY F/ 7,900' TO 8,563' = 663' @ 69.73 FPH WOB 20,000-26,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 100 PUMPS 110 SPM= 473 GPM PUMP PRESSURE ON/OFF BTM 2135/2005 TORQUE ON/OFF BTM 10,000/8,000 PICK UP WT 210,000 SLACK OFF WT 153,000 ROT WT 173,000 MUD WT 10.7 VIS 38 / 10% LCM 100 BBL MUD LOSE
7/1/2012	0:00 - 17:00	17.00	DRLPRO	02	D	P		DRILL / SURVEY F/ 8,563' TO 9,500' =937' @ 55.11 FPH WOB 20,000-27,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 100 PUMPS 110 SPM= 473 GPM PUMP PRESSURE ON/OFF BTM 2245/1940 TORQUE ON/OFF BTM 10,000/8,000 PICK UP WT 222,000 SLACK OFF WT 172,000 ROT WT 195,000 MUD WT 11.3 VIS 38 / 10% LCM 160 BBL MUD LOSE
	17:00 - 17:30	0.50	DRLPRO	07	A	P		SERVICE RIG @ 9,500'
	17:30 - 18:30	1.00	DRLPRO	02	D	P		DRILL / SURVEY F/ 9,500' TO 9,557' =57' @ 57 FPH WOB 20,000-27,000 TOP DRIVE RPM 45-70 MUD MOTOR RPM 97 PUMPS 102 SPM= 460 GPM PUMP PRESSURE ON/OFF BTM 2245/1940 TORQUE ON/OFF BTM 10,000/8,000 PICK UP WT 222,000 SLACK OFF WT 172,000 ROT WT 195,000 MUD WT 11.3 VIS 38 / 10% LCM 100 BBL MUD LOSE

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/3/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	18:30 - 22:00	3.50	DRLPRO	05	A	P		CIRCULATE & CONDITION MUD @ 9,557' TD RAISE MUD WT FROM 11.3 PPG TO 11.9 PPG / SPOT 60 BBL 13.0 PPG WEIGHTED PILL W/ 15% LCM
	22:00 - 0:00	2.00	DRLPRO	06	E	P		WIPER TRIP FROM 9,557' TO 6,800' / TIGHT HOLE @ 5,227' WORK & WIPE SAME
7/2/2012	0:00 - 3:00	3.00	DRLPRO	06	E	P		TOOH FROM 6,800' TO SHOE @V 2,649' / CHANGE OUT ROTATING HEAD RUBBER / FLOW CHECK - OK
	3:00 - 6:30	3.50	DRLPRO	06	E	P		TIH FROM 2,649' TO 9,557' WASH LAST 2 STDs TO BOTTOM 4' FILL
	6:30 - 8:30	2.00	DRLPRO	05	A	P		CIRCULATE & CONDITION MUD @ 9,557'
	8:30 - 13:30	5.00	DRLPRO	06	A	P		TOOH FROM 9,557' TO BIT WITH NO PROBLEMS, HANDLE BHA
	13:30 - 14:00	0.50	DRLPRO	07	A	P		SERVICE RIG
	14:00 - 19:30	5.50	DRLPRO	11	D	P		SAFETY MEETING / RIG UP & RUN QUAD COMBO OPEN HOLE LOGS TO 9,566' WIRE LINE DEPTH / DRILLERS DEPTH 9,557'
	19:30 - 20:30	1.00	DRLPRO	14	B	P		PULL SMITH BEARING ASSY & WEAR BUSHING
	20:30 - 21:30	1.00	DRLPRO	12	A	P		CHANGE OUT BAILS / INSTALL CASING FILL LINE
	21:30 - 22:30	1.00	DRLPRO	12	A	P		PREJOB SAFETY MEETING RU FRANKS CASING EQUIPMENT
	22:30 - 0:00	1.50	DRLPRO	12	C	P		RUN 4 1/2" PRODUCTION CASING TO 2,000'
7/3/2012	0:00 - 5:30	5.50	DRLPRO	12	C	P		CONTINUE TO RUN 4 1/2" PRODUCTION CASING FROM 2,000' TO 9,539' SHOE @ 9,539' / FLOAT COLLAR @ 9,494' / M Verde Marker @ 7,328' / X-O @ 4,965' / LAND HANGER WITH 100 K
	5:30 - 7:30	2.00	DRLPRO	05	A	P		CIRCULATE & CONDITION MUD @ 9,539'
	7:30 - 11:00	3.50	DRLPRO	12	E	P		INSTALL BJ CMT HEAD, TEST PUMP & LINES TO 5,000 PSI, DROP BOTTOM PLUG PUMP 25 BBLS FW PUMP 525 SKS LEAD CEMENT @ 12.5 PPG, (185 BBLS) (PREM LITE II + .025 pps CELLO FLAKE + 5 pps KOL SEAL + .05 lb/sx STATIC FREE + 6% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + 0.2 % R-3 + 0.4%bwoc FL-52 100.1% FRESH WATER / (10.44 gal/sx, 1.98 yield) + 1170 SX TAIL @ 14.3 ppg(275 BBLS)+ (CLS G 50/50 POZ + 10% SALT + .005lbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE + 0.5%EC-1+ 58.9% FW / (5.94 gal/sx, 1.32 yield) DROP TOP PLUG & DISPLACE W/ 147 BBLS H2O + ADDITIVES / PLUG DOWN @ 10:23 HOURS / FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY/ LOST RETURNS @ 100 BBL INTO DISPLACEMENT / NO LEAD CMT TO SURFACE / GOOD LIFT PRESSURE @ 2986 PSI / BUMP PRESSURE TO 3,645 PSI / TOP OF TAIL CEMENT CALCULATED @4,150' / RIG DOWN BJ
	11:00 - 13:00	2.00	DRLPRO	14	A	P		FLUSH BOP'S / SET PK OFF WITH CAMERON / ND BOP'S / CLEAN PITS RELEASE RIG @ 13:00 HRS

