

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Tony Delfin
Acting Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



December 1, 2016

Oxy USA Inc.
Attn: Mr. David Stewart

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 20 2017

RECEIVED

ADMINISTRATIVE NON-STANDARD LOCATION ORDER

Administrative Order NSL-7487

Oxy USA Inc.
OGRID 16696
Cedar Canyon 21 Federal Com. No. 22H
API No. 30-015-pending

Proposed Location:

	Footages	Unit	Sec.	Twsp	Range	County
Surface	1764' FNL & 141' FWL	E	21	24S	29E	Eddy
Penetration Point	1386' FNL & 340' FWL	E	21	24S	29E	Eddy
Final perforation	1387' FNL & 340' FEL	H	21	24S	29E	Eddy
Terminus	1387' FNL & 180' FEL	H	21	24S	29E	Eddy

Proposed Project Area:

Description	Acres	Pool	Pool Code
S/2 N/2 of Section 21	160	Corral Draw; Bone Spring	96238

Reference is made to your application received on November 8, 2016.

You have requested to drill this horizontal well at an unorthodox oil well location described above in the referenced pool or formation. This location is governed by statewide Rule 19.15.15.9.A NMAC, which provides for 40-acre units, with wells located at least 330 feet from a unit outer boundary, and Rule 19.15.16.14.B (2) NMAC concerning directional wells in designated project areas. This location is unorthodox because portions of the proposed completed interval are closer to outside boundaries of the proposed project area than any location that would be a standard location under the applicable pool rules.

Administrative Order NSL-7487
Oxy USA Inc.
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Your application has been duly filed under the provisions of Division Rules 19.15.15.13 NMAC and 19.15.4.12.A (2) NMAC.

It is our understanding that you are seeking this NSL in order to allow for efficient spacing of horizontal wells and thereby preventing waste.

It is also understood that you have given due notice of this application to all operators or owners who are "affected persons," as defined in Rule 19.15.4.12 A (2) NMAC, in all adjoining units towards which the proposed location encroaches.

Pursuant to the authority conferred by Division Rule 19.15.15.13 (B) NMAC, the above-described unorthodox location is hereby approved.

This approval is subject to your being in compliance with all other applicable Division rules, including, but not limited to Division Rule 19.15.5.9 NMAC.

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.


DAVID R. CATANACH
Director

DRC/lrl

cc: Oil Conservation Division – Artesia District
Bureau of Land Management – Carlsbad Field Office

Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 20 2017

Schlumberger

RECEIVED

Well Reference:

21, 24S, 29E, Eddy NM
-32 20541 -103.99755

I, Drew Mikkonen certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 29, 2017 through September 09, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 495.00 feet to a depth of 13326.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Oxy U.S.A. Inc. for the Cedar Canyon 21 Federal Com 22H Well (Original Hole) API No. 30-015-44190 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Drew Mikkonen
TS

Drew Mikkonen

Subscribed and Sworn to before me this 26th day of September (month) 2017 (yr)

My Commission expires:

Dec 20, 2020

J. Allemand

Notary Public

Adams County Colorado
(County State)

(signature) JENNIFER ALLEMAND
Notary Public
State of Colorado
Notary ID # 20164047962
Commission Expires 12-20-2020

