



02287520

Colorado
Oil & Gas Commission

1725 Lincoln Street, Suite 601, Denver, Colorado 80203 Phone: (303)894-2100 Fax: (303)894-2109



SUNDRY NOTICE

Submit original plus one copy. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full on Technical Information Page (Page 2 of this form.) Identify well or other facility by API Number or by OGCC Facility ID. Operator shall send an informational copy of all sundry notices for wells located in High Density Areas to the Local Government Designee (Rule 603b.)

RECEIVED

FEB 22 2012

COGCC

Complete the Attachment
Checklist

OP OGCC

1. OGCC Operator Number: 66571
2. Name of Operator: OXY USA WTP LP, Attn: Glenda Jones
3. Address: P.O. Box 27757
City: Houston State: TX Zip 77227-7757
4. Contact Name: Joan Proulx
Phone: 970-263-3641
Fax: 970-263-3694

5. API Number 05-045-20729-00
6. Well/Facility Name: Cascade Creek
7. Well/Facility Number 697-04-76B
8. Location (Qtr/Qtr, Sec, Twp, Rng, Meridian): NWSW 4 6S 97W 6 PM
9. County: Garfield
10. Field Name: Grand Valley
11. Federal, Indian or State Lease Number: N/A

Survey Plat
deviated drill plan X 2287521
Surface Equipmt Diagram
Technical Info Page X X
Other wellbore diagram X 2287522

General Notice

☐ CHANGE OF LOCATION: Attach New Survey Plat

(a change of surface qtr/qtr is substantive and requires a new permit)

Change of Surface Footage from Exterior Section Lines:

Change of Surface Footage to Exterior Section Lines:

Change of Bottomhole Footage from Exterior Section Lines:

Change of Bottomhole Footage to Exterior Section Lines:

Bottomhole location Qtr/Qtr, Sec, Twp, Rng, Mer

Latitude

Distance to nearest property line

Distance to nearest bldg, public rd, utility or RR

Longitude

Distance to nearest lease line

Is location in a High Density Area (rule 603b)?

Yes/No

Ground Elevation

Distance to nearest well same formation

Surface owner consultation date:

attach directional survey

GPS DATA:

Date of Measurement PDOP Reading Instrument Operator's Name

☐ CHANGE SPACING UNIT

Formation

Formation Code

Spacing order number

Unit Acreage

Unit configuration

☐ Remove from surface bond

Signed surface use agreement attached

☐ CHANGE OF OPERATOR (prior to drilling):

Effective Date:

Plugging Bond:

☐ Blanket☐ Individual☐ CHANGE WELL NAME

NUMBER

From:

To:

Effective Date:

☐ ABANDONED LOCATION:

Was location ever built?

☐ Yes☐ No

Is site ready for inspection?

☐ Yes☐ No

Date Ready for Inspection:

☐ NOTICE OF CONTINUED SHUT IN STATUS

Date well shut in or temporarily abandoned:

Has Production Equipment been removed from site?

☐ Yes☐ No

MIT required if shut in longer than two years. Date of last MIT

☐ SPUD DATE:☐ REQUEST FOR CONFIDENTIAL STATUS (6 mos from date casing set)☐ SUBSEQUENT REPORT OF STAGE, SQUEEZE OR REMEDIAL CEMENT WORK

*submit cbl and cement job summaries

Method used

Cementing tool setting/perf depth

Cement volume

Cement top

Cement bottom

Date

☐ RECLAMATION:

Attach technical page describing final reclamation procedures per Rule 1004.

Final reclamation will commence on approximately

☐

Final reclamation is completed and site is ready for inspection.

Technical Engineering/Environmental Notice

☒ Notice of Intent

Approximate Start Date: 2/21/2012

☐ Report of Work Done

Date Work Completed:

Details of work must be described in full on Technical Information Page (Page 2 must be submitted.)

☐ Intent to Recomplete (submit form 2)☐ Request to Vent or Flare☐ E&P Waste Disposal☐ Change Drilling Plans☐ Repair Well☐ Beneficial Reuse of E&P Waste☐ Gross Interval Changed?☐ Rule 502 variance requested☐ Status Update/Change of Remediation Plans☐ Casing/Cementing Program Change☒ Other: UNPLANNED SIDETRACK

for Spills and Releases

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct and complete.