7/3/12

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	MORGAN STATE 921-36D4CS RED	Wellbore No.	OH
Well Name	MORGAN STATE 921-36D4CS	Wellbore Name	MORGAN STATE 921-36D4CS
Report No.	1	Report Date	5/27/2012
Project	UTAH-UINTAH	Site	MORGAN STATE 921-36E PAD
Rig Name/No.		Event	COMPLETION
Start Date	10/5/2012	End Date	10/8/2012
Spud Date	5/27/2012	Active Datum	RKB @5,033.00usft (above Mean Sea Level)
UWI	SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/N/0/811/0/0		

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	6,484.0 (usft)-9,282.0 (usft)	Start Date/Time	9/12/2012 12:00AM
No. of Intervals	68	End Date/Time	9/12/2012 12:00AM
Total Shots	237	Net Perforation Interval	79.00 (usft)
Avg Shot Density	3.00 (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
9/12/2012 12:00AM	WASATCH/			6,484.0	6,486.0	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
9/12/2012 12:00AM	WASATCH/			6,515.0	6,517.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,555.0	6,557.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,613.0	6,615.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,681.0	6,682.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,748.0	6,750.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,762.0	6,764.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,835.0	6,836.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			6,854.0	6,856.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			7,157.0	7,158.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			7,193.0	7,194.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			7,264.0	7,265.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			7,270.0	7,271.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			7,280.0	7,282.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	WASATCH/			7,355.0	7,357.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,411.0	7,412.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,435.0	7,436.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,532.0	7,533.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,605.0	7,606.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,623.0	7,624.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,660.0	7,661.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,672.0	7,674.0	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
9/12/2012 12:00AM	MESAVERDE/			7,783.0	7,784.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,797.0	7,798.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,823.0	7,824.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,877.0	7,878.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,957.0	7,958.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			7,985.0	7,986.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,025.0	8,026.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,065.0	8,066.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,162.0	8,163.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,204.0	8,205.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,234.0	8,235.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,288.0	8,289.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,328.0	8,329.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,337.0	8,338.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,349.0	8,350.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,381.0	8,382.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,399.0	8,400.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,428.0	8,429.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,464.0	8,465.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,479.0	8,480.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,539.0	8,540.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

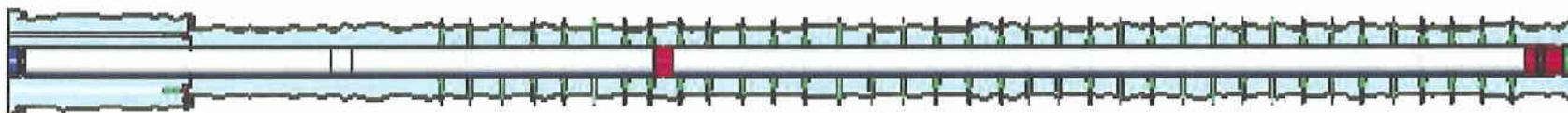
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/12/2012 12:00AM	MESAVERDE/			8,556.0	8,557.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,585.0	8,586.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,641.0	8,642.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,655.0	8,656.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,700.0	8,701.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,732.0	8,733.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,766.0	8,767.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,782.0	8,783.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,800.0	8,801.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,823.0	8,824.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,857.0	8,858.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,880.0	8,881.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,897.0	8,898.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,923.0	8,924.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,962.0	8,964.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			8,986.0	8,987.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,022.0	9,023.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,045.0	9,046.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,060.0	9,061.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,068.0	9,069.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,093.0	9,094.0	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
9/12/2012 12:00AM	MESAVERDE/			9,115.0	9,116.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,199.0	9,200.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,223.0	9,224.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/12/2012 12:00AM	MESAVERDE/			9,281.0	9,282.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots

3.1 Wellbore Schematic



US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 10/5/2012

End Date: 10/8/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/27/2012	-							
9/18/2012	7:00 - 7:30	0.50	DRLOUT	48		P		TRIPPING TBG
	7:30 - 19:00	11.50	DRLOUT	44		P		MIRU, NDWH, NU BOP'S, TEST BOP'S, PU TBG, TIH 299 JTS TO 9494', TAG , BREAK CIRC, PUMP 125 BBLs, CIRC HOLE CLEAN, POOH LD TBG ON TLR. ND BOP'S, NUWH, RDMO
9/19/2012	13:00 - 15:00	2.00	FRAC	33	C	P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 37 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 43 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 67 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. SWMFW
9/21/2012	13:00 - 14:00	1.00	FRAC	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWMFW
9/26/2012	6:45 - 7:00	0.25	FRAC	48		P		HSM. HIGH PSI LINES.
	7:00 - 18:00	11.00	FRAC	36	B	P		FRAC STG 1)WHP 2083 PSI, BRK 2615 PSI @ 4.7 BPM. ISIP 2787 PSI, FG .74. CALC PERFS OPEN @ 50.4 BPM @ 5249 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2860 PSI, FG .75 NPI 73 PSI. MP 6088 PSI, MR 51.3 BPM, AP 5236 PSI, AR 50.2 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL. PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 9035' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC. FRAC STG 2)WHP 635 PSI, BRK 3014 PSI @ 4.9 BPM. ISIP 1845 PSI, FG .65. CALC PERFS OPEN @ 48.7 BPM @ 5779 PSI = 67% HOLES OPEN. (16/24 HOLES OPEN) ISIP 2803 PSI, FG .75, NPI 958 PSI. MP 6213 PSI, MR 52.2 BPM, AP 5821 PSI, AR 51.6 BPM, PUMPED 30/50 OWATTA SAND. SWMFW.

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 10/5/2012

End Date: 10/8/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/27/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8847' P/U PERF AS PER DESIGN.</p> <p>FRAC STG 3)WHP 1585 PSI, BRK 1937 PSI @ 6.9 BPM. ISIP 1911 PSI, FG .66. CALC PERFS OPEN @ 50.8 BPM @ 5837 PSI = 67% HOLES OPEN. (18/24 HOLES OPEN) ISIP 2112 PSI, FG .68, NPI 201 PSI. MP 6396 PSI, MR 51.2 BPM, AP 5872 PSI, AR 50.5 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8616' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 4)WHP 980 PSI, BRK 2939 PSI @ 4.7 BPM. ISIP 1909 PSI, FG .66. CALC PERFS OPEN @ 54.8 BPM @ 4692 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2366 PSI, FG .72, NPI 457 PSI. MP 5440 PSI, MR 55.3 BPM, AP 4778 PSI, AR 54.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8371' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 5)WHP 740 PSI, BRK 2963 PSI @ 4.9 BPM. ISIP 1441 PSI, FG .61. CALC PERFS OPEN @ 54.2 BPM @ 5066 PSI = 91% HOLES OPEN. (19/21 HOLES OPEN) ISIP 2618 PSI, FG .76, NPI 1177 PSI. MP 5834 PSI, MR 55.2 BPM, AP 5405 PSI, AR 54.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8096' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 6)WHP 240 PSI, BRK 2256 PSI @ 4.9 BPM. ISIP 1596 PSI, FG .64. CALC PERFS OPEN @ 54.7 BPM @ 5286 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2581 PSI, FG .76, NPI 984 PSI. MP 5939 PSI, MR 55 BPM, AP 5544 PSI, AR 54.5 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN,</p>

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36D4CS RED				Spud Date: 5/27/2012				
Project: UTAH-UINTAH			Site: MORGAN STATE 921-36E PAD			Rig Name No: MILES 2/2		
Event: COMPLETION			Start Date: 10/5/2012		End Date: 10/8/2012			
Active Datum: RKB @5,033.00usft (above Mean Sea Level)				UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0				
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
								23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7704' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 10/5/2012

End Date: 10/8/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/28/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 7)WHP 865 PSI, BRK 2375 PSI @ 4.8 BPM. ISIP 1453 PSI, FG .63. CALC PERFS OPEN @ 54.5 BPM @ 4649 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2446 PSI, FG .75, NPI 993 PSI. MP 5242 PSI, MR 55.1 BPM, AP 4709 PSI, AR 54.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7387' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 8)WHP 721 PSI, BRK 2068 PSI @ 4.7 BPM. ISIP 1143 PSI, FG .60. CALC PERFS OPEN @ 54.5 BPM @ 4221 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 1961 PSI, FG .71, NPI 818 PSI. MP 5045 PSI, MR 55 BPM, AP 4463 PSI, AR 54.3 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6886' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 9)WHP 0 PSI, BRK 2388 PSI @ 4.7 BPM. ISIP 1439 PSI, FG .65. CALC PERFS OPEN @ 54.2 BPM @ 4221 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2142 PSI, FG .76, NPI 703 PSI. MP 5376 PSI, MR 54.9 BPM, AP 4569 PSI, AR 53.3 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6645' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 10)WHP 505 PSI, BRK 2371 PSI @ 4.7 BPM. ISIP 1914 PSI, FG .73. CALC PERFS OPEN @ 50.5 BPM @ 3355 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 1928 PSI, FG .73, NPI 14 PSI. MP 5111 PSI, MR 51 BPM, AP 3733 PSI, AR 50.5 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PU 4 1/2 8K HALCBP. RIH SET KILL PLUG @ 6434'. POOH. SWI. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 263,876 LBS TOTAL CLFL = 11,816 BBL</p>