Schlumberger

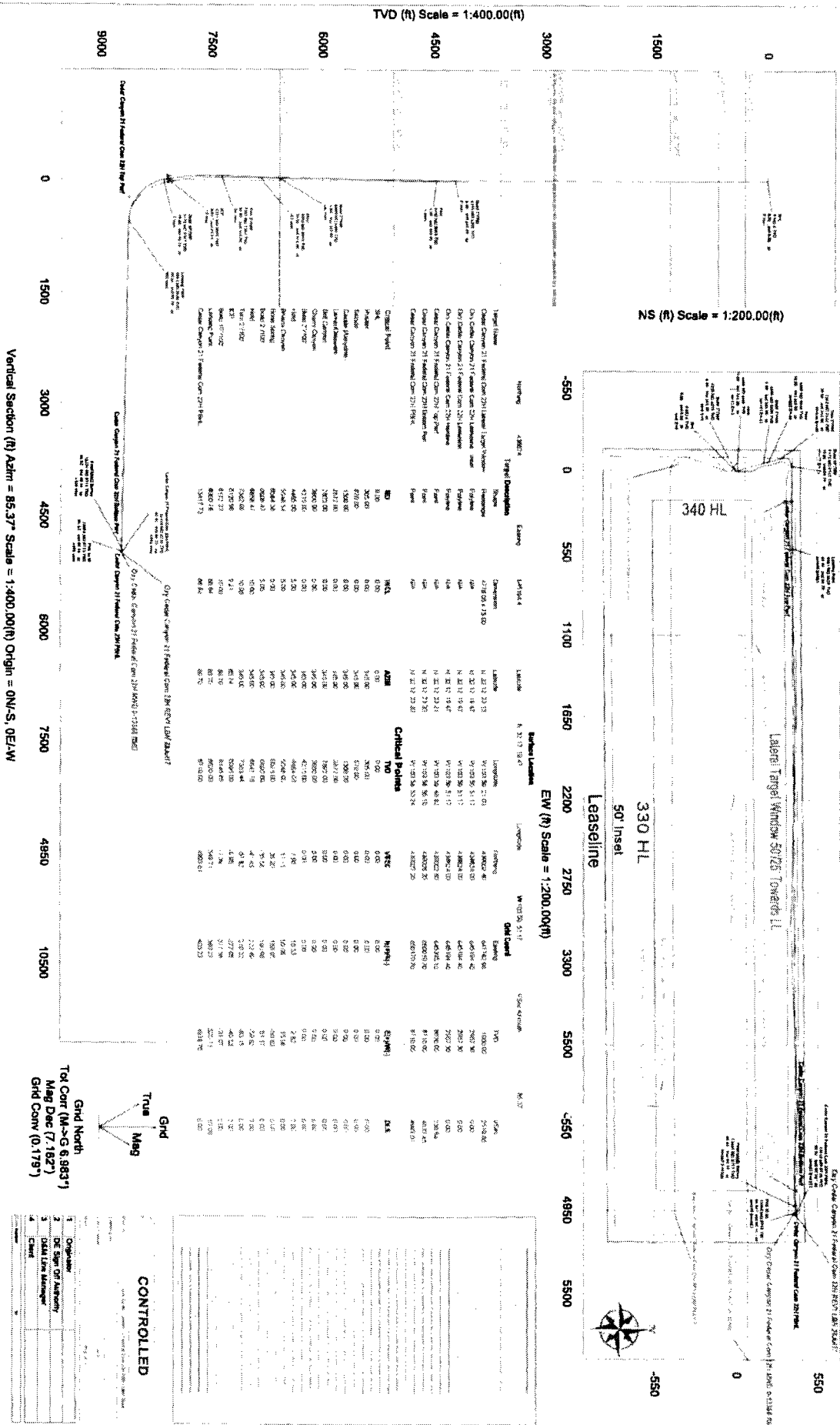
OXY



Struktur

Oxy Cedar Canyon 21 Federal Com 22H

Water-Related Info:	
Dry Creek Canyon 21	TWO Pkts.
Lake:	PULP-CAL2007.21 above 85L
Federal Cam Z24	
Oxy Cedar Canyon 21 Federal Cam Z24 HNT's LBN 24x67	
Phys.	