Signed:

Date: 2/21/12

Email: joan_proulx@oxy.com

Print Name: Joan Proulx

Title: Regulatory Analyst

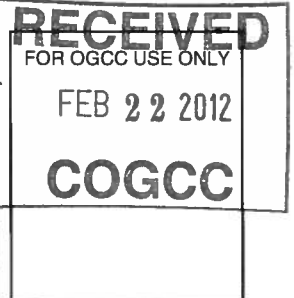
COGCC Approved:

Title: NWAE

Date: 3/16/12

CONDITIONS OF APPROVAL, IF ANY:

TECHNICAL INFORMATION PAGE



1. OGCC Operator Number:	66571	API Number:	05-045-20729-00
2. Name of Operator:	OXY USA WTP LP	OGCC Facility ID #	
3. Well/Facility Name:	Cascade Creek	Well/Facility Number:	697-04-76B
4. Location (QtrQtr, Sec, Twp, Rng, Meridian):	NWSW 4 6S 97W 6 PM		

This form is to be completed whenever a Sundry Notice is submitted requiring detailed report of work to be performed or completed. This form shall be transmitted within 30 days of work completed as a "subsequent" report and must accompany Form 4, page 1.

5. DESCRIBE PROPOSED OR COMPLETED OPERATIONS

The 697-04-76B well was drilled to a TD of 9,504'. While running the 4.5" production casing, a restriction was encountered at 5,290'. With difficulty, casing was continued to 6,310' but was unable to pass this depth. The production casing was laid down. A reaming assembly was picked up and TIH, but after several attempts was unable to pass 5,227'.

Total depth reached: 9,504'

4 1/2" production casing was not set.

There is no fish in the hole.

Proposed plug setting depth: cement plug from 4,950' to 4,750', 14.1 bbls of 13 ppg cement, 1.47 yield, 80 sxs.

KOP cement plug will be balanced. TOC at 2,950' and bottom at 3,450'. 44.53 bbls of 17 ppg cement.

Proposed sidetrack kick-off point: 3,100'

Proposed objective formation: Same as original wellbore (WMFK, ILES)

BHL target for sidetrack: N 635482.88 usft; E 1231573.37 usft

Verbal/email approval to sidetrack: Approval granted by David Andrews via email on 2/17/2012.

deviated drill plan 16



02287521



Scientific Drilling

Company: OXY USA RMAT
Project: Garfield County, CO NAD27
Site: Cascade Creek 697-04D Pad