**US ROCKIES REGION
Operation Summary Report**

Well: MORGAN STATE 921-36D4CS RED

Spud Date: 5/27/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 10/5/2012

End Date: 10/8/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1540/W/0/811/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/29/2012	-							
10/5/2012	7:00 - 7:30	0.50	DRLOUT	48		P		TRIPPING TBG
	7:30 - 15:00	7.50	DRLOUT	31	I	P		MIRU, NDWH, NU BOP'S, PU TBG, POBS, 3 7/8" BIT, XNSN, TIH 202 JTS, 6424', TAG PLUG# 1 6434', PU PWR SWIVEL, PRESSURE TEST BOP'S 3000#, SWIFWE
10/8/2012	7:00 - 7:30	0.50	DRLOUT	49		P		MILL PLUGS
	7:30 - 17:00	9.50	DRLOUT	44	C	P		TIH 202 JTS, 6434', TAG PLUG# 1, MILL 10 PLUGS, PLUG# 1 6434' 0' SAND 5 MIN 400# KICK PLUG# 2 6645' 30' SAND 5 MIN 300# KICK PLUG# 3 6886' 40' SAND 5 MIN 0# KICK PLUG# 4 7390' 50' SAND 5 MIN 0# KICK PLUG# 5 7704' 124' SAND 5 MIN 400# KICK PLUG# 6 8096' 40' SAND 5 MIN 0# KICK PLUG# 7 8371' 20' SAND 5 MIN 500# KICK PLUG# 8 8618' 30' SAND 5 MIN 300# KICK PLUG# 9 8847' 30' SAND 5 MIN 200# KICK PLUG# 10 9035' 30' SAND 5 MIN 100# KICK
								BTM PERF 9282' PBDT 9494'
								C/O 121' SAND TO 9494', 298 JTS, LD 22 JTS TO 8809.32', 277 JTS, LAND TBG, ND BOP'S, NUWH, POBS, TEST FLOW LINE TO 3000#, TURN TO FB CREW
								TBG 280 JTS 8780.29' KB 26.00' HANGER .83' XNSN 1.875" 2.20' EOT 8809.32'
								FRAC WTR 11,815 BBLS RCVD 2,500 BBLS LTR 9,315 BBLS
	17:00 - 17:00	0.00	DRLOUT	50				WELL TURNED TO SALES @ 1530 HR ON 10/8/2012. 1550 MCFD, 1920 BWPD, FCP 1935 #, FTP 1735 #, 20/64" CK.

Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINTAH_MORGAN STATE 921-38E PAD
 Well: MORGAN STATE 921-38D4CS
 Wellbore: MORGAN STATE 921-38D4CS
 Section:
 SHL:
 Design: MORGAN STATE 921-38D4CS (wp01)
 Latitude: 39.99551
 Longitude: -109.505898
 GL: 6007.00
 KB: 28' RKB + 6007' GL @ 5033.00ft (H&P 298)

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4640.00	4653.49	WASATCH
5240.00	5253.50	TOP OF CYLINDER
7335.00	7348.51	MESAVERDE