Grid North
Tot Corr (M->G 6.983")
Mag Dec (7.162")
Grid Conv (0.179")

CONTROLLED

1	Organizer
2	DE Sign Off Authority
3	Datalink Manager
4	Chief

Oxy Cedar Canyon 21 Federal Com 22H MWD 0-13366 ftMD Survey

Geodetic Report

(Def Survey)



Report Date: September 11, 2017 11:18 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Cedar Canyon 21 Federal Com 22H / Oxy Cedar Canyon 21 Federal Com 22H
 Well: Oxy Cedar Canyon 21 Federal Com 22H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Cedar Canyon 21 Federal Com 22H MWD 0-13366 ftMD
 Survey Date: August 25, 2017
 Tort / AHD / DDI / ERD Ratio: 206.580' / 5291.859' h : 6.233' / 0.819'
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 12' 19.47067" W 103° 59' 51.17374"
 Location Grid N/E Y/X: N 438624 000 NUS E 845194 400 NUS
 CRS Grid Convergence Angle: 0.1780°
 Grid Scale Factor: 0.99992144
 Version / Patch: 2.10.544.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 85.368° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB-28.5'
 TVD Reference Elevation: 2957.300 ft above MSL
 Seabed / Ground Elevation: 2930.800 ft above MSL
 Magnetic Declination: 7.162°
 Total Gravity Field Strength: 998.4877 mgn (8.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48092.489 nT
 Magnetic Dip Angle: 60.011°
 Declination Date: August 25, 2017
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.1780°
 Total Corr Mag North -> Grid North: 6.9832°
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	438624.00	845194.00	N 32 12 18.47	W 103 59 51.17
	495.00	0.20	166.92	495.00	0.13	-0.84	0.20	0.04	438623.16	845194.60	N 32 12 18.46	W 103 59 51.17
	585.00	0.16	161.74	585.00	0.18	-1.11	0.27	0.05	438622.89	845194.87	N 32 12 19.46	W 103 59 51.17
	680.00	0.13	137.45	680.00	0.26	-1.32	0.38	0.07	438622.68	845194.78	N 32 12 19.46	W 103 59 51.17
	771.00	0.13	56.37	771.00	0.44	-1.41	0.56	0.10	438622.58	845194.96	N 32 12 19.46	W 103 59 51.17
	861.00	0.13	118.09	861.00	0.63	-1.46	0.75	0.05	438622.54	845195.15	N 32 12 19.46	W 103 59 51.17
	951.00	0.08	352.10	951.00	0.71	-1.45	0.83	0.21	438622.55	845195.23	N 32 12 19.46	W 103 59 51.16
	1042.00	0.13	167.25	1042.00	0.73	-1.48	0.85	0.23	438622.52	845195.25	N 32 12 19.46	W 103 59 51.16
	1222.00	0.08	158.99	1222.00	0.79	-1.80	0.84	0.03	438622.20	845195.34	N 32 12 19.45	W 103 59 51.16
	1314.00	0.16	27.68	1314.00	0.88	-1.75	1.02	0.24	438622.25	845195.42	N 32 12 19.45	W 103 59 51.16
	1405.00	0.13	246.76	1405.00	0.85	-1.67	0.98	0.30	438622.33	845195.38	N 32 12 19.45	W 103 59 51.16
	1500.00	0.13	244.43	1500.00	0.64	-1.76	0.78	0.01	438622.24	845195.19	N 32 12 19.45	W 103 59 51.16