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FEB 22 2012

COGCC



Form 4
2287520

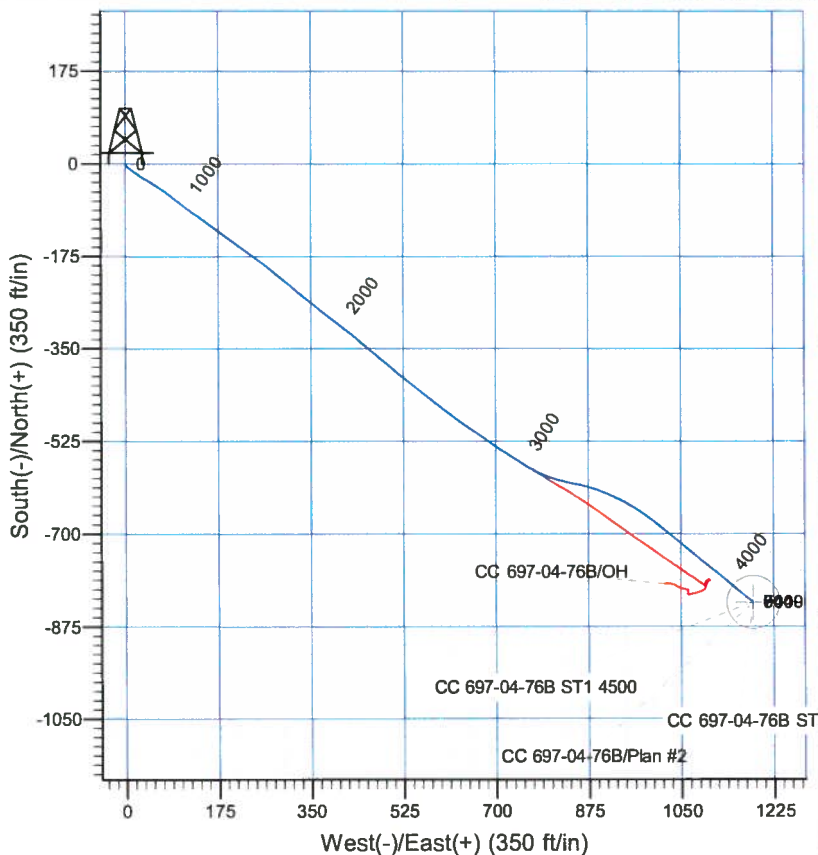
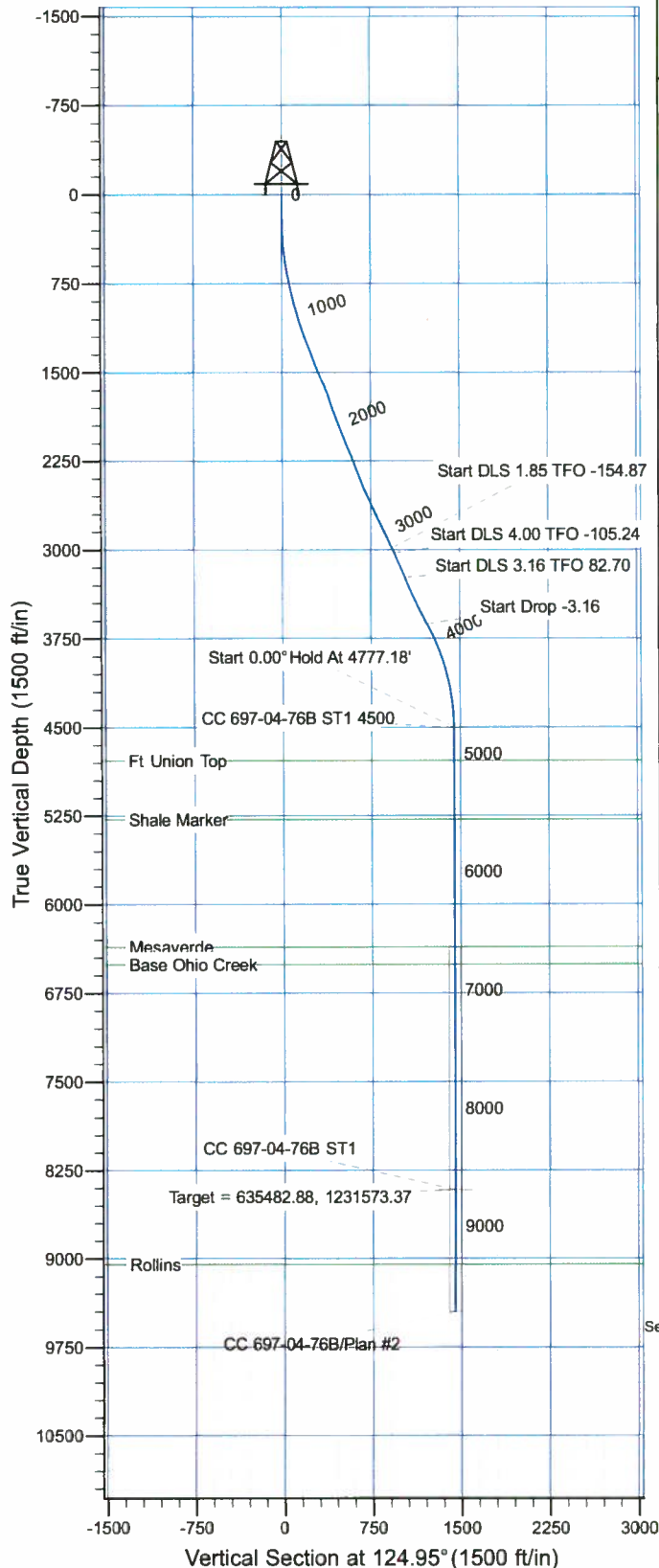
Well Details: CC 697-04-76B