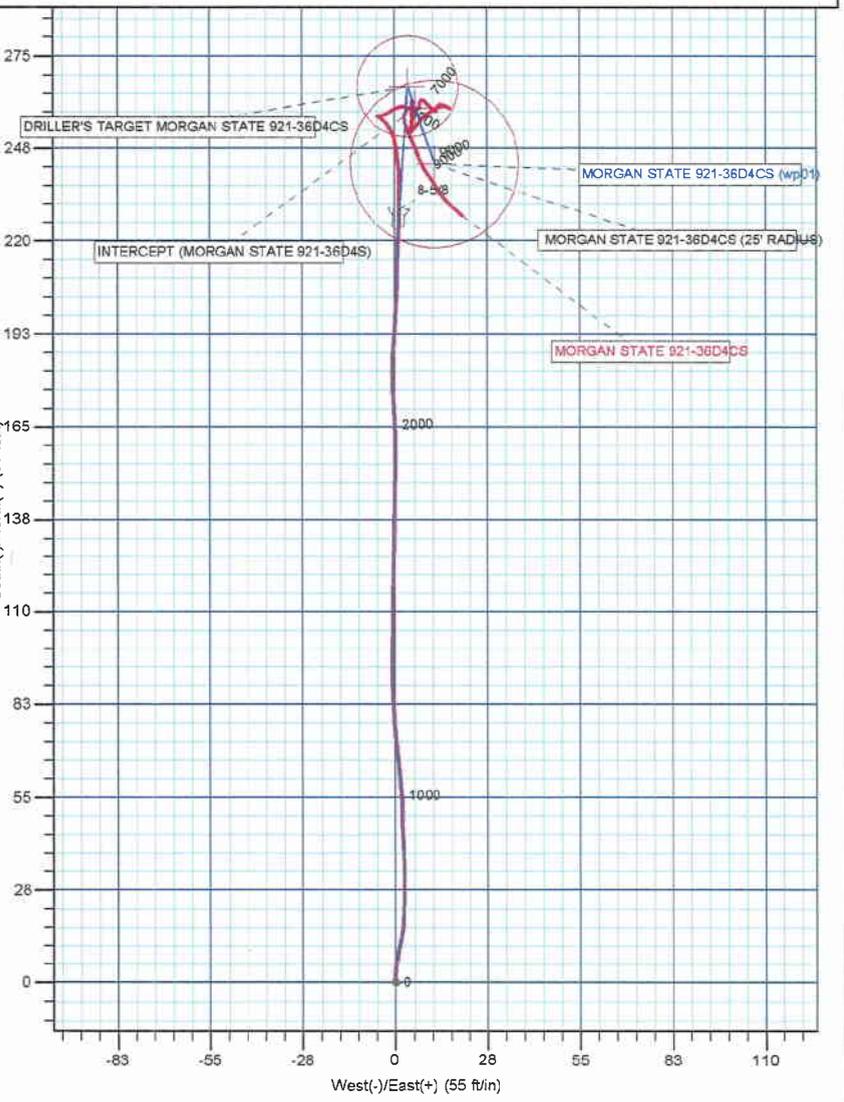
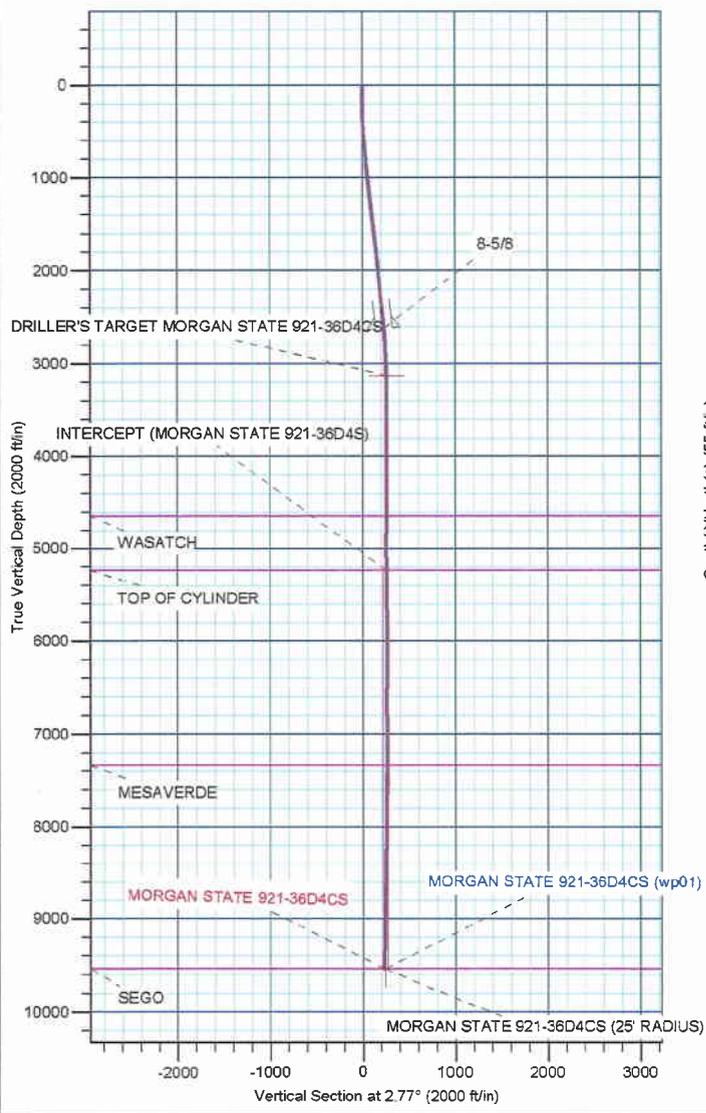
WELL DETAILS: MORGAN STATE 921-38D4CS						
+N/-S	+E/-W	Northing	Ground Level: Easting	5007.00 Latitude	Longitude	Slot
0.00	0.00	14527931.65	2058987.84	39.99551	-109.505898	

CASING DETAILS			
TVD	MD	Name	Size
2620.90	2632.80	8-5/8	8-5/8

Azimuths to True North
 Magnetic North: 10.95°
 Magnetic Field
 Strength: 5224.6snT
 Dip Angle: 65.84°
 Date: 6/20/2012
 Model: IGRF2010