	1595.00	0.13	208.19	1595.00	0.49	-1.80	0.64	0.09	438622.10	845195.04	N 32 12 19.45	W 103 59 51.17
	1690.00	0.08	182.31	1690.00	0.42	-2.07	0.59	0.07	438621.93	845194.99	N 32 12 19.45	W 103 59 51.17
	1785.00	0.13	44.57	1785.00	0.49	-2.06	0.66	0.21	438621.94	845195.06	N 32 12 19.45	W 103 59 51.17
	1975.00	0.08	269.40	1975.00	0.52	-1.90	0.68	0.10	438622.10	845195.08	N 32 12 19.45	W 103 59 51.17
	2069.00	0.18	27.54	2069.00	0.54	-1.77	0.68	0.24	438622.23	845195.08	N 32 12 19.45	W 103 59 51.17
	2258.00	0.16	94.05	2258.00	0.60	-1.82	0.75	0.27	438622.18	845195.15	N 32 12 19.45	W 103 59 51.17
	2354.00	0.13	24.43	2354.00	0.78	-1.73	0.93	0.18	438622.27	845195.33	N 32 12 19.45	W 103 59 51.16
	2449.00	0.13	56.22	2449.00	0.93	-1.57	1.06	0.07	438622.43	845195.48	N 32 12 19.46	W 103 59 51.16
	2544.00	0.08	228.00	2544.00	0.97	-1.56	1.10	0.22	438622.44	845195.50	N 32 12 19.46	W 103 59 51.16
	2639.00	0.13	142.32	2639.00	0.98	-1.69	1.12	0.16	438622.31	845195.52	N 32 12 19.45	W 103 59 51.16
	2828.00	0.16	162.78	2827.99	1.15	-2.11	1.33	0.03	438621.89	845195.73	N 32 12 19.45	W 103 59 51.16
	2923.00	0.16	49.09	2922.99	1.29	-2.15	1.47	0.28	438621.85	845195.87	N 32 12 19.46	W 103 59 51.16
	3018.00	0.20	185.82	3017.99	1.36	-2.23	1.55	0.35	438621.77	845195.95	N 32 12 19.45	W 103 59 51.16
	3113.00	0.16	293.14	3112.99	1.22	-2.34	1.41	0.31	438621.66	845195.81	N 32 12 19.45	W 103 59 51.16
	3208.00	0.16	48.74	3207.99	1.21	-2.20	1.38	0.29	438621.80	845195.79	N 32 12 19.45	W 103 59 51.16
	3398.00	0.20	25.04	3397.99	1.58	-1.72	1.73	0.04	438622.28	845196.13	N 32 12 19.46	W 103 59 51.15
	3493.00	0.18	158.04	3492.99	1.71	-1.71	1.85	0.37	438622.29	845196.25	N 32 12 19.45	W 103 59 51.15
	3682.00	0.16	289.06	3681.99	1.57	-1.87	1.73	0.17	438622.13	845196.13	N 32 12 19.46	W 103 59 51.16
	3872.00	0.16	6.46	3871.99	1.41	-1.49	1.53	0.10	438622.51	845195.93	N 32 12 19.46	W 103 59 51.16
	4062.00	0.05	22.84	4061.99	1.96	0.23	1.89	0.25	438623.17	845196.39	N 32 12 19.47	W 103 59 51.15
	4157.00	2.50	15.99	4156.95	2.94	-2.28	2.77	1.95	438626.28	845197.17	N 32 12 19.55	W 103 59 51.14
	4252.00	4.53	13.12	4251.76	4.82	-7.90	4.19	2.14	438631.90	845198.50	N 32 12 18.73	W 103 59 51.10
	4442.00	6.67	3.82	4440.85	8.73	-26.22	6.63	1.22	438650.22	845201.03	N 32 12 18.73	W 103 59 51.10
	4536.00	7.48	357.80	4534.13	9.79	-37.78	6.76	1.17	438661.78	845201.16	N 32 12 19.84	W 103 59 51.09
	4631.00	8.49	354.84	4628.21	9.99	-50.95	5.89	1.15	438674.84	845200.28	N 32 12 19.97	W 103 59 51.10
	4726.00	10.27	352.91	4721.94	9.56	-66.34	4.21	1.60	438690.33	845198.61	N 32 12 20.13	W 103 59 51.12