TVD Reference: GL 8629' & RKB 30' @ 8659.00ft (H&P) Ground Level: 8629.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 636347.37 1230412.51 39° 32' 55.869 N 108° 13' 46.143 W G



Azimuths to True North
Magnetic North: 10.37°

Magnetic Field
Strength: 52158.8snT
Dip Angle: 65.72°
Date: 2/16/2012
Model: IGRF2010



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
4781.00	5058.18	Ft Union Top
5281.00	5558.18	Shale Marker
6359.00	6636.18	Mesaverde
6509.00	6786.18	Base Ohio Creek
9049.00	9326.18	Rollins

Plan: Plan #2

18:14, February 17 2012
Created By: Rex Hall

PROJECT DETAILS: Garfield County, CO NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Colorado Central 502

System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	3155.00	25.59	122.80	2984.53	-560.41	739.01	0.00	0.00	926.77	
2	3200.00	24.84	121.96	3025.25	-570.68	755.20	1.85	-154.87	945.93	
3	3426.76	24.00	100.00	3232.15	-603.97	841.21	4.00	-105.24	1035.49	
4	3861.82	28.95	129.17	3623.10	-686.24	1010.79	3.16	32.70	1221.62	
5	4777.18	0.00	0.00	4500.00	-829.22	1186.31	3.16	190.00	1447.39	CC 697-04-76B ST1 4500
6	8691.18	0.00	0.00	8414.00	-829.22	1186.31	0.00	0.00	1447.39	CC 697-04-76B ST1
7	9726.18	0.00	0.00	9449.00	-829.22	1186.31	0.00	0.00	1447.39	



OXY USA RMAT

**Garfield County, CO NAD27
Cascade Creek 697-04D Pad
CC 697-04-76B - Slot G**

ST-1

Plan: Plan #2

Standard Planning Report

17 February, 2012

3/6
Scientific Drilling
Planning Report

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FEB 22 2012
COGCC

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well CC 697-04-76B - Slot G
Company:	OXY USA RMAT	TVD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Site:	Cascade Creek 697-04D Pad	North Reference:	True
Well:	CC 697-04-76B	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST-1		
Design:	Plan #2		

Project	Garfield County, CO NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado Central 502		

Site	Cascade Creek 697-04D Pad		
Site Position:		Northing:	635,530.62 usft
From:	Map	Easting:	1,230,276.10 usft
Position Uncertainty:	0.00 ft	Spot Radius:	13.200 in
		Latitude:	39° 32' 47.760 N
		Longitude:	108° 13' 47.570 W
		Grid Convergence:	-1.72 °

Well	CC 697-04-76B - Slot G		
Well Position	+N/-S	820.48 ft	Northing:
	+E/-W	111.81 ft	Easting:
Position Uncertainty	0.00 ft	Wellhead Elevation:	
		Latitude:	39° 32' 55.869 N
		Longitude:	108° 13' 46.143 W
		Ground Level:	8,629.00 ft

Wellbore	ST-1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/16/2012	10.38	65.72	52,159

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	3,155.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	124.95

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
3,155.00	25.59	122.80	2,984.53	-560.41	739.01	0.00	0.00	0.00	0.00	
3,200.00	24.84	121.96	3,025.25	-570.68	755.20	1.85	-1.67	-1.87	-154.87	
3,426.76	24.00	100.00	3,232.15	-603.97	841.21	4.00	-0.37	-9.68	-105.24	
3,861.82	28.95	129.17	3,623.10	-686.24	1,010.79	3.16	1.14	6.70	82.70	
4,777.18	0.00	0.00	4,500.00	-829.22	1,186.31	3.16	-3.16	0.00	180.00	CC 697-04-76B ST1
8,691.18	0.00	0.00	8,414.00	-829.22	1,186.31	0.00	0.00	0.00	0.00	CC 697-04-76B ST1
9,726.18	0.00	0.00	9,449.00	-829.22	1,186.31	0.00	0.00	0.00	0.00	

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Scientific Drilling
Planning Report

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well CC 697-04-76B - Slot G
Company:	OXY USA RMAT	TVD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Site:	Cascade Creek 697-04D Pad	North Reference:	True
Well:	CC 697-04-76B	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST-1		
Design:	Plan #2		