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
DRILLER'S TARGET MORGAN STATE 921-38D4CS	3128.52	265.91	3.80	14528197.59	2058867.18	39.996281	-109.505884	Circle (Radius: 15.00)	
INTERCEPT (MORGAN STATE 921-38D4S)	5240.00	259.50	6.02	14528191.22	2058889.52	39.996264	-109.505876	Point	
MORGAN STATE 921-38D4CS (25' RADIUS)	9540.00	242.93	11.77	14528174.74	2058995.53	39.996218	-109.505856	Circle (Radius: 25.00)	

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	
2621.00	5.72	4.01	2609.16	228.32	1.17	0.00	0.00	228.11	
2856.00	5.72	4.01	2842.99	251.69	2.81	0.00	0.00	251.53	
3142.00	0.00	4.01	3128.52	265.92	3.80	2.00	180.00	265.79	
3214.89	0.22	160.90	3201.41	265.79	3.85	0.30	160.90	265.66	
9553.53	0.22	160.90	9540.00	242.93	11.77	0.00	0.00	243.21	



US ROCKIES REGION PLANNING

**UTAH - UTM (feet), NAD27, Zone 12N
UINTAH_MORGAN STATE 921-36E PAD
MORGAN STATE 921-36D4CS**

MORGAN STATE 921-36D4CS

Design: MORGAN STATE 921-36D4CS

Standard Survey Report

25 July, 2012

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Site:	UINTAH_MORGAN STATE 921-36E PAD	MD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Well:	MORGAN STATE 921-36D4CS	North Reference:	True
Wellbore:	MORGAN STATE 921-36D4CS	Survey Calculation Method:	Minimum Curvature
Design:	MORGAN STATE 921-36D4CS	Database:	edmp

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 UINTAH_MORGAN STATE 921-36E PAD			
Site Position:		Northing:	14,527,931.66 usft
From:	Lat/Long	Easting:	2,058,887.84 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	39.995551
		Longitude:	-109.505898
		Grid Convergence:	0.96 °

Well MORGAN STATE 921-36D4CS			
Well Position		Northing:	14,527,931.66 usft
	+N/-S 0.00 ft	Easting:	2,058,887.84 usft
	+E/-W 0.00 ft	Wellhead Elevation:	ft
Position Uncertainty	0.00 ft	Latitude:	39.995551
		Longitude:	-109.505898
		Ground Level:	5,007.00 ft

Wellbore MORGAN STATE 921-36D4CS					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/20/2012	10.95	65.84	52,225

Design MORGAN STATE 921-36D4CS					
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	17.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	17.00	0.00	0.00		5.01

Survey Program Date: 7/25/2012					
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
246.00	2,621.00	Survey #1 (MORGAN STATE 921-36D4CS)	MWD	MWD - STANDARD	
2,747.00	9,557.00	Survey #2 (MORGAN STATE 921-36D4CS)	MWD	MWD - STANDARD	

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00
246.00	0.18	183.66	246.00	-0.36	-0.02	-0.36	0.08	0.08	0.00
337.00	1.06	1.02	337.00	0.34	-0.02	0.34	1.36	0.97	194.90
428.00	2.64	359.52	427.94	3.28	-0.02	3.26	1.74	1.74	-1.65
523.00	4.13	13.50	522.78	8.79	0.76	8.82	1.78	1.57	14.72
618.00	5.45	7.79	617.44	16.59	2.17	16.71	1.48	1.39	-6.01
713.00	6.07	0.14	711.97	26.08	2.79	26.23	1.04	0.65	-8.05
809.00	6.16	357.06	807.42	36.30	2.54	36.38	0.35	0.09	-3.21
903.00	5.80	357.50	900.91	46.08	2.08	46.09	0.39	-0.38	0.47
997.00	5.89	359.26	994.42	55.65	1.81	55.60	0.21	0.10	1.87

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Site:	UINTAH_MORGAN STATE 921-36E PAD	MD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Well:	MORGAN STATE 921-36D4CS	North Reference:	True
Wellbore:	MORGAN STATE 921-36D4CS	Survey Calculation Method:	Minimum Curvature
Design:	MORGAN STATE 921-36D4CS	Database:	edmp