	4821.00	11.32	351.30	4815.28	8.53	-83.96	1.76	1.15	438707.95	845196.16	N 32 12 20.30	W 103 59 51.15
	4916.00	11.31	349.88	4908.41	6.82	-102.32	-1.45	0.50	438726.31	845192.95	N 32 12 20.46	W 103 59 51.18
	5011.00	8.80	344.11	5001.97	4.38	-118.29	-5.19	2.98	438742.28	845189.21	N 32 12 20.04	W 103 59 51.23
	5106.00	6.17	333.24	5096.18	1.07	-129.68	-9.43	2.94	438753.67	845184.97	N 32 12 20.75	W 103 59 51.28
	5201.00	6.58	333.20	5190.59	-2.91	-138.10	-14.19	0.43	438763.09	845180.21	N 32 12 20.85	W 103 59 51.33
	5296.00	6.68	333.21	5284.96	-7.13	-146.85	-19.21	0.15	438772.84	845176.39	N 32 12 21.04	W 103 59 51.39
	5391.00	8.20	337.69	5379.35	10.88	-158.56	-23.76	0.76	438782.55	845170.64	N 32 12 21.04	W 103 59 51.44
	5486.00	5.36	339.48	5473.86	13.88	-167.54	-27.30	1.01	438791.53	845167.11	N 32 12 21.13	W 103 59 51.49
	5581.00	5.40	342.23	5568.44	-15.91	-175.95	-30.22	0.27	438799.94	845164.19	N 32 12 21.21	W 103 59 51.52
	5676.00	4.91	343.27	5563.06	-17.78	-184.10	-32.75	0.53	438808.09	845161.85	N 32 12 21.29	W 103 59 51.55
	5771.00	4.81	348.19	5757.71	-19.13	-191.90	-34.74	0.45	438815.88	845159.67	N 32 12 21.37	W 103 59 51.57
	5866.00	4.90	352.72	5852.37	-19.81	-199.62	-36.07	0.41	438823.80	845158.34	N 32 12 21.45	W 103 59 51.58
	5961.00	4.61	354.12	5947.05	-20.08	-207.84	-36.97	0.33	438831.62	845157.43	N 32 12 21.53	W 103 59 51.60
	6056.00	4.67	355.41	6041.74	-20.16	-215.29	-37.87	0.13	438839.28	845156.73	N 32 12 21.60	W 103 59 51.60
	6151.00	4.56	350.52	6136.43	-20.48	-222.87	-38.60	0.43	438846.86	845155.80	N 32 12 21.68	W 103 59 51.61
	6246.00	4.24	345.92	6230.15	-21.36	-229.93	-40.06	0.51	438853.91	845154.34	N 32 12 21.75	W 103 59 51.63
	6340.00	4.18	346.97	6324.89	-22.45	-236.71	-41.70	0.10	438860.89	845152.70	N 32 12 21.81	W 103 59 51.65
	6435.00	3.89	344.66	6418.66	-23.55	-243.19	-43.33	0.35	438867.17	845151.07	N 32 12 21.88	W 103 59 51.67
	6530.00	3.61	341.98	6514.46	-24.84	-249.14	-45.11	0.35	438873.12	845149.29	N 32 12 21.94	W 103 59 51.69
	6625.00	3.11	333.51	6609.29	-26.49	-254.29	-47.18	0.74	438878.27	845147.22	N 32 12 22.01	W 103 59 51.71
	6719.00	3.62	343.03	6703.13	-28.08	-258.11	-49.19	0.80	438883.39	845145.22	N 32 12 22.04	W 103 59 51.74
	6814.00	4.48	354.11	6797.89	-28.80	-265.88	-50.44	1.23	438897.71	845143.96	N 32 12 22.10	W 103 59 51.75
	6908.00	4.58	358.71	6892.58	-28.54	-273.73	-50.92	0.58	438905.25	845142.52	N 32 12 22.18	W 103 59 51.76
	7003.00	4.26	352.19	6987.27	-28.60	-281.27	-51.49	0.86	438915.01	845141.41	N 32 12 22.26	W 103 59 51.78
	7099.00	2.98	338.17	7082.08	-29.61	-287.03	-52.97	1.70	438915.01	845141.41	N 32 12 22.31	W 103 59 51.78