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
100.00	0.12	167.37	100.00	-0.10	0.02	0.07	0.12	0.12	0.00
200.00	0.66	151.51	200.00	-0.53	0.19	0.46	0.55	0.54	-15.86
300.00	2.45	145.98	299.96	-2.59	1.48	2.70	1.79	1.79	-5.52
400.00	4.70	133.19	399.76	-7.41	5.46	8.72	2.37	2.25	-12.79
500.00	7.31	126.81	499.21	-13.91	13.54	19.07	2.69	2.61	-6.38
600.00	9.32	120.65	598.14	-22.04	25.64	33.64	2.20	2.01	-6.17
700.00	11.54	122.13	696.49	-31.33	41.12	51.65	2.24	2.22	1.48
800.00	13.14	121.82	794.15	-42.60	59.39	73.08	1.60	1.60	-0.31
900.00	14.08	127.75	891.41	-56.05	78.36	96.33	1.68	0.94	5.93
1,000.00	16.08	127.52	987.85	-72.22	99.23	122.70	2.00	2.00	-0.23
1,100.00	17.08	126.31	1,083.82	-89.12	121.70	150.81	1.06	1.00	-1.20
1,200.00	19.87	125.57	1,178.70	-107.56	147.30	182.35	2.81	2.80	-0.74
1,300.00	21.48	125.98	1,271.97	-128.59	176.59	218.41	1.61	1.61	0.40
1,400.00	20.79	126.24	1,365.22	-149.95	205.71	254.51	0.70	-0.69	0.26
1,500.00	22.15	125.75	1,458.60	-170.98	234.64	290.28	1.38	1.36	-0.49
1,600.00	23.63	127.51	1,550.47	-194.28	266.51	329.74	1.63	1.48	1.76
1,700.00	21.91	129.27	1,642.43	-218.82	297.19	368.95	1.86	-1.73	1.76
1,800.00	18.50	129.89	1,736.21	-240.93	323.89	403.50	3.41	-3.40	0.62
1,900.00	20.01	129.73	1,830.97	-261.40	348.38	435.30	1.51	1.51	-0.16
2,000.00	21.03	127.22	1,924.49	-283.53	376.02	470.63	1.34	1.01	-2.51
2,100.00	21.42	127.32	2,017.70	-305.34	404.93	506.82	0.40	0.39	0.10
2,200.00	23.06	130.25	2,110.30	-328.94	434.37	544.47	1.98	1.64	2.93
2,300.00	22.49	130.45	2,202.47	-354.09	463.91	583.09	0.58	-0.57	0.19
2,400.00	20.40	129.03	2,295.58	-377.37	491.96	619.42	2.15	-2.09	-1.42
2,500.00	20.65	129.86	2,389.30	-399.59	518.85	654.19	0.39	0.25	0.84
2,600.00	22.74	128.66	2,482.20	-423.00	547.50	691.08	2.13	2.08	-1.20
2,700.00	24.36	127.79	2,573.83	-447.73	579.00	731.07	1.67	1.63	-0.87
2,800.00	25.60	127.00	2,664.43	-473.50	612.56	773.33	1.28	1.24	-0.79
2,900.00	26.04	125.27	2,754.34	-499.26	647.95	817.10	0.87	0.44	-1.73
3,000.00	25.46	124.10	2,844.40	-523.98	683.69	860.56	0.77	-0.58	-1.17
3,100.00	25.28	123.16	2,934.87	-547.55	719.20	903.17	0.44	-0.18	-0.94
3,155.00	25.59	122.80	2,984.53	-560.41	739.01	926.77	0.63	0.56	-0.65
Start DLS 1.85 TFO -154.87									
3,200.00	24.84	121.96	3,025.25	-570.68	755.20	945.93	1.85	-1.67	-1.87
Start DLS 4.00 TFO -105.24									
3,300.00	24.08	112.47	3,116.31	-589.60	791.89	986.84	4.00	-0.76	-9.49
3,400.00	23.93	102.63	3,207.69	-601.84	830.55	1,025.53	4.00	-0.15	-9.84
3,426.76	24.00	100.00	3,232.15	-603.97	841.21	1,035.49	4.00	0.25	-9.83
Start DLS 3.16 TFO 82.70									
3,500.00	24.40	105.57	3,298.96	-610.62	870.45	1,063.26	3.16	0.54	7.61
3,600.00	25.25	112.83	3,389.74	-624.44	910.01	1,103.61	3.16	0.86	7.26
3,700.00	26.44	119.56	3,479.76	-643.70	949.05	1,146.64	3.16	1.19	6.73
3,800.00	27.91	125.69	3,568.73	-668.34	987.44	1,192.22	3.16	1.47	6.13
3,861.82	28.95	129.17	3,623.10	-686.24	1,010.79	1,221.62	3.16	1.68	5.63
Start Drop -3.16									
3,900.00	27.74	129.17	3,656.70	-697.69	1,024.85	1,239.69	3.16	-3.16	0.00
4,000.00	24.58	129.17	3,746.44	-725.53	1,059.03	1,283.66	3.16	-3.16	0.00
4,100.00	21.42	129.17	3,838.48	-750.21	1,089.31	1,322.62	3.16	-3.16	0.00
4,200.00	18.26	129.17	3,932.54	-771.64	1,115.62	1,356.46	3.16	-3.16	0.00
4,300.00	15.09	129.17	4,028.32	-789.76	1,137.86	1,385.07	3.16	-3.16	0.00
4,400.00	11.93	129.17	4,125.54	-804.51	1,155.97	1,408.37	3.16	-3.16	0.00
4,500.00	8.77	129.17	4,223.90	-815.86	1,169.90	1,426.28	3.16	-3.16	0.00
4,600.00	5.60	129.17	4,323.10	-823.76	1,179.59	1,438.75	3.16	-3.16	0.00
4,700.00	2.44	129.17	4,422.84	-828.19	1,185.03	1,445.75	3.16	-3.16	0.00

Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well CC 697-04-76B - Slot G
Company:	OXY USA RMAT	TVD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Site:	Cascade Creek 697-04D Pad	North Reference:	True
Well:	CC 697-04-76B	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST-1		
Design:	Plan #2		

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)
4,777.18	0.00	0.00	4,500.00	-829.22	1,186.31	1,447.39	3.16	-3.16	0.00
Start 0.00° Hold At 4777.18'									
4,800.00	0.00	0.00	4,522.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
4,900.00	0.00	0.00	4,622.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,000.00	0.00	0.00	4,722.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,058.18	0.00	0.00	4,781.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
Ft Union Top									
5,100.00	0.00	0.00	4,822.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,200.00	0.00	0.00	4,922.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,300.00	0.00	0.00	5,022.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,400.00	0.00	0.00	5,122.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,500.00	0.00	0.00	5,222.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,558.18	0.00	0.00	5,281.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
Shale Marker									
5,600.00	0.00	0.00	5,322.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,700.00	0.00	0.00	5,422.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,800.00	0.00	0.00	5,522.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
5,900.00	0.00	0.00	5,622.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,000.00	0.00	0.00	5,722.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,100.00	0.00	0.00	5,822.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,200.00	0.00	0.00	5,922.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,300.00	0.00	0.00	6,022.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,400.00	0.00	0.00	6,122.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,500.00	0.00	0.00	6,222.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,600.00	0.00	0.00	6,322.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,636.18	0.00	0.00	6,359.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
Mesaverde									
6,700.00	0.00	0.00	6,422.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,786.18	0.00	0.00	6,509.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
Base Ohio Creek									
6,800.00	0.00	0.00	6,522.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
6,900.00	0.00	0.00	6,622.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,000.00	0.00	0.00	6,722.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,100.00	0.00	0.00	6,822.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,200.00	0.00	0.00	6,922.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,300.00	0.00	0.00	7,022.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,400.00	0.00	0.00	7,122.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,500.00	0.00	0.00	7,222.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,600.00	0.00	0.00	7,322.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,700.00	0.00	0.00	7,422.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,800.00	0.00	0.00	7,522.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
7,900.00	0.00	0.00	7,622.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,000.00	0.00	0.00	7,722.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,100.00	0.00	0.00	7,822.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,200.00	0.00	0.00	7,922.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,300.00	0.00	0.00	8,022.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,400.00	0.00	0.00	8,122.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,500.00	0.00	0.00	8,222.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,600.00	0.00	0.00	8,322.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,691.18	0.00	0.00	8,414.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
Target = 635482.88, 1231573.37									
8,700.00	0.00	0.00	8,422.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,800.00	0.00	0.00	8,522.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
8,900.00	0.00	0.00	8,622.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,000.00	0.00	0.00	8,722.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00