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,090.00	6.60	351.53	1,086.87	65.71	0.96	65.54	1.18	0.76	-8.31
1,185.00	6.42	355.66	1,181.26	76.40	-0.25	76.09	0.53	-0.19	4.35
1,280.00	6.24	357.50	1,275.68	86.86	-0.87	86.45	0.29	-0.19	1.94
1,373.00	6.10	2.40	1,368.14	96.85	-0.89	96.40	0.59	-0.15	5.27
1,467.00	6.24	1.37	1,461.60	106.94	-0.56	106.48	0.19	0.15	-1.10
1,564.00	6.33	358.44	1,558.01	117.56	-0.58	117.06	0.34	0.09	-3.02
1,657.00	6.60	2.95	1,650.42	128.02	-0.44	127.49	0.62	0.29	4.85
1,753.00	6.42	359.17	1,745.80	138.90	-0.23	138.34	0.48	-0.19	-3.94
1,846.00	6.07	2.69	1,838.25	149.01	-0.08	148.43	0.56	-0.38	3.78
1,940.00	6.16	359.52	1,931.72	159.02	0.11	158.42	0.37	0.10	-3.37
2,034.00	5.80	356.54	2,025.21	168.80	-0.22	168.13	0.51	-0.38	-3.17
2,126.00	5.36	357.59	2,116.77	177.73	-0.68	176.99	0.49	-0.48	1.14
2,218.00	5.63	2.86	2,208.35	186.53	-0.63	185.76	0.62	0.29	5.73
2,309.00	5.72	5.76	2,298.90	195.50	0.05	194.76	0.33	0.10	3.19
2,404.00	6.51	0.32	2,393.36	205.60	0.55	204.86	1.03	0.83	-5.73
2,495.00	5.98	0.75	2,483.82	215.50	0.64	214.73	0.58	-0.58	0.47
2,621.00	5.72	4.01	2,609.16	228.32	1.17	227.55	0.33	-0.21	2.59
2,747.00	4.64	355.79	2,734.65	239.67	1.23	238.86	1.04	-0.86	-6.52
FIRST MWD SURVEY									
2,841.00	3.39	352.40	2,828.42	246.22	0.59	245.33	1.35	-1.33	-3.61
2,936.00	2.00	342.86	2,923.31	250.59	-0.27	249.60	1.53	-1.46	-10.04
3,031.00	1.56	338.73	3,018.26	253.38	-1.23	252.30	0.48	-0.46	-4.35
3,125.00	1.50	304.48	3,112.23	255.26	-2.71	254.05	0.96	-0.06	-36.44
3,220.00	0.88	321.48	3,207.21	256.54	-4.19	255.19	0.74	-0.65	17.89
3,314.00	0.50	289.23	3,301.21	257.24	-5.03	255.81	0.56	-0.40	-34.31
3,408.00	0.44	152.48	3,395.20	257.05	-5.25	255.61	0.93	-0.06	-145.48
3,502.00	0.69	53.86	3,489.20	257.07	-4.62	255.68	0.93	0.27	-104.92
3,597.00	0.56	93.61	3,584.20	257.38	-3.70	256.07	0.47	-0.14	41.84
3,691.00	1.69	57.22	3,678.18	258.10	-2.07	256.93	1.36	1.20	-38.71
3,786.00	1.19	65.73	3,773.15	259.26	0.00	258.27	0.57	-0.53	8.96
3,880.00	0.75	78.86	3,867.13	259.78	1.50	258.92	0.52	-0.47	13.97
3,974.00	0.81	96.73	3,961.12	259.82	2.76	259.07	0.27	0.06	19.01
4,069.00	1.25	110.48	4,056.11	259.38	4.40	258.77	0.53	0.46	14.47
4,163.00	1.25	357.61	4,150.10	260.05	5.32	259.52	2.22	0.00	-120.07
4,258.00	0.50	340.23	4,245.09	261.47	5.13	260.92	0.83	-0.79	-18.29
4,352.00	0.13	123.23	4,339.08	261.80	5.08	261.24	0.65	-0.39	152.13
4,446.00	0.31	160.73	4,433.08	261.50	5.26	260.96	0.24	0.19	39.89
4,541.00	0.94	178.98	4,528.08	260.48	5.35	259.95	0.69	0.66	19.21
4,635.00	1.00	185.48	4,622.06	258.89	5.29	258.36	0.13	0.06	6.91
4,730.00	1.06	185.61	4,717.05	257.19	5.12	256.66	0.06	0.06	0.14
4,824.00	1.00	182.36	4,811.03	255.51	5.01	254.97	0.09	-0.06	-3.46
4,918.00	1.06	183.61	4,905.02	253.82	4.92	253.28	0.07	0.06	1.33
5,013.00	0.88	196.23	5,000.00	252.24	4.66	251.68	0.29	-0.19	13.28