	7195.00	3.64	323.55	7177.92	-32.04	-291.78	-55.78	1.01	438915.75	845138.61	N 32 12 22.36	W 103 59 51.81
	7290.00	4.43	334.49	7272.89	-34.94	-297.51	-59.16	1.16	438921.49	845135.24	N 32 12 22.42	W 103 59 51.85
	7385.00	5.59	349.73	7367.33	-38.70	-305.38	-61.57	1.85	438929.35	845132.84	N 32 12 22.49	W 103 59 51.88
	7480.00	6.86	4.46	7461.77	-36.26	-315.59	-61.95	2.14	438939.56	845132.45	N 32 12 22.60	W 103 59 51.88
	7575.00	8.34	15.03	7555.94	-33.05	-327.90	-59.72	2.14	438951.87	845134.68	N 32 12 22.72	W 103 59 51.86
	7670.00	8.13	33.09	7649.98	-26.62	-340.18	-54.27	2.72	438964.16	845140.14	N 32 12 22.84	W 103 59 51.79
	7765.00	8.07	49.59	7744.04	-17.10	-350.14	-45.52	2.44	438974.11	845148.88	N 32 12 22.94	W 103 59 51.69
	7860.00	8.41	62.88	7838.29	-6.79	-358.88	-43.72	2.47	438980.85	845158.08	N 32 12 23.00	W 103 59 51.58
	7954.00	7.93	82.57	7931.56	4.54	-360.11	-24.82	3.05	438984.08	845169.78	N 32 12 23.03	W 103 59 51.45
	8023.00	8.49	90.30	7999.86	14.37	-360.79	-14.81	1.79	438984.67	845179.59	N 32 12 23.04	W 103 59 51.33
	8190.00	14.27	105.57	8163.54	46.00	-355.10	-17.38	3.87	438979.08	845211.78	N 32 12 22.88	W 103 59 50.06
	8285.00	23.25	102.70	8253.40	74.95	-347.83	-47.01					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8507.00	41.07	85.91	8441.55	189.55	341.89	162.57	11.70	438965.86	645358.95	N 32 12 22.85	W 103 59 49.27
	8571.00	49.14	87.89	8488.78	234.93	344.41	207.79	12.75	438968.38	645402.18	N 32 12 22.87	W 103 59 48.74
	8634.00	52.84	84.51	8526.44	283.86	347.81	256.61	7.00	438971.78	645450.86	N 32 12 22.80	W 103 59 48.17
	8698.00	53.21	84.45	8545.68	309.42	350.27	282.06	1.17	438974.24	645476.43	N 32 12 22.83	W 103 59 47.88
	8761.00	69.71	84.81	8590.92	392.58	358.03	364.88	17.37	438982.00	645559.23	N 32 12 23.00	W 103 59 46.91
	8797.00	78.33	86.17	8600.82	427.18	360.74	398.33	24.22	438984.71	645593.70	N 32 12 23.03	W 103 59 46.51
	8824.00	81.06	86.72	8605.65	453.71	362.38	425.84	10.31	438986.36	645620.21	N 32 12 23.04	W 103 59 46.20
	8858.00	81.65	86.56	8610.48	485.34	364.24	457.42	1.91	438988.21	645651.78	N 32 12 23.06	W 103 59 45.84
	8951.00	85.15	85.61	8621.38	579.89	370.88	551.58	3.82	438994.65	645745.81	N 32 12 23.12	W 103 59 44.74
	9003.00	85.63	85.95	8625.55	631.52	374.50	603.25	1.13	438998.47	645797.60	N 32 12 23.16	W 103 59 44.14
	9098.00	88.76	88.26	8630.20	726.34	378.29	697.99	4.08	439003.26	645892.34	N 32 12 23.20	W 103 59 43.04
	9193.00	89.48	88.58	8631.68	821.20	381.92	792.95	0.82	439005.89	645987.28	N 32 12 23.23	W 103 59 41.93
	9288.00	89.62	89.15	8632.41	916.07	384.65	887.90	0.48	439008.62	646082.23	N 32 12 23.25	W 103 59 40.63