Scientific Drilling
Planning Report

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Database:	Rockies Compass Server	Local Co-ordinate Reference:	Well CC 697-04-76B - Slot G
Company:	OXY USA RMAT	TVD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Project:	Garfield County, CO NAD27	MD Reference:	GL 8629' & RKB 30' @ 8659.00ft (H&P)
Site:	Cascade Creek 697-04D Pad	North Reference:	True
Well:	CC 697-04-76B	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST-1		
Design:	Plan #2		

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)
9,100.00	0.00	0.00	8,822.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,200.00	0.00	0.00	8,922.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,300.00	0.00	0.00	9,022.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,326.18	0.00	0.00	9,049.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
Rollins									
9,400.00	0.00	0.00	9,122.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,500.00	0.00	0.00	9,222.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,600.00	0.00	0.00	9,322.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,700.00	0.00	0.00	9,422.82	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
9,726.18	0.00	0.00	9,449.00	-829.22	1,186.31	1,447.39	0.00	0.00	0.00
PBHL = 635482.88, 1231573.37									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
CC 697-04-76B ST1 45°	0.00	0.00	4,500.00	-829.22	1,186.31	635,482.89	1,231,573.36	39° 32' 47.673 N	108° 13' 30.999 W
- plan hits target center									
- Point									
CC 697-04-76B ST1	0.00	0.00	8,414.00	-829.22	1,186.31	635,482.89	1,231,573.36	39° 32' 47.673 N	108° 13' 30.999 W
- plan hits target center									
- Circle (radius 50.00)									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
5,058.18	4,781.00	Ft Union Top		0.00		
5,558.18	5,281.00	Shale Marker		0.00		
6,636.18	6,359.00	Mesaverde		0.00		
6,786.18	6,509.00	Base Ohio Creek		0.00		
9,326.18	9,049.00	Rollins		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
3,155.00	2,984.53	-560.41	739.01	Start DLS 1.85 TFO -154.87
3,200.00	3,025.25	-570.68	755.20	Start DLS 4.00 TFO -105.24
3,426.76	3,232.15	-603.97	841.21	Start DLS 3.16 TFO 82.70
3,861.82	3,623.10	-686.24	1,010.79	Start Drop -3.16
4,777.18	4,500.00	-829.22	1,186.31	Start 0.00° Hold At 4777.18'
8,691.18	8,414.00	-829.22	1,186.31	Target = 635482.88, 1231573.37
9,726.18	9,449.00	-829.22	1,186.31	PBHL = 635482.88, 1231573.37



wellbore diagram

form 4
2287520

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WELL 697-04-76B ORIGINAL HOLE DIAGRAM					WELL 697-04-76B SIDETRACK DIAGRAM				
FORMATION MD	Hole size & Depth MD		Csg Depth MD	CMT Slurry TOC MD	FORMATION MD	Hole size & Depth		Csg Depth MD	CMT Slurry TOC MD
				TOC at Surface	SIDETRACK KOP 3,116'				
	14 3/4" 2,710'		9 5/8" 36# J-55 2,690'	Lead slurry 12.3 ppg Tail slurry 12.8 ppg					
				TOC 2860'					
				KOP CEMENT PLUG Bottom 3450'					
				TOC 4748' Cement Plug Bottom 4948'					
5002' Fort Union					5002' Fort Union				TOC 2860' KOP CEMENT PLUG Bottom 3450'
6475' Ohio Creek 6629' Williams fork					6475' Ohio Creek 6629' Williams fork				TOC 4748' Cement Plug Bottom 4948'
8900' Cameo Coal					8900' Cameo Coal				
9298' Rollins					9298' Rollins				
9498' TD	8 3/4" - 9506'				9498' TD	8 3/4" - 9506'			