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Site:	UINTAH_MORGAN STATE 921-36E PAD	MD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Well:	MORGAN STATE 921-36D4CS	North Reference:	True
Wellbore:	MORGAN STATE 921-36D4CS	Survey Calculation Method:	Minimum Curvature
Design:	MORGAN STATE 921-36D4CS	Database:	edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,107.00	1.50	30.48	5,094.00	252.61	5.08	252.09	2.51	0.66	-176.33	
5,202.00	1.31	40.86	5,188.97	254.50	6.42	254.09	0.33	-0.20	10.93	
5,296.00	1.19	46.61	5,282.95	255.99	7.83	255.69	0.18	-0.13	6.12	
5,391.00	1.19	47.48	5,377.93	257.33	9.28	257.16	0.02	0.00	0.92	
5,485.00	1.19	48.73	5,471.91	258.63	10.73	258.58	0.03	0.00	1.33	
5,580.00	1.00	69.61	5,566.89	259.57	12.25	259.65	0.46	-0.20	21.98	
5,674.00	0.81	79.48	5,660.88	259.98	13.67	260.18	0.26	-0.20	10.50	
5,768.00	0.56	98.36	5,754.87	260.04	14.78	260.33	0.35	-0.27	20.09	
5,863.00	0.50	114.36	5,849.87	259.80	15.62	260.17	0.17	-0.06	16.84	
5,957.00	0.69	133.36	5,943.86	259.24	16.40	259.68	0.29	0.20	20.21	
6,052.00	1.13	310.23	6,038.86	259.45	16.10	259.87	1.92	0.46	186.18	
6,146.00	0.63	294.48	6,132.84	260.26	14.92	260.57	0.59	-0.53	-16.76	
6,240.00	0.56	271.11	6,226.84	260.49	13.99	260.71	0.27	-0.07	-24.86	
6,335.00	0.38	251.73	6,321.84	260.40	13.23	260.56	0.25	-0.19	-20.40	
6,430.00	0.31	237.86	6,416.83	260.16	12.71	260.28	0.11	-0.07	-14.60	
6,524.00	0.50	183.61	6,510.83	259.62	12.47	259.71	0.43	0.20	-57.71	
6,619.00	0.81	183.23	6,605.83	258.53	12.41	258.63	0.33	0.33	-0.40	
6,713.00	1.13	316.23	6,699.82	258.54	11.73	258.57	1.90	0.34	141.49	
6,808.00	0.94	320.11	6,794.80	259.81	10.58	259.74	0.21	-0.20	4.08	
6,902.00	0.88	316.48	6,888.79	260.93	9.59	260.77	0.09	-0.06	-3.86	
7,092.00	0.25	290.61	7,078.78	262.13	8.20	261.85	0.35	-0.33	-13.62	
7,469.00	0.38	188.86	7,455.78	261.19	7.24	260.82	0.13	0.03	-26.99	
7,563.00	0.81	155.11	7,549.77	260.28	7.47	259.93	0.57	0.46	-35.90	
7,658.00	0.63	235.48	7,644.77	259.37	7.32	259.02	0.99	-0.19	84.60	
7,752.00	1.06	293.48	7,738.76	259.42	6.10	258.96	0.96	0.46	61.70	
7,846.00	0.75	264.11	7,832.75	259.71	4.69	259.12	0.58	-0.33	-31.24	
7,941.00	0.38	225.86	7,927.74	259.42	3.84	258.77	0.54	-0.39	-40.26	
8,035.00	0.69	203.98	8,021.74	258.69	3.39	258.00	0.39	0.33	-23.28	
8,129.00	0.75	196.48	8,115.73	257.58	2.98	256.86	0.12	0.06	-7.98	
8,224.00	0.94	173.48	8,210.72	256.21	2.90	255.49	0.41	0.20	-24.21	
8,413.00	1.00	159.61	8,399.70	253.13	3.65	252.48	0.13	0.03	-7.34	
8,507.00	1.25	154.86	8,493.68	251.43	4.37	250.85	0.28	0.27	-5.05	
8,602.00	1.00	157.36	8,588.66	249.73	5.13	249.22	0.27	-0.26	2.63	
8,696.00	1.25	158.98	8,682.64	248.01	5.81	247.57	0.27	0.27	1.72	
8,791.00	1.50	158.73	8,777.61	245.89	6.63	245.52	0.26	0.26	-0.26	
8,885.00	1.50	152.86	8,871.58	243.64	7.64	243.38	0.16	0.00	-6.24	
8,979.00	1.50	152.73	8,965.55	241.46	8.77	241.30	0.00	0.00	-0.14	
9,074.00	1.81	141.86	9,060.51	239.17	10.26	239.15	0.46	0.33	-11.44	
9,168.00	1.75	146.98	9,154.46	236.80	11.96	236.94	0.18	-0.06	5.45	
9,263.00	1.88	150.61	9,249.42	234.23	13.52	234.51	0.18	0.14	3.82	
9,357.00	1.63	136.11	9,343.37	231.92	15.20	232.36	0.54	-0.27	-15.43	
9,452.00	1.94	130.48	9,438.33	229.90	17.36	230.54	0.37	0.33	-5.93	
9,507.00	1.94	133.86	9,493.30	228.65	18.74	229.41	0.21	0.00	6.15	

LAST MWD SURVEY

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-36D4CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Site:	UINTAH_MORGAN STATE 921-36E PAD	MD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Well:	MORGAN STATE 921-36D4CS	North Reference:	True
Wellbore:	MORGAN STATE 921-36D4CS	Survey Calculation Method:	Minimum Curvature
Design:	MORGAN STATE 921-36D4CS	Database:	edmp

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,557.00	1.94	133.86	9,543.27	227.48	19.96	228.35	0.00	0.00	0.00
PROJECTION TO TD									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N-S (ft)	+E-W (ft)		
2,747.00	2,734.65	239.67	1.23	FIRST MWD SURVEY	
9,507.00	9,493.30	228.65	18.74	LAST MWD SURVEY	
9,557.00	9,543.27	227.48	19.96	PROJECTION TO TD	

Checked By: _____ Approved By: _____ Date: _____