	9382.00	89.03	89.81	8632.70	1009.88	386.32	981.88	1.82	439010.29	646176.21	N 32 12 23.26	W 103 59 39.73
	9477.00	89.76	87.87	8632.87	1104.70	388.25	1076.96	2.06	439012.21	646271.17	N 32 12 23.28	W 103 59 38.63
	9572.00	89.66	87.91	8633.35	1199.60	391.74	1171.79	0.11	439015.71	646366.10	N 32 12 23.31	W 103 59 37.52
	9666.00	90.10	89.23	8633.55	1293.45	394.09	1265.76	1.48	439018.06	646460.06	N 32 12 23.33	W 103 59 36.43
	9761.00	89.86	87.64	8633.58	1388.32	396.68	1360.72	1.69	439020.85	646555.01	N 32 12 23.35	W 103 59 35.32
	9856.00	89.17	88.03	8634.39	1483.22	400.27	1455.65	0.83	439024.24	646649.93	N 32 12 23.39	W 103 59 34.22
	9951.00	88.97	89.53	8635.93	1578.04	402.29	1550.62	1.59	439028.26	646744.89	N 32 12 23.40	W 103 59 33.11
	10046.00	89.28	90.09	8637.38	1672.74	402.61	1645.60	0.67	439026.58	646839.87	N 32 12 23.40	W 103 59 32.01
	10140.00	88.73	91.62	8639.01	1766.29	401.21	1739.58	1.73	439025.18	646933.84	N 32 12 23.39	W 103 59 30.91
	10235.00	88.01	91.01	8641.71	1860.74	399.03	1834.51	0.99	439023.80	647028.76	N 32 12 23.36	W 103 59 29.81
	10330.00	88.45	91.19	8644.55	1955.22	397.21	1929.45	0.50	439021.17	647123.69	N 32 12 23.34	W 103 59 28.70
	10425.00	88.56	91.88	8647.13	2049.66	394.83	2024.39	0.53	439018.80	647218.62	N 32 12 23.31	W 103 59 27.60
	10520.00	89.04	91.31	8649.12	2144.10	392.35	2119.33	0.64	439016.32	647313.56	N 32 12 23.29	W 103 59 26.49
	10615.00	88.80	91.14	8650.91	2238.58	390.32	2214.29	0.31	439014.29	647408.51	N 32 12 23.26	W 103 59 25.39
	10710.00	88.62	91.23	8653.04	2333.07	388.35	2309.25	0.21	439012.32	647503.46	N 32 12 23.24	W 103 59 24.28
	10804.00	89.00	91.48	8655.00	2426.54	386.13	2403.20	0.48	439010.10	647598.41	N 32 12 23.22	W 103 59 23.19
	10899.00	89.04	91.52	8656.82	2520.98	383.65	2498.16	0.06	439007.61	647693.35	N 32 12 23.19	W 103 59 22.09
	10994.00	88.90	90.87	8658.33	2615.47	381.66	2593.12	0.70	439005.63	647788.31	N 32 12 23.17	W 103 59 20.98
	11089.00	88.83	91.10	8660.21	2710.00	380.03	2688.09	0.25	439004.00	647883.27	N 32 12 23.15	W 103 59 19.88
	11184.00	88.80	91.14	8662.18	2804.50	378.18	2783.05	0.05	439002.14	647977.22	N 32 12 23.13	W 103 59 18.77
	11279.00	89.18	92.22	8663.85	2898.91	375.39	2877.99	1.20	438999.36	648072.16	N 32 12 23.10	W 103 59 17.67
	11374.00	89.62	93.18	8664.84	2993.12	370.83	2972.88	1.09	438994.90	648167.04	N 32 12 23.05	W 103 59 16.56
	11468.00	88.73	85.64	8666.20	3086.81	371.75	3066.80	7.84	438995.72	648260.95	N 32 12 23.05	W 103 59 15.47
	11563.00	87.83	88.65	8668.03	3181.70	376.32	3161.64	3.10	439000.29	648355.78	N 32 12 23.10	W 103 59 14.36
	11658.00	87.53	88.19	8672.90	3276.49	378.93	3256.52	0.58	439002.80	648450.66	N 32 12 23.12	W 103 59 13.26
	11753.00	88.00	89.21	8675.77	3371.28	381.09	3351.45	1.88	439005.06	648545.58	N 32 12 23.14	W 103 59 12.15
	11848.00	88.59	87.93	8677.77	3466.11	383.46	3446.40	1.41	439007.43	648640.52	N 32 12 23.16	W 103 59 11.05
	11943.00	88.55	88.22	8679.31	3560.89	386.65	3541.33	1.08	439010.62	648735.45	N 32 12 23.18	W 103 59 9.94
	12038.00	89.38	87.09	8680.20	3655.91	390.53	3636.25	1.20	439014.50	648830.35	N 32 12 23.22	W 103 59 8.84
	12133.00	88.56	87.30	8681.91	3750.84	395.18	3731.12	0.89	439019.15	648925.22	N 32 12 23.26	W 103 59 7.74
	12227.00	90.31	89.97	8682.94	3844.67	397.42	3820.07	3.40	439021.39	649019.16	N 32 12 23.28	W 103 59 6.64
	12322.00	87.08	88.81	8685.00	3939.49	400.08	3919.99	4.76	439028.78	649114.07	N 32 12 23.35	W 103 59 5.54
	12417.00	87.18	87.48	8688.78	4034.33	404.81	4014.75	0.71	439032.80	649208.83	N 32 12 23.35	W 103 59 4.43
	12512.00	87.04	87.03	8694.55	4129.16	409.36	4109.52	0.50	439033.32	649303.59	N 32 12 23.39	W 103 59 3.33
	12606.00	85.50	87.56	8700.58	4222.91	413.78	4203.22	1.63	439037.75	649397.28	N 32 12 23.42	W 103 59 2.24
	12701.00	86.90	90.17	8706.79	4317.52	415.66	4297.99	3.06	439039.63	649492.04	N 32 12 23.45	W 103 59 1.14
	12796.00	91.27	96.04	8708.31	4411.57	410.52	4392.77	7.70	439034.48	649586.82	N 32 12 23.39	W 103 59 0.03
	12891.00	92.37	94.48	8705.29	4505.11	401.81	4487.32	2.01	439025.78	649681.38	N 32 12 23.30	W 103 58 58.93
	12986.00	91.24	92.88	8702.30	4599.06	395.72	4582.07	2.06	439019.68	649776.10	N 32 12 23.24	W 103 58 57.83
	13081.00	88.86	90.69	8701.39	4693.45	392.76	4677.01	2.72	439016.73	649871.03	N 32 12 23.21	W 103 58 56.73
	13175.00	87.42	88.51	8703.62	4787.16	393.41	4770.97	3.48	439017.38	649966.49	N 32 12 23.21	W 103 58 55.63
	13270.00	87.39	88.53	8707.92	4881.92	395.86	4865.84	0.04	439019.83	650061.95	N 32 12 23.23	W 103 58 54.53
Final MWD	13324.00	86.63	88.14	8710.74	4935.77	397.43	4918.74	1.58	439021.40	650153.75	N 32 12 23.25	W 103 58 53.90
Proj to bit	13366.00	86.63	88.14	8713.21	4977.65	398.79	4961.65	0.00	439022.76	650155.65	N 32 12 23.26	W 103 58 53.41

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	Act Slns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG-Depth Only	Original Borehole / Oxy Cedar Canyon 21 Federal Com 22H MWD 0-13366 ftMD
	1	26.500	495.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Cedar Canyon 21 Federal Com 22H
	1	495.000	13366.000	Act Slns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Cedar Canyon 21 Federal Com 